"Effect of Digital Transformation on Employee Performance in Commercial Banks of Butwal Sub-Metropolitan City"

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Abstract

The objective of this study is to investigate the effect of digital transformation on employee performance in commercial banks of Butwal Sub-metropolitan City. Data was gathered from 286 employees of these banks using a convenience sampling method, employing a self-administered questionnaire based on a five-point Likert scale. The research utilized descriptive and explanatory research design, incorporating correlation and regression analyses. The findings indicate that all five independent variables-Digital Leadership, Employee Digital Skill, Data-Driven Decision Making, Technology Integration, and Organizational Culture-have a statistically significant and positive effect on employee performance. Among these, Digital Leadership is identified as the most influential predictor, suggesting that strong leadership in digital initiatives enhances employee output and engagement. Employee Digital Skill follows closely, indicating that digitally proficient employees perform better in technology-driven environments. Data-Driven Decision Making also plays a vital role by enabling more informed and effective actions. While Technology Integration and Organizational Culture show relatively smaller impacts, their contributions remain significant in fostering a productive work environment. It can be concluded that enhancing digital leadership, improving employee digital skills, and promoting data-informed practices are crucial strategies for boosting employee performance. Additionally, cultivating a supportive organization strengthens and ensuring effective technology integration further strengthens overall organizational outcomes.

Keywords: Digital Leadership, Employee Digital Skill, Data-Driven Decision Making, Technology Integration, and Organizational Culture.

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I. Introduction

In today's rapidly evolving financial landscape, digital transformation has emerged as a strategic necessity rather than a mere technological upgrade for commercial banks. As financial institutions worldwide navigate the complexities of globalization, competitive pressure, and customer expectations, leveraging digital tools and strategies has become imperative to enhance not only service delivery but also employee performance (Bala, 2024; Kadyan et al., 2024). The fusion of advanced technologies with human capital processes is fundamentally reshaping how banks function internally and externally, leading to what is now widely regarded as the digital era of banking.

Digital transformation, in the context of banking, refers to the full-scale incorporation of digital technologies across all operational areas, revolutionizing service delivery mechanisms, internal workflows, and employee roles. According to the Nepal Bankers Association (2019), digital transformation entails the transformation of traditional banking business models into

agile, tech-enabled systems that offer seamless services, reduce operational costs, ensure data security, and foster innovation. These digitally-driven operations allow customers to access services anytime, anywhere, while also enhancing the working experience and productivity of employees through automation and data-driven insights.

The global trajectory of digital transformation began in the 1960s with the advent of Automated Teller Machines (ATMs), which offered customers around-the-clock account access. The 1980s brought personal computers and early forms of digital communication, eventually giving rise to online banking in the 1990s (Day, 2024). This progressive digitalization has led to the current ecosystem where mobile banking, artificial intelligence (AI), robotic process automation (RPA), and blockchain are integral components of banking infrastructure.

Scholars and practitioners alike have explored the multi-dimensional nature of digital transformation, highlighting several core enablers that determine its success in organizational contexts. Buvat et al. (2018) emphasized the strategic role of digital tools across banking functions, while more recent studies by Malik et al. (2024), Kadyan et al. (2024), and Saranya and Vasantha (2023) have underlined the importance of factors such as digital leadership, employee digital skills, technology integration, organizational culture, and data-driven decision-making in influencing employee performance. These studies collectively suggest that digital transformation is not solely about technology adoption but also about creating a conducive organizational environment that supports continuous learning, adaptability, and performance enhancement.

In the South Asian region, and particularly in Nepal, digital transformation in the banking sector has gained momentum in recent years. Driven by the dual need to improve operational efficiency and expand financial inclusion, banks in Nepal have started investing heavily in digital infrastructure and service platforms. The government's policy efforts to establish digital banks and promote a cashless economy underscore the importance of digitalization in national development strategies (Acharya, 2020; Kathmandu Post, 2025). Despite these initiatives, the implementation of digital transformation remains uneven. Urban centers have seen increased adoption of digital services, including fund transfers, utility payments, and online loan applications. In contrast, rural areas continue to face challenges such as low digital literacy, poor internet connectivity, and a reliance on traditional banking methods, exacerbating the digital divide (Kathmandu Post, 2025).

