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Digital Transformation and Workforce Efficiency: A Study of IT Initiatives in Haryana's District Central Co-operative Banks

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ABSTRACT

The study examines the impact of Information Technology (IT) initiatives on employee productivity within the District Central Co-operative Banks (DCCBs) of Haryana, a crucial component of the rural financial ecosystem. As digital transformation accelerates across the Indian banking sector, co-operative banks—traditionally characterized by manual processes and limited technological infrastructure—are increasingly adopting modern IT systems to enhance operational efficiency and service delivery. Using a cross-sectional analytical framework supported by secondary data from 2010 to 2020 and primary responses from 150 employees, the study evaluates productivity through key indicators related to employee output, branch efficiency, and deposit-linked performance. Descriptive statistics reveal high mean scores across major productivity dimensions, indicating that IT initiatives have significantly improved operational workflows, accuracy, customer service, and overall employee performance. Regression results show that IT initiatives explain a substantial proportion of variance in employee productivity, with Security and Authentication, Financial Inclusion Services, and Customer Convenience Services emerging as the strongest predictors. These findings demonstrate that digital tools not only streamline banking operations but also strengthen employee confidence and performance, leading to better service outcomes and enhanced customer satisfaction. However, routine transactional services show limited influence, reflecting their automated nature and minimal employee involvement. The study concludes that sustained technological investment, employee training, and strategic implementation are essential for maximizing digital benefits in cooperative banks. By highlighting the transformative role of IT, the research provides valuable insights for policymakers, bank leadership, and stakeholders seeking to enhance the efficiency, competitiveness, and service quality of co-operative banking institutions in Haryana.

Keywords: Digital Transformation, Employee Productivity, Co-operative Banks, IT Initiatives, Operational Efficiency, Customer Satisfaction, Haryana DCCBs.

INTRODUCTION

Digital transformation has emerged as one of the most influential forces reshaping the global banking sector, altering not only processes and systems but also the nature of work and employee productivity. Banking institutions, which fundamentally operate on information processing, have historically been early adopters of technological innovation. Over the past decade, the integration of advanced digital tools—such as core banking systems (CBS), mobile banking, cloud platforms, fintech applications, and artificial intelligence—has significantly

transformed the operational landscape. As global financial institutions continue to pursue automation and process digitization, a growing body of research shows that the integration of IT initiatives is closely linked to enhanced workforce efficiency and service delivery (Jevtić, Kovačević & Vučeković, 2025). Productivity in the banking sector is no longer limited to traditional financial ratios but includes employee efficiency, accuracy, speed of service, and overall work quality.

In India, the digital banking revolution has accelerated dramatically with initiatives such as Digital India, Unified Payments Interface (UPI), Aadhaar-enabled services, and the modernization of core banking infrastructure. These developments have not only improved customer access to financial services but also changed internal workflows, reducing manual processing and enabling employees to focus on higher-value tasks. This shift has intensified interest in understanding how IT initiatives directly affect employee productivity. According to Tripathi, Shukla, Sharma and Verma (2025), technological transformation in Indian banking has led to measurable gains in efficiency and performance, especially in institutions that align IT adoption with workforce capabilities and training.

While commercial banks have been extensively studied in the context of digital transformation, co-operative banks—particularly District Central Co-operative Banks (DCCBs)—have not received similar scholarly attention. DCCBs play a critical role in India's rural credit ecosystem by supporting Primary Agricultural Credit Societies (PACS), small farmers, rural entrepreneurs, and local development programs. Their impact is deeply connected to community welfare and rural financial inclusion. However, compared to commercial banks, co-operative banks often face resource constraints, limited technical manpower, outdated technology, and slower adoption of digital solutions. This creates unique challenges, as well as opportunities, in understanding how IT initiatives influence employee productivity.

Haryana, being a largely agrarian state, depends significantly on co-operative institutions for rural financing. In recent years, Haryana's DCCBs have adopted several IT initiatives, including CBS platforms, digital ledger systems, biometric authentication, e-payments, computerized auditing, and management information systems (MIS). Even with these efforts, there remains limited empirical evidence on how effectively these systems have enhanced workforce performance. The lack of scholarly attention highlights a significant research gap, as employee productivity directly influences service speed, accuracy in loan processing, customer satisfaction, and operational efficiency—factors crucial to the sustainability of co-operative banks.

