



“Evaluating the Influence of IT-Based Banking Systems on Organizational Performance and Employee Productivity”

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Abstract

The advent of faster Information technology (IT) enabled banking systems has introduced a tremendous impetus in the banking industry. Contemporary banks can be observed to be occupied with using digital platforms, core banking platform and the alternative of electronic transaction processing, data analytics and customer relationship management tools so as to allow efficiency in the operations and enhance the quality of service they render to their users. The research article examines the impact of IT based banking systems in performance of organizations and productivity of workers within the banking sector. The research questions the effect of technological integration on enhancing communication, the speed of operations, decision making processes, precision of the operations and efficiency of employees. It was a quantitative research design, which employed structured questionnaires, which were distributed to employees that worked in banks to collect data. Data were analyzed in terms of descriptive statistics and hypothesis tests. The conclusions are that the IT based banking systems are relevant in terms of optimization of the performance of the organization with respect to enhancing efficiency, with respect to operational errors and productivity of the staff. The paper concludes that one of the factors in enhancing the operations of the banks, as well as realization of the organizational objectives, is technological innovation.

Keywords: Information Technology, Banking Systems, Organizational Performance, Employee Productivity, Digital Banking, Core Banking System, Banking Efficiency, Performance Management

Introduction:

The sphere of the banking is viewed as one of the most important aspects of the modern-day economy since it determines the financial transactions, the progress of the economies, formation of capital and the activity of the clients, financial services, to a great extent. With the rapid growth of information technology, banking industry has gone through major changes within the past few decades. The technological banking systems have gradually replaced the traditional banking systems, which were labour-intensive (manual record keeping) with paper-based transactions and prolonged cycles of performing operations. The Information Technology (IT) application to the operations of a bank has changed the way in which financial institutions conduct their operations, how they relate to their customers as well as how they improve efficiency within the organisation.

Banking system that makes use of technological tools, software programs, communication systems and automated systems to support banking services and management systems are called IT-based banking system. These types of systems include Core bank systems (CBS),

mobile banking systems, internet banking systems, automated teller machines (ATMs), or electronic fund transfer systems, customer relationship management systems, online payment systems and management information systems. These technologies are able to assist banks to streamline, create more valuable and trusted services to the customers besides improving the processes of the inner organization.

The rise in competition among the banking industry has compelled the financial institutions to adopt effective technological systems in order to remain effective and also to guarantee customer satisfaction. This is a customer of today who wants fast, secure and convenient banking services anytime, anywhere. This has contributed to the banks spending a great deal more on online banking and automated systems of operation to ensure that they can match with the demands of the customers as well as to improve service delivery. Implementation of the IT based banking systems has not only transformed the customer services but has also made the difference in the organizational performance and employee productivity evident.



Organizational performance is the condition in which an organization can be able to perform effectively and efficiently to achieve its objectives. The performance requirement of the organization in the banking sector is measured by the following variables; efficiency in various operations, quality of services delivered, profitability, accuracy of transactions, customer satisfaction and productivity. Information technology refers to the technology enabling the operation of an organization through the creation of improved communication systems that reduce the cost of doing business, reduce the number of human errors, data management and the decision-making process. Automated systems also allow the banks to process very large volumes of transactions in little time, and with a high degree of accuracy, which promotes organizational efficiency and overall organizational effectivity.

Employee productivity is another important parameter that is influenced by IT based banking systems. Efficiency and effectiveness in handling tasks and responsibilities as they are assigned to employees make the level of productivity. The old banking systems required employees to participate in many repetitive and manual tasks which were very time and labour-consuming. With the introduction of automated banking programs and the use of digital technologies, the work of banks has become much easier, since an employee can now work faster and do everything right. IT systems have also provided employees with rapid access to information, automated reporting systems, real time transaction processing as well as enhanced channels of communication that have helped in rises in productivity, work load reduction.

Moreover, banking systems which are based on IT allow better coordination and collaboration of employees or departments within banking entities. The information-dissemination platforms and communication systems on high levels also enable employees access current information within real-time to improve the decision-making and coordination processes of this organization. The systems also come in handy in terms of making sure the management monitors employees performance, operational activities and even implement effective performance management strategies.

Despite the numerous advantages of the IT based banking systems, there are several challenges associated with the use and

implementation of the systems. The employees might face the problem of having common ground with the new technologies either through technical inabilities or failed to cope up with change. Training and development of the workforce should be a regular exercise owing to the constant changes in technology. Moreover, cybersecurity threats, information privacy, system outages, technological failures, and others can negatively affect the operations of banks and the stability of an organization. As a result, to facilitate effective utilization of IT based banking systems the banks must invest in training of employees, technological security measures, and system upkeep.