Banking institutions like NMB have taken proactive steps by digitizing customer onboarding processes, automating internal workflows, and integrating compliance tools through technology. These initiatives have improved operational turnaround times and service quality. However, the transformation has not been without hurdles. Integrating digital tools in a predominantly cash-based economy, addressing employee skill gaps, and adapting legacy systems to new platforms present significant barriers (FMO Case Study, 2025). Moreover, the COVID-19 pandemic has further accelerated digital adoption, compelling banks to shift to contactless transactions and remote working models (Acharya, 2020). While this shift increased digital transaction volumes and user confidence, it also exposed gaps in infrastructure and highlighted the need for robust digital leadership, organizational

flexibility, and skilled human capital (ICT Frame, 2025).

Despite the growing literature on digital transformation and its impact on customer satisfaction and operational efficiency, limited empirical research has specifically explored how these transformations influence employee performance within Nepalese commercial banks. Most existing studies tend to focus on customer-centric innovations or descriptive accounts of technology adoption, often neglecting the internal organizational dynamics that are crucial for sustainable change. There is a significant gap in understanding how digital leadership, technology integration, employee digital skills, organizational culture, and data-driven decision-making interact to affect employee productivity, satisfaction, and adaptability in the context of Nepal's unique socio-economic and infrastructural landscape.

The need to address this gap is pressing. Inadequate digital leadership, for example, can result in an unclear vision for technological change, leaving employees without guidance or support during transitions (Kadyan et al., 2024). Similarly, poorly integrated technologies that do not align with employee workflows create operational inefficiencies, redundancies, and frustrations, negatively affecting performance (Widodo et al., 2024). A rigid organizational culture that discourages innovation or lacks mechanisms for continuous learning can hinder employees from embracing new digital tools (Gupta & Sharma, 2021). Additionally, without adequate training, employees may lack the digital competencies necessary to operate new systems effectively, resulting in low morale and job dissatisfaction (Patel & Joshi, 2023). Furthermore, when data-driven decision-making is underutilized, organizations miss out on opportunities to empower employees with real-time insights that could enhance their performance (Das & Mishra, 2022).

To address these challenges, scholars and practitioners recommend a multifaceted strategy. Strong digital leadership is essential to setting a clear direction and fostering a supportive environment for employees (Malik et al., 2024). Integrating technology into core work processes in a user-friendly manner ensures that digital tools enhance rather than disrupt workflows (Rani & Kumar, 2022). Cultivating an innovative and collaborative organizational culture that encourages learning and experimentation can reduce resistance to change (Bala, 2024). Regular training programs that build digital competencies are key to preparing employees for evolving technologies (Choden & Tshering, 2024). Finally, promoting data-driven decision-making allows employees to act with greater confidence and precision, thereby improving individual and organizational performance (Fatima & Hussain, 2023).

This study, therefore, seeks to fill a critical knowledge gap by empirically examining the effect of digital transformation on employee performance in commercial banks within Nepal, focusing specifically on the Butwal Sub-Metropolitan City area. It aims to explore how five key dimensions—digital leadership, technology integration, organizational culture, employee digital skills, and data-driven decision-making—interact to shape employee outcomes. By doing so, the research will provide evidence-based insights that can inform both organizational strategies and policy frameworks to support effective digital transformation.

The significance of this research extends beyond the academic domain. For bank management, the findings will offer practical insights into how to develop targeted leadership initiatives, digital skill-building programs, and organizational change strategies that enhance workforce readiness. For policymakers, the research can support the formulation of regulatory and support frameworks that promote digital adoption while safeguarding employee well-being. For academicians and future researchers, it adds to the relatively sparse body of literature on the intersection of digital transformation and employee performance in the context of developing countries like Nepal. Most importantly, for employees themselves, this study has the potential to contribute to more inclusive, supportive, and empowering digital work environments that foster career growth, job satisfaction, and well-being.

The objectives of the proposed study are as mentioned below

• To measure the relationship between Digital Leadership, Technology Integration, Organizational Culture, Employee Digital Skills, Data Driven Decision Making and Employee Performance.

• To examine the effect of Digital Leadership, Technology Integration, Organizational Culture, Employee Digital Skills, and Data Driven Decision Making on Employee Performance.