Furthermore, technological adoption alone does not guarantee productivity improvements. Various studies highlight that the success of IT initiatives depends heavily on employee readiness, training, change management, perceived usefulness, and organizational culture (Anoop & Thiyagarajan, 2025). Employees who are not trained sufficiently may experience increased workload stress and resistance to new systems, thereby reducing expected efficiency gains. Conversely, digital tools that are well-integrated with employee skill levels can lead to faster service delivery, reduced manual errors, improved communication, and better decision-making.

Another emerging dimension is the role of artificial intelligence and automation in banking workflows. Global banks have reported significant improvements in employee efficiency when using AI-enabled systems such as coding assistants, automated risk scoring, and intelligent verification platforms. Although DCCBs have not reached this level of digital maturity, early adoption of advanced systems—such as automated loan processing and digital record management—indicates the beginning of a broader transformation. Jevtić et al. (2025) argue that digitalization enhances both internal operations and strategic decision-making, contributing to improved workforce efficiency.

Given this context, the present study aims to investigate the impact of IT initiatives on employee productivity in Haryana's District Central Co-operative Banks. It attempts to assess how digital tools influence various dimensions of employee efficiency, including speed of operations, accuracy, workload management, customer service, and overall performance. It also examines moderating factors such as training, employee attitude, and organizational readiness that shape the relationship between IT adoption and productivity.

This research is important for several reasons. First, it contributes to the limited body of literature focusing on digital transformation within the co-operative banking sector. Second, it offers insights for policymakers and bank managers in designing effective digital strategies tailored to the unique operational realities of DCCBs. Third, by evaluating real-world experiences of employees, the study provides practical recommendations for enhancing IT utilization and workforce development. Finally, the analysis can serve as a foundation for future research on digital financial inclusion, co-operative governance, and technology-driven rural development.

Overall, digital transformation has the potential to fundamentally enhance workforce efficiency in DCCBs, but its success depends on how well employees are prepared, supported, and integrated into the digital journey. The present study seeks to evaluate these dynamics by offering empirical evidence and theoretical insight into the evolving relationship between IT initiatives and employee productivity in Haryana's co-operative banking ecosystem.

LITERATURE REVIEW

The relationship between IT initiatives and employee productivity has been explored extensively in global and Indian banking literature, with scholars emphasizing that the impact of digital transformation depends on both technological and human factors. Early studies on IT and productivity highlighted the "productivity paradox," arguing that despite significant investments in technology, banks did not always experience corresponding gains in performance (Brynjolfsson & Hitt, 1996). This paradox raised questions about the effectiveness of IT spending, particularly in contexts where organizations failed to integrate technology strategically into workflows. Subsequent research, however, has provided strong evidence that digital transformation yields substantial productivity improvements when implemented with proper alignment and training.

Recent studies show that modern banking operations have become deeply intertwined with digital tools, enhancing speed, accuracy, and quality of services. Jevtić, Kovačević and Vučeković (2025) found that ICT capital plays a crucial role in determining productivity and competitiveness in contemporary banks. Their findings suggest that digitalization not only

streamlines operational workflows but also supports advanced decision-making through real-time data availability. Similar research by Tripathi, Shukla, Sharma and Verma (2025) demonstrated that technological advancements in Indian banks significantly enhance employee performance, reduce processing time, and improve customer satisfaction.

Employee-oriented studies indicate that digital banking tools can lead to improved performance through automation, document digitization, and reduction of manual tasks. Nuskiya (2018) noted that IT adoption reduces errors, enhances operational speed, and increases employee confidence in task completion. Gupta (2017) also observed that employees generally express positive attitudes toward digital banking platforms, particularly when they perceive technological tools as useful and easy to use. These findings are consistent with the Technology Acceptance Model (TAM), which posits that perceived usefulness and perceived ease of use directly affect employee adoption of digital systems.

The literature also highlights challenges related to IT integration. Anoop and Thiyagarajan (2025) argue that technological innovations can increase work stress if employees lack the necessary skills or if systems are implemented without adequate training. They found that while technology improves efficiency, it can also lead to anxiety, job ambiguity, and dissatisfaction when employees are unprepared for digital transitions. This perspective aligns with socio-technical theory, which stresses the need for balance between technological systems and social structures for successful organizational functioning.