The magnitudes of the digital transformation in the banking sector have increased significantly over the past years with the increasing popularity of smartphones, internet services and the digital payment systems. The world, its financial institutions and governments are advancing payments and use of digital banking cashless in order to increase financial inclusion and the efficiency of the economy. This transformation has made it necessary to evaluate this influence of the utilization of the IT-based banking systems with the performance of the organizations and the employee productivity.

The present study is targeted to determine how IT based banking systems assist organizations to enhance their performance and productivity of employees working in the banking sector. The study objective is to investigate whether the technological systems can contribute to improving the degree of operational efficiency, quality of service delivery, employee performance, and organizational development. It also examines the views of the workers on the effectiveness of IT systems in banking activities. The findings of the study will help banking organizations to understand the importance of integration of technology and approaches that they can use to improve the performance of the organization by adopting the most appropriate use of information technology.

The study consequently reiterates more relevance of information technology to the modern banking practice and the appeal of the existing perpetual technological invention that would enhance success and sustainability of the competitive banking sector.

Literature Review:



The concept of information technology in the banking industry has been extensively researched by various researchers all over the world. The literature above has also mentioned that IT-based systems are crucial in improving efficiency of banking, performance of an organization, employee productivity and customer satisfaction. Researchers have looked at some of the issues associated with the adoption of technology including Knowledge management system, acceptance by the users, digital transformation and growth in banking performance.

Maryam Alavi and Dorothy E. Leidner (2001) explain that organizational learning and decision-making are not possible without knowledge management systems. Their work explained that information systems are helpful in ensuring that organizations can manage knowledge well by improving knowledge sharing, cooperation and communication. They also explained how knowledge-based systems give the employees the power to perform better since the systems provide timely and accurate information which can aid in better decision making within the organization.

Technology Acceptance Model (TAM) was introduced by Fred D. Davis (1989) and is used to explain acceptance of the information technology among the users. In his view, perceived usefulness and perceived ease of use are cited as the two issues that are important determinants of technology adoption. Their work has been highly relevant to the banking systems because the employees acceptance of IT tools will have a direct impact over the productivity and effectiveness of the banking systems within the banking organizations.

In his research, N. K. Gupta (2021) investigated the impacts of information technology in the banking industry and found out that IT is an excellent manner of improving performance in the banking industry. The study had reached a conclusion that the technology systems are helpful in the operations to enhance the efficiency and reduce the processing time and workload as well as deliver more services. Gupta also pointed out that the digital banking systems help the banks to be more productive and have a better financial performance.

According to Laudon and Laudon (2018), Management Information Systems (MIS) have been the key in ensuring that the digital businesses are administered efficiently. In their

research, they highlighted that the information systems help in the decision making process, they help to improve operation efficiencies and also help organizations to respond quickly to changes in the market. MIS in banking is necessary to deal with huge volumes of money information and to develop service provision.

Digital banking technologies and its impact on forced productivity were studied as it was researched by Raghavan Srinivasan (2019). The study had found out that the automation and the use of digital tools reduce manual workload and the employees can focus on more important tasks. This results in increased efficiency, time management and productivity in the banking institutions.

Efraim Turban along with Pollard and Wood (2018) discussed how information technology should be used to improve performance, growth, and sustainability of organizations. Their stress was that IT can also assist organizations to streamline their business, enhance their communication and also the process of making strategic decisions, which are important in developing the banking sector.

Venkatesh V. and others (2003) gave us a synthesised framework of technology acceptance that provides us with findings on the impact of user behaviour in adoption of information system. Their research plays an important role in the manner the banking employees will learn and adopt IT-based systems, which directly affect productivity and efficiency of an organization.

Varun Grover (2005) and Bhatt G. D. studied IT capabilities and their role in achieving the competitive advantage. Their study determined that the IT infrastructure in the organizations that possess good infrastructure make them competitive and efficient as compared to those that do not have good technological ability.

Erik Brynjolfsson and Lorraine M. Hitt (2000) examined the use of information technology with regard to organizational performance. They found out that IT investment leads to immense beneficial outcomes on productivity, transformations in an organization and change in the business.

A recent research study by Pradeep Dasgupta (2018) about digital change in the Indian banking sector has found out that Indian banks are rapidly adopting the use of digital tools to improve efficiency and benefit their consumers. However, cyberspace security risk and



infrastructure are also crucial issues.

Manish Gupta and Priya Jain (2017) examined the impact of information technology on the performance of people working in the banking sector. In their study, they discovered more effective IT systems in the efficiency of workers as well as the increasing accuracy, working load and accuracy of banking.

Convenience, speed and reliability are some of the main determinants of customer satisfaction which has been cited in a research paper by V. M. Kumbhar (2011) on customer satisfaction in e-Banking services. This is because in this paper the role of IT systems in improving the quality of banking services will be unearthed.