II. Review of Literature

Theoretical Review

Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM), developed by Davis (1989), explains how perceived usefulness (PU) and perceived ease of use (PEOU) influence an individual's intention to adopt new technology. In digital transformation, TAM clarifies how employees' attitudes toward digital tools affect their performance. When tools are seen as useful and easy to use, employees are more likely to engage, boosting productivity and efficiency. In Nepalese banks, where digital transition is ongoing, TAM highlights the importance of training, support, and user-friendly systems to ensure that technology adoption translates into improved employee performance and job satisfaction.

Resource-Based View (RBV)

Barney's (1991) Resource-Based View (RBV) posits that competitive advantage stems from internal resources that are valuable, rare, inimitable, and non-substitutable (VRIN). Within digital transformation, employee digital skills qualify as strategic assets under RBV. Skilled employees enable better use of digital tools, drive innovation, and support organizational agility. As digital proficiency is not easily replicated, it provides sustained performance benefits. In Nepal's banking context, investment in digital upskilling enhances both individual and organizational capabilities. RBV thus supports the idea that digital skills are not just technical competencies but critical resources for long-term employee and organizational success.

Transformational Leadership Theory

Bass's (1985) Transformational Leadership Theory emphasizes leaders' role in motivating employees through vision, inspiration, and individual support. In digital transformation, transformational leaders influence performance by encouraging

innovation and adaptability, building trust, and supporting employee growth. They create a culture where employees embrace digital change confidently. In Nepalese banks, such leadership is essential to overcome resistance, align employee goals with digital strategies, and foster a high-performance culture. By inspiring employees to use digital tools effectively, transformational leaders help bridge traditional practices and modern demands, making them vital to the success of any digital transformation initiative.

Socio-Technical Systems Theory

Trist and Bamforth's (1951) Socio-Technical Systems Theory stresses the interdependence of technological tools and the social structures within an organization. It argues that performance improves only when technical systems (e.g., digital tools) are aligned with social systems (e.g., culture, people). In digital transformation, this theory explains that without supportive culture and skills, technology alone cannot enhance employee performance. In Nepalese banks, addressing both digital tools and human elements—such as collaboration, training, and leadership—is crucial. This theory advocates a holistic approach, where technological success depends equally on employee readiness and cultural adaptability for sustainable performance outcomes.

Contingency Theory

Fiedler's Contingency Theory (1964) suggests that effective leadership and management depend on contextual factors such as environment, culture, and team characteristics. In digital transformation, this theory implies that organizational culture must align with the digital strategy for successful employee performance outcomes. In flexible cultures, innovation is embraced, while in rigid settings, resistance may occur unless properly managed. For Nepalese banks, adapting digital initiatives to match existing structures and employee readiness is key. The theory supports the idea that one-size-fits-all digital strategies fail; success depends on tailoring leadership and technology implementation to specific organizational contexts.

Empirical Review

H1: There is a significant effect of Digital Leadership on Employee Performance

A growing body of empirical research confirms that digital leadership significantly impacts employee performance across sectors. For instance, a recent meta-analysis by Malik et al. (2025) encompassing 16 peer-reviewed studies revealed a pooled effect size of 0.363 ($p < 0.001$), indicating a consistent, strong positive relationship between digital leadership and employee outcomes. Structural equation modeling (SEM) studies, such as those by Saranya and Vasantha (2023), have further validated this connection, demonstrating that digital leadership enhances employee motivation, engagement, and adaptability by integrating technological vision with human-centric strategies. Kadyan et al. (2024) found that adaptive digital leaders directly foster innovative work behavior, which positively influences employee productivity and creativity. Additionally, Bala (2024) highlights that such leadership facilitates the creation of a high-performance digital

culture by promoting experimentation, trust, and continuous learning. The effect appears resilient across various industries, organizational structures, and cultures, suggesting digital leadership is a universally relevant driver of employee performance in the digital age.

H2: There is a significant effect of Technology Integration on Employee Performance

Empirical findings strongly support the assertion that technology integration is a powerful catalyst for enhanced employee performance. Widodo et al. (2024) provide regression-based evidence that organizations adopting advanced digital tools experience higher employee engagement, job satisfaction, and task efficiency. Studies in remote work contexts, such as those by Patel and Joshi (2023), report significant regression coefficients (e.g., $\beta = 0.45$, $p < 0.001$) linking perceived technological usefulness with performance outcomes. Similarly, correlational studies (e.g., $r = 0.34$) confirm a moderate but statistically significant relationship between digital tool usage and productivity. ICT Frame (2025) affirms that when technologies are embedded into workflows, training, and collaboration platforms, they promote adaptability, reduce redundancy, and enable faster decision-making. Systematic reviews by Rani and Kumar (2022) further suggest that seamless integration of technology in daily operations leads to increased morale and better work-life balance, ultimately improving the quality and output of employee contributions.