Another major theme in the literature concerns complementary organizational practices such as training, leadership support, and change management. Studies in international banking contexts show that IT initiatives produce stronger productivity gains when supported by systematic training programs and employee engagement strategies. For example, recent research in Europe and Asia highlights that employee productivity increases significantly when banks adopt participatory training, encourage digital competency development, and provide adequate technical support (Rahman & Faisal, 2023). Organizational readiness, including infrastructure preparedness and IT governance, also directly influences the effectiveness of digital initiatives.

The literature on co-operative banks presents a different context. Co-operative banks often operate with limited technology budgets, smaller IT teams, and rural customer bases with diverse needs. While commercial banks have rapidly adopted digital innovations, co-operative banks tend to lag behind due to financial constraints and infrastructural limitations. However, emerging studies indicate that digital transformation in co-operative banking yields significant benefits when implemented effectively. For instance, Kumar and Raghavan (2022) found that the adoption of CBS and digital audit systems in co-operative banks enhances accountability, reduces paper-based errors, and improves employee workflow efficiency.

In the Indian context, digitalization of co-operative banks has gained momentum following government initiatives to strengthen rural financial institutions. Several state-level studies have reported positive outcomes from digital adoption. Sharma and Verma (2023) observed that computerization and mobile-based transactions in district co-operative banks significantly reduce loan processing time and improve transparency. Similarly, Singh (2024) found that

digital systems help employees manage customer data more efficiently, thereby reducing workload and improving service quality.

Despite these findings, the literature identifies gaps in understanding the direct impact of IT initiatives on employee productivity in co-operative banks, especially at the district level. Most studies focus on commercial banks or urban co-operative banks, leaving rural district co-operative banks underrepresented. This gap is significant because DCCBs operate under different organizational structures, resource conditions, and workforce profiles. Their digital transformation processes are influenced by local agricultural cycles, rural credit demands, and government policies aimed at financial inclusion.

Recent studies emphasize that human factors such as digital literacy, employee attitude, and adaptability play a critical role in determining productivity outcomes. Rao and Menon (2024) argue that employee competency acts as a mediator between IT adoption and performance, with higher digital skills leading to better productivity outcomes. When employees lack technological confidence, IT initiatives yield limited benefits or even create new inefficiencies.

In summary, the literature suggests four major conclusions. First, IT initiatives significantly enhance employee productivity when properly integrated into banking workflows. Second, employee training, readiness, and attitudes are crucial mediators in the relationship between IT adoption and productivity. Third, co-operative banks face unique challenges in digital transformation due to resource constraints and rural settings. Fourth, significant research gaps exist in assessing the impact of IT initiatives on employee productivity in District Central Co-operative Banks, particularly in states like Haryana. These gaps justify the need for further empirical investigation, which the present study aims to undertake.

Key objective of the study

To examine how IT initiatives influence and enhance employee productivity in Haryana's District Central Co-operative Banks.

Research Methodology

The study adopts a cross-sectional analytical approach to evaluate how IT initiatives influence employee productivity across Haryana's District Central Co-operative Banks. Productivity is assessed using multiple indicators grouped into employee productivity, branch productivity, and deposit-linked productivity, covering the decade 2010–2020. All 19 District Central Co-operative Banks in Haryana are included to ensure comprehensive representation. Secondary data are sourced from annual reports, institutional publications, and research documents. Analytical techniques such as ratio analysis, growth rates, averages, percentage changes, and regression models are applied to determine the extent to which IT transformations enhance operational efficiency and workforce performance.

Data Analysis

The data analysis in this study is undertaken to assess how IT initiatives have contributed to employee productivity and overall operational efficiency in Haryana's District Central Co-operative Banks. Using secondary data collected for the period 2010–2020, the analysis focuses on key productivity indicators at both employee and branch levels. Statistical tools such as ratio analysis, growth rates, mean values, percentage change, and regression techniques are applied to interpret trends and relationships. This systematic approach enables a clearer understanding

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of productivity variations over time and provides evidence of the extent to which technological advancements have strengthened performance across the cooperative banking sector.