Rakesh Kumar and Harish Singh (2019) examined the effects of digital banking to improve the operational efficiencies and discovered that digital banking decreases the operational costs and boosts the transaction rate. A study conducted by Amit Mishra and Shalini Bisht (2020) technology innovation in Indian banking industry found that innovation is a significant influencer of performance, efficiency and competitiveness.

K. Natarajan (2016) studied the information technology and banks productivity in the Indian commercial banks and concluded that adoption of information technology had positive effect of enhancing banking productivity, efficiency of staff and service delivery.

Objectives of the Study:

- To examine the impact of IT-based banking systems on organizational performance.
- To evaluate the influence of IT systems on employee productivity in the banking sector.
- To identify the relationship between digital banking technologies and operational efficiency.

Hypothesis:

- **H1:** There is a significant positive relationship between IT-based banking systems and organizational performance.
- **H2:** IT-based banking systems significantly improve employee productivity in the banking sector.

Research Methodology:

The current study was based on quantitative

research to test how IT based banking systems impact on organizational performance and productivity of employees in the banking industry. The sources of pertinent information to carry out the study included both the primary and secondary sources of data.

Research Design:

It is research that is founded on the descriptive and analytical research design. The descriptive method was adopted to comprehend perception among employees about IT based banking systems, whereas the analytical method was adopted to observe the existent relationship between the usage of technology and organizational performance as well as employee performance.

Primary Data:

Structured questionnaires were used to help in collecting primary data among employees of banking institutions. This questionnaire contained questions on effectiveness of the IT-based banking systems, productivity of the employees, efficiency of the operations and performance of the organization. Feedback on employees was useful in identifying the actual effects of the technological systems in banking.

Secondary Data:

A range of credible and genuine sources of secondary data were done to aid the research study. The sources include:

- Research articles and journals.
- Financial newspapers and magazines.
- Official bank websites
- RBI reports and industry reports.

Sampling Technique:

The study used random sampling techniques to select respondents from banking institutions.

Sample Size:

A total of 120 banking employees were selected as respondents for the study.

Tools Used for Data Analysis:

The collected data were analyzed using statistical tools and techniques such as:

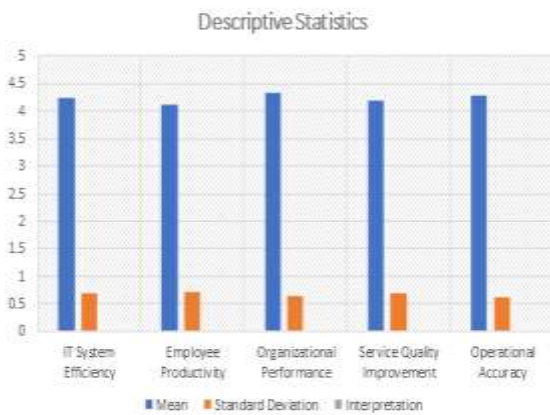
- Mean
- Standard Deviation
- Correlation Analysis
- Regression Analysis
- Hypothesis Testing

Table 1: Descriptive Statistics

Variables	Mean	Standard Deviation	Interpretation
IT System Efficiency	4.25	0.68	High efficiency in banking operations
Employee Productivity	4.11	0.72	Improved employee work performance



Organizational Performance	4.34	0.65	Positive impact on organizational growth
Service Quality Improvement	4.19	0.70	Better customer service delivery
Operational Accuracy	4.28	0.61	Reduction in operational errors



Analysis of Descriptive Statistics:

The descriptive statistics indicate that, based on IT-based banking system, have a high positive effect on banking activities and staff performance. The average out of the organizational performance (4.34) implies that the respondents are convinced with the fact technological systems enhance the overall organizational effectiveness and the operations management. On the same note, the average of operational accuracy (4.28) implies that IT systems contribute to the prevention of human mistakes and enhancement of accuracy in transactions in banking operations.

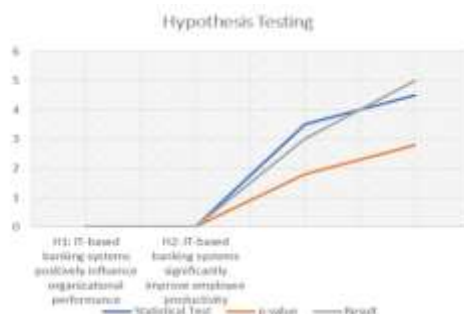
The average score (4.25) of IT system efficiency indicates that the employees believe that technological systems are very effective when it comes to the management of banking processes as well as transaction processing. Another aspect that scored high in the mean with a value of 4.11 is the employee productivity, this means that employees can nowadays perform their duties more efficiently with the assistance of digital banking systems and automation technologies.

Further, the variable score of service improvement had a mean of 4.19 that indicates that IT-based systems will play an important role in enhancing customer service