H3: There is a significant effect of Organizational Culture on Employee Performance

Organizational culture has consistently been identified as a central determinant of employee performance in empirical research. Studies utilizing SEM-PLS and multiple regression analysis (Gupta & Sharma, 2021) have shown that dimensions like adaptability, involvement, and mission alignment significantly predict performance outcomes. For example, a study by Das and Mishra (2022) found that cultural dimensions explained up to 56.7% ($R^2 = 0.567$, $p < 0.05$) of the variance in employee performance across Nepalese banks. Using Denison's cultural framework, research by Saranya and Vasantha (2023) found that the "mission" and "consistency" traits were particularly influential in boosting engagement and innovation. These results are echoed in findings from cross-industry studies, where inclusive and learning-oriented cultures have been linked to higher productivity, lower turnover, and greater job satisfaction (Acharya, 2020). The evidence clearly indicates that a supportive organizational culture is essential for maximizing the benefits of digital transformation and improving workforce performance.

H4: There is a significant effect of Employee Digital Skills on Employee Performance

Extensive empirical evidence validates that employee digital skills have a direct and measurable impact on job performance. Quantitative studies from Choden and Tshering (2024) and Bala (2024) demonstrate that higher levels of digital

literacy correlate with increased job efficiency, creativity, and satisfaction. Regression analyses indicate that digitally skilled employees adapt faster to new tools, complete tasks more accurately, and experience higher morale. Patel and Joshi (2023) found that continuous digital training enhances task accuracy and confidence, while Fatima and Hussain (2023) reported that employees with advanced digital capabilities were more likely to be promoted and retained. Furthermore, systematic reviews underline that upskilling initiatives bridge the digital divide, allowing for equitable access to tools and boosting long-term performance across organizational levels. These studies collectively argue that investing in digital competency development is not just beneficial but essential in the age of digital transformation.

H5: There is a significant effect of Data-Driven Decision Making on Employee Performance

Data-driven decision making (DDDM) has emerged as a significant enabler of employee performance, supported by a wealth of empirical research. Studies in Industry 5.0 environments, as cited by Widodo et al. (2024), show that DDDM boosts decision outcomes by up to 46.15%, leading to improved service delivery, efficiency, and satisfaction. Fatima and Hussain (2023) highlight that DDDM in human resource management enables more precise performance evaluations, targeted interventions, and equitable talent development. HR analytics powered by DDDM has been shown to enhance accountability and reduce subjectivity in performance appraisals, as noted by ICT Frame (2025). Malik et al. (2024) add that organizations practicing DDDM achieve up to 21% higher productivity than their counterparts, as data enables proactive decision-making and real-time monitoring. These empirical results collectively underscore that DDDM is not merely a managerial tool but a strategic approach that enhances individual and team performance.

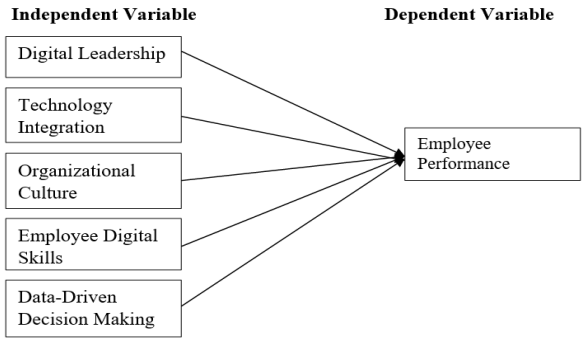
Research Methodology

The study employed a descriptive and causal-comparative research design to provide a comprehensive understanding of the effect of digital transformation on employee performance. The descriptive approach helped illustrate the current status of variables, while the causal-comparative design explored cause-effect relationships between independent and dependent variables based on demographic characteristics. The study was conducted in Butwal Sub-metropolitan City, targeting 567 employees from 20 commercial banks. A sample size of 234 was determined using Yamane's formula, and purposive sampling was used to select respondents. Data were collected using structured questionnaires based on a five-point Likert scale measuring digital leadership, technology integration, organizational culture, employee digital skills, data-driven decision-making, and employee performance. A total of 300 questionnaires were distributed, and 286 valid responses were obtained (95% response rate). The data collected were primary in nature, directly sourced from employees. Statistical tools including descriptive statistics (mean and standard deviation), reliability testing, and inferential statistics (correlation and regression

analysis) were employed to analyze the data. The responses were processed and interpreted using SPSS software. The methodology ensures reliability of results to support the study's objectives and answer the research questions effectively.