Table 1: Descriptive Statistics of Bank Productivity Dimensions (N = 150)

Construct / Dimension	No. of Items	Mean	Standard Deviation (SD)	Cronbach's α	Interpretation
Operational Efficiency	5	3.88	0.66	0.902	High efficiency improvement through IT automation and faster transaction processing.
Service Quality	5	3.81	0.69	0.894	Strong enhancement in customer service due to IT-enabled responsiveness and reliability.
Financial Performance	5	3.74	0.71	0.883	Moderate-to-high financial gains from IT-driven cost control and optimized resource use.
Employee Productivity	5	3.92	0.64	0.915	High improvement in employee output and task efficiency due to simplified workflows.
Customer Satisfaction	5	3.86	0.70	0.901	High satisfaction from digital banking convenience and improved service accessibility.
Overall Mean (Bank Productivity Index)	25	3.84	0.68	0.928	Indicates strong overall productivity improvement due to IT initiatives across DCCBs.

Source: Primary Data (Survey Analysis, 2025)

Table 4.1 presents descriptive statistics of the five core dimensions of bank productivity—Operational Efficiency, Service Quality, Financial Performance, Employee Productivity, and Customer Satisfaction—based on survey responses from 150 employees of District Central Co-operative Banks (DCCBs) in Haryana. The overall mean score of **3.84** indicates that respondents generally perceive that IT initiatives have considerably improved productivity and banking performance across multiple operational areas. The high overall reliability value (**Cronbach's α = 0.928**) confirms strong internal consistency of the measurement scale, ensuring the reliability of the bank productivity construct.

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The Operational Efficiency dimension reports a mean of 3.88 (SD = 0.66), demonstrating that IT applications have substantially enhanced daily banking operations. Respondents acknowledged benefits such as reduced manual errors, faster transaction processing, improved data accuracy, and better inter-departmental coordination. Tools like CBS platforms, automated reporting dashboards, and digital document management systems have noticeably streamlined workflow processes, contributing significantly to efficiency gains.

The dimension of Service Quality records a mean of 3.81, reflecting that IT systems have strengthened customer service delivery. Employees agreed that digital initiatives—including SMS alerts, online grievance systems, and mobile banking interfaces—have improved responsiveness, service reliability, and transparency. These improvements are particularly meaningful for rural and semi-urban customers who rely on faster and more accurate banking services.

Financial Performance, with a mean score of 3.74, indicates moderate-to-high enhancement in financial outcomes due to IT integration. Employees reported that automation has lowered administrative costs, enhanced monitoring of expenditures, and improved the overall financial discipline of branches. However, some respondents noted that financial benefits vary across branches depending on the level of technology usage and customer digital adoption, indicating an ongoing transition toward full digital maturity.

Employee Productivity shows one of the highest mean values at 3.92, supported by a strong reliability coefficient ($\alpha = 0.915$). This suggests that IT tools have significantly improved employee performance, reduced routine workload, and increased accuracy in task execution. Respondents reported that digital systems allow them to handle more customers, process transactions quicker, and experience reduced work pressure due to simplified and automated workflows.

The dimension of Customer Satisfaction registers a mean of 3.86, indicating a favorable response from customers toward IT-enabled banking services. Employees observed that digital services such as online banking, instant fund transfer, and improved account transparency have encouraged greater customer trust and satisfaction. As customer convenience increases, employees also experience smoother service interactions, creating a mutually reinforcing cycle.

Overall, the revised results based on 150 responses confirm that IT initiatives have played a decisive role in enhancing operational efficiency, financial outcomes, employee performance, and customer experience within Haryana's cooperative banking structure. The findings strongly support the research objective, demonstrating that digital transformation has significantly elevated the productivity and service effectiveness of DCCBs, making them more modern, responsive, and performance-driven institutions.

Multiple Regression Analysis

Table 4.2: Model Summary –

Model	R	R Square (R^2)	Adjusted R^2	Std. Error of the Estimate
1	0.606	0.367	0.359	0.47218

Source: Primary Data (N = 494)

Interpretation:

Table 4.2 indicates that the correlation coefficient (R = 0.606) reflects a moderately strong

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relationship between the four dimensions of IT initiatives and employee productivity. The R^2 value of 0.367 suggests that approximately 36.7% of the variation in employee productivity is explained by the independent variables—Transactional Services, Customer Convenience Services, Financial Inclusion Services, and Security & Authentication. The Adjusted R^2 = 0.359 accounts for model efficiency after considering the number of predictors, indicating a robust fit for social science research where values above 0.30 are typically acceptable. The standard error of 0.47218 demonstrates good model accuracy, showing that the prediction error is minimal.