Theoretical Framework

Figure 1



Note. Adapted from Do et al. (2022)

IV. Results and Discussion

Descriptive Statistics - Reliability Test

Table 1 - *Cronbach Alpha*

Independent Variable	Cronbach Alpha
Digital Leadership	.960
Technology Integration	.784
Organizational Culture	.761
Employee Digital Skills	.892
Data Driven Decision Making	.805
Employee Performance	**.769**

Table 1 shows the reliability statistics for each construct using Cronbach's Alpha, a measure of internal consistency. All constructs exceed the acceptable threshold of 0.70, confirming that the items used in the questionnaire are reliable. Digital Leadership shows the highest reliability with an alpha of 0.960, indicating excellent internal consistency. Employee Digital Skills also shows very good reliability with 0.892. Data-Driven Decision Making and Technology Integration have good reliability, with alphas of 0.805 and 0.784 respectively. Organizational Culture and Employee Performance show acceptable reliability, with alphas of 0.761 and 0.769. This confirms the scales are dependable for further analysis.

Table 2 - *Descriptive Statistics*

Variables	N	Mean	Std. Deviation
Data Driven Decision Making	286	3.7168	.93339
Technology Integration	286	3.8521	.66600
Employee Digital Skill	286	3.7720	1.05687

Digital Leadership	286	3.5049	1.06196
Organizational Culture	286	3.8140	.31802
Employee Performance	286	3.5140	1.24162

Table 2 presents descriptive statistics for six variables based on 286 responses. The mean score for Data-Driven Decision Making (3.72) suggests general agreement that data is used for decisions, though a standard deviation of 0.93 indicates moderate variation. Technology Integration has a mean of 3.85 with a low standard deviation (0.67), reflecting consistent and positive experiences with technology use. Moreover, Employee Digital Skills scored 3.77, but with a higher variation (SD = 1.06), showing differing skill levels among staff. Digital Leadership has a mean of 3.50, indicating moderate perceptions, with a high variability (SD = 1.06), suggesting inconsistent leadership effectiveness. Furthermore, Organizational Culture scored 3.81 with a very low SD of 0.32, showing strong and consistent cultural support across the organization. Employee Performance had a mean of 3.51 but the highest standard deviation (1.24), reflecting wide differences in perceived performance among employees.

Correlation

Table 3 - *Correlation*

		DDDM	TI	EDS	DL	OC	EP
DDDM	Pearson Cor.	1	.487**	.596**	.637**	.046	.487**
TI	Pearson Cor.		1	.533**	.542**	.026	.491**
EDS	Pearson Cor.			1	.636**	.083	.631**
DL	Pearson Cor.				1	.122*	.663**
OC	Pearson Cor.					1	.175**
EP	Pearson Cor.						1

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

*. Correlation is significant at the 0.05 level (2-tailed).

Where: DL: Digital Leadership; **TI**: Technology Integration; **OC**: Organizational Culture; **EDS**: Employee Digital Skills; **DDDM**: Data-Driven Decision Making; **EP**: Employee Performance

Table 3 presents the Pearson correlation results between five independent variables and Employee Performance (EP). Digital Leadership (r = 0.663) and Employee Digital Skills (r = 0.631) show strong positive and significant relationships with EP, indicating that effective leadership and digital proficiency strongly enhance performance. Technology Integration (r = 0.491) and Data-Driven Decision Making (r = 0.487) demonstrate moderate but significant positive correlations, suggesting that digital tools and data use improve task efficiency and decision-making. Organizational

Culture shows a weak but still significant positive relationship (r = 0.175), indicating some influence on performance.

Regression

Table 4 - *Model Summary*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.727[a]	.529	.521	.85965

a. Predictors: (Constant), Organizational Culture, Technology Integration, Data Driven Decision Making, Employee Digital Skill, Digital Leadership.

Table 4 shows the model summary, where the value of R = 0.727 represents the multiple correlation coefficient between the observed values of the dependent variable (Employee Performance) and the values predicted by the model. An R value of 0.727 indicates a strong positive correlation, suggesting that the combination of independent variables—Organizational Culture, Technology Integration, Data-Driven Decision Making, Employee Digital Skill, and Digital Leadership—has a strong linear relationship with Employee Performance.

The R Square value of 0.529 represents the coefficient of determination, indicating that 52.9% of the variation in Employee Performance can be explained by the predictors included in the model. This demonstrates a moderately strong explanatory power, showing that the model captures more than half of the variance in the outcome variable.

Furthermore, the Adjusted R Square value of 0.521 refines this estimate by adjusting for the number of predictors in the model. It suggests that 52.1% of the variance in Employee Performance is explained by the independent variables after accounting for the complexity of the model. The minimal difference between R Square and Adjusted R Square indicates that the model is not overfitted and that all five predictors contribute meaningfully to explaining Employee Performance.

Table 5 - *ANOVA*

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	232.446	5	46.489	62.909	.000[b]
	Residual	206.918	280	.739		
	Total	439.364	285			

a. Dependent Variable: Employee Performance

b. Predictors: (Constant), Organizational Culture, Technology Integration, Data Driven Decision Making, Employee Digital Skill, Digital Leadership

Table 5 presents the ANOVA (Analysis of Variance) results for the regression model predicting Employee Performance using the independent variables: Organizational Culture, Technology Integration, Data-

Driven Decision Making, Employee Digital Skill, and Digital Leadership. The Regression Sum of Squares is 232.446 with 5 degrees of freedom (df), indicating the portion of the total variability in Employee Performance that is explained by the regression model. The Residual Sum of Squares is 206.918 with 280 degrees of freedom, representing the unexplained variance or error in the model.

The Total Sum of Squares is 439.364, which is the sum of the explained and unexplained variance. The Mean Square for Regression is calculated as 232.446 / 5 = 46.489, while the Mean Square for Residuals is 206.918 / 280 = 0.739. The F-statistic is 62.909, which is the ratio of the model variance to the error variance (46.489 / 0.739). A high F-value indicates that the model significantly improves the prediction of the dependent variable compared to a model with no predictors.

The significance level (Sig.) is 0.000, which is less than 0.01, indicating that the regression model is statistically significant at the 1% level. This means there is a very low probability that the observed F-value occurred by chance.
From Table 6 following interpretation can be done

Interpretation of overall factors of Digital Transformation in relation to Employee Performance

Y=a+b1x1+b2x2+b3x3+b4x4+b5x5

EP = .283 -.323x1+.350x2+.175x3-.066x4+ .953x5

R = .962, R2=.925

The regression analysis presented in Table 10 provides insights into the relationship between various independent variables and the dependent variable, **Employee Performance**. The **regression equation** constructed from the unstandardized coefficients is:

Employee Performance = −1.704+0.312(DDDM)+0.204(TI)+0.377(EDS)+0.464(DL)+0.382(OC)

The intercept (constant) value of -1.704 suggests the predicted value of Employee Performance when all predictor variables are zero, although in practical terms, this value is less meaningful and primarily serves to complete the equation.

In terms of hypothesis testing, all five independent variables—Data-Driven Decision Making (DDDM), Technology Integration (TI), Employee Digital Skill (EDS), Digital Leadership (DL), and Organizational Culture (OC)—show statistically significant p-values (all below 0.05), indicating that each variable has a significant positive effect on Employee Performance. Specifically, DDDM has a p-value of 0.000, which is highly significant, and a t-value of 3.997, indicating a strong contribution to the model. This means the null hypothesis (that DDDM has no effect on Employee Performance) is rejected, and the alternative hypothesis is accepted.

Table 6 - *Coefficient*

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.

		B	Std. Error	Beta		
1	(Constant)	-1.704	.683		-2.495	.013
	Data Driven Decision Making	.312	.078	.285	3.997	.000
	Technology Integration	.204	.096	.109	2.122	.035
	Employee Digital Skill	.377	.068	.321	5.561	.000
	Digital Leadership	.464	.071	.397	6.558	.000
	Organizational Culture	.382	.162	.098	2.364	.019

a. Dependent Variable: Employee Performance

b. R = .727, R Square = .529, Adjusted R Square = .521

The standardized beta coefficients (Beta) help identify the relative importance of each predictor. Among them, Digital Leadership (Beta = 0.397) is the most influential factor, followed by Employee Digital Skill (Beta = 0.321) and Data-Driven Decision Making (Beta = 0.285). These three variables emerge as the major predictors of Employee Performance in this model. Technology Integration (Beta = 0.109) and Organizational Culture (Beta = 0.098) also contribute significantly, though their effects are relatively smaller.