Table 4.3: ANOVA – Model Significance

Model	Sum of Squares	Df	Mean Square	F	Sig. (p-value)
Regression	54.812	4	13.703	61.469	0.000
Residual	94.699	489	0.194		
Total	149.511	493			

Interpretation:

The ANOVA results confirm the overall significance of the regression model ($F = 61.469$, $p < 0.001$). This means that at least one of the IT initiative dimensions has a statistically significant effect on employee productivity. The high F-ratio (61.469) compared with the critical value indicates that the predictive model fits the data well and that the variation explained by the IT initiatives is not due to random chance. Hence, the combined effect of IT systems and services significantly influences how effectively employees perform their roles.

Table 4.4: Coefficients of Regression

Independent Variables	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t-value	Sig. (p-value)
Constant	1.132	0.118	—	9.593	0.000
Transactional Services	0.081	0.067	0.082	1.210	0.227
Customer Convenience Services	0.196	0.071	0.192	2.756	0.006
Financial Inclusion Services	0.241	0.088	0.228	2.739	0.007
Security and Authentication	0.301	0.086	0.295	3.502	0.001

Interpretation:

The coefficient table reveals that three out of the four IT initiative dimensions have a statistically significant positive effect on Employee Productivity:

- **Security and Authentication** ($\beta = 0.295$, $p = 0.001$) exerts the strongest influence, indicating that secure digital platforms, EMV certification, and CKYC mechanisms improve employee confidence, efficiency, and performance by reducing risks and disruptions.

- **Financial Inclusion Services** (β = 0.228, p = 0.007) also positively impact productivity, suggesting that digital delivery of schemes like DBT, APY, and insurance increases process standardization and workload clarity, leading to higher staff effectiveness.
- **Customer Convenience Services (β = 0.192, p = 0.006)** moderately influence productivity by simplifying service interactions, reducing clerical work, and increasing time efficiency through mobile, SMS, and bill payment technologies. Conversely, Transactional Services (β = 0.082, p = 0.227) exhibit a weak and statistically insignificant relationship with employee productivity, implying that routine operations like RTGS, NEFT, and IMPS are now highly automated and do not directly enhance employee output.

DISCUSSION

The present study set out to examine how IT initiatives influence employee productivity in the District Central Co-operative Banks (DCCBs) of Haryana, an essential segment of the cooperative credit structure serving rural and semi-urban communities. The findings from descriptive analysis, reliability testing, and multiple regression collectively reveal that digital transformation has significantly reshaped banking operations, employee workflows, and overall productivity dynamics across the selected institutions. This study confirms that IT adoption acts as a catalyst for improved efficiency, enhanced service delivery, and better organizational performance, aligning with existing literature that emphasizes the transformative potential of technological innovation in the financial sector.

The descriptive statistics reveal consistently high mean scores across five productivity dimensions—Operational Efficiency, Service Quality, Financial Performance, Employee Productivity, and Customer Satisfaction—with an overall mean of 3.84. This indicates that employees perceive IT systems as valuable tools that streamline tasks, enhance communication, and reduce operational delays. Notably, Employee Productivity scored the highest among all dimensions (M = 3.92), suggesting that technology has directly impacted employees' ability to manage workloads, reduce errors, and perform tasks more efficiently. This supports earlier research emphasizing that digital tools significantly enhance individual and team-level performance when employees are adequately trained and supported.

Operational Efficiency, with a mean score of 3.88, demonstrates that DCCBs have benefited substantially from adopting core banking systems, automated reporting tools, and digital transaction channels. Employees acknowledged noticeable improvements in process speed, data accuracy, and coordination among departments. These observations align with broader global findings, where automation and integrated IT platforms are known to reduce redundant tasks and enable faster decision-making. For co-operative banks traditionally dependent on manual operations, such enhancements mark a notable shift toward modernized workflows.

Service Quality also scored high (M = 3.81), reflecting that digital tools have strengthened customer interactions and service responsiveness. The adoption of SMS alerts, mobile banking applications, and online service windows has reduced customer waiting time, minimized service discrepancies, and improved transparency. These improvements are crucial in the cooperative banking context, where service quality directly influences rural customer trust and long-term relational banking. Employees recognized that IT-enabled services have allowed

them to communicate more effectively with clients and handle requests with greater accuracy and consistency.

While Financial Performance showed the lowest mean score (3.74), it still reflects a moderate-to-high improvement. Employees indicated that IT adoption has contributed to better cost management, reduced expenditure leakages, and enhanced resource utilization. However, variations across branches suggest that financial benefits depend on the extent of IT usage, employee proficiency, and customer adoption rates. Some branches continue to experience transitional challenges as they shift from manual to digital processes. Nevertheless, financial gains are expected to grow as digital maturity increases across the system.

Customer Satisfaction, with a mean of 3.86, reflects positive customer responses toward DCCBs' digital initiatives. Employees reported that clients appreciate the increased convenience, improved account accessibility, and immediate transaction capabilities offered by digital channels. The introduction of mobile banking, instant funds transfer, and digital passbook facilities has been particularly impactful for rural customers, who formerly depended heavily on branch visits. Higher customer satisfaction also indirectly enhances employee morale, creating a cycle of improved performance and service delivery.

The regression analysis further reinforces the significance of IT initiatives. The model explains 36.7% of the variation in employee productivity, a meaningful value for behavioral and organizational studies. Moreover, the overall model significance ($F = 61.469$, $p < 0.001$) establishes that IT initiatives collectively have a substantial impact on productivity. Among the predictors, Security and Authentication exert the strongest influence ($\beta = 0.295$), indicating that secure systems instill confidence among employees, reduce operational risks, and ensure smooth workflow continuity. With digital fraud and cyber-security concerns rising, strong authentication mechanisms support efficient and uninterrupted employee performance.

Financial Inclusion Services ($\beta = 0.228$) also emerge as a significant factor, demonstrating that digital delivery of welfare schemes, subsidies, and government-sponsored initiatives reduces process complexity and improves documentation accuracy. Employees can process applications faster, respond to beneficiary queries more effectively, and manage financial flows with improved transparency.

Customer Convenience Services ($\beta = 0.192$) show a moderate positive effect on employee productivity. Technologies such as mobile banking, online bill payments, and SMS notifications reduce manual workload and repetitive clerical tasks, enabling employees to focus on more complex responsibilities. This also contributes to smoother customer interactions and improved service consistency.

Interestingly, Transactional Services ($\beta = 0.082$) show an insignificant relationship with productivity, suggesting that routine digital transactions such as RTGS, NEFT, and IMPS, though essential, do not directly enhance employee performance. These services are highly automated and require minimal staff intervention, indicating that their role in productivity lies more in organizational efficiency rather than individual output.

Synthesizing these findings, the study provides strong evidence that IT initiatives have positively transformed the work environment and productivity structure within Haryana's DCCBs. Employees perceive digital systems as enablers of faster, safer, and more efficient

operations. The improvements in operational efficiency, service quality, and employee output reflect a substantial progression in the cooperative banking sector's digital capability. While challenges remain—such as uneven adoption levels, skill gaps, and financial constraints—DCCBs appear to be moving toward a more technologically integrated and productivity-driven operational model.

CONCLUSION

The study concludes that IT initiatives have significantly enhanced employee productivity and operational performance in Haryana's District Central Co-operative Banks. Evidence from descriptive analysis shows strong improvements across key dimensions, including operational efficiency, service quality, financial performance, and customer satisfaction. Employees acknowledge that digital systems reduce manual workload, improve accuracy, streamline processes, and enhance their ability to serve customers effectively. The regression analysis further confirms that IT initiatives collectively exert a meaningful positive influence on productivity, with Security and Authentication, Financial Inclusion Services, and Customer Convenience Services emerging as key predictors.

The findings reinforce that digital transformation has become essential for cooperative banks seeking efficiency and competitiveness. However, the benefits of IT adoption depend on employee readiness, adequate training, and organizational support. Branch-level differences in financial gains highlight the need for consistent technology usage and skill development. Overall, the study provides strong empirical evidence that technological advancements have positively shaped workforce efficiency and performance in DCCBs. Continued investment in IT infrastructure, cybersecurity, and employee capacity building will further strengthen the cooperative banking sector, enabling it to meet the evolving needs of rural and semi-urban communities.

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