Discussion

The present study's findings on Data-Driven Decision Making (DDDM) and Employee Performance align closely with previous research emphasizing the value of data-centric strategies. McAfee and Brynjolfsson (2012) demonstrated that organizations employing data-driven decision-making outperform competitors by 5–6% in productivity and profitability. Similarly, Sharma et al. (2020) highlighted improved employee efficiency through data analytics in technology firms, while Provost and Fawcett (2013) noted that data-driven approaches empower employees to make more informed decisions, enhancing performance. The significant positive relationship found here confirms these insights and supports fostering a data-driven culture to boost employee outcomes.

Regarding Technology Integration (TI), the findings resonate with Davis's (1989) Technology Acceptance Model, which identifies perceived usefulness as a key factor in performance improvement. Mohammadi (2015) and Agarwal and Prasad (1999) also documented positive impacts of technology adoption on individual productivity and decision-making. Though TI positively influences performance here, its somewhat lower effect size suggests its benefits are contingent on complementary factors such as employee digital literacy and organizational support.

Employee Digital Skill (EDS) shows a strong positive association with performance, consistent with van Laar et al. (2017), Ghobakhloo et al. (2012), and Tekkaya et al. (2021), who emphasize digital competence as essential for navigating and

leveraging technological tools effectively. This highlights the critical role of ongoing digital training to enhance workforce capabilities.

Digital Leadership (DL) emerged as the most influential predictor, confirming Kane et al.'s (2015) assertion that visionary digital leaders drive innovation and change management. El Sawy et al. (2016) and Matarazzo et al. (2021) similarly found that digital leadership fosters alignment of digital initiatives with organizational goals, leading to higher engagement and performance, consistent with this study's results.

Finally, Organizational Culture (OC), while positively related to performance, showed a smaller effect size. This aligns with Denison (1990) and Kotter and Heskett (1992), who argue that culture shapes motivation and coordination but may act more as a foundational factor than a direct performance driver in digital contexts. Alvesson and Sveningsson (2015) also emphasize culture's role in fostering innovation and productivity, supporting these findings.

V. Conclusion and Implications

Conclusion

It is found from the analysis chapter that all five independent variables Digital Leadership, Employee Digital Skill, Data-Driven Decision Making, Technology Integration, and Organizational Culture-have a statistically significant and positive effect on Employee Performance. Among these, Digital Leadership is identified as the most influential predictor, indicating that strong leadership in digital initiatives enhances employee output and engagement. Employee Digital Skill follows closely, showing that digitally proficient employees perform better in technology-driven environments. Data-Driven Decision Making also plays a vital role by enabling more informed and effective actions. Although Technology Integration and Organizational Culture show relatively smaller impacts, their contributions remain significant in fostering a productive work environment. Thus, it can be concluded that enhancing digital leadership, improving employee digital skills, and promoting data-informed practices are crucial strategies for boosting employee performance, while supportive culture and effective technology use further strengthen overall outcomes in the organization.

Implications

Based on findings, following implications have been put forward.

Implications for policy makers:

- The findings of this study have several important implications for organizational leaders, HR managers, and policymakers aiming to enhance employee performance in digitally evolving workplaces. First, the strong influence of Digital Leadership highlights the need for organizations to invest in leadership development programs focused on digital transformation, strategic vision, and technological adaptability.

Cultivating such leadership can inspire and guide employees through digital change effectively.

- Second, the significance of Employee Digital Skill underscores the importance of continuous training and upskilling initiatives. Organizations should prioritize digital literacy programs to equip employees with the tools and confidence needed to perform efficiently in technology-driven environments.
- Third, the positive role of Data-Driven Decision Making suggests that organizations should foster a data-centric culture by integrating data analytics into daily operations and encouraging employees to use data for informed decision-making.
- Finally, while Technology Integration and Organizational Culture have relatively smaller impacts, they remain essential. Investments in user-friendly technologies and nurturing a collaborative, innovation-friendly culture will complement efforts in leadership and skills development, collectively boosting employee performance and organizational success.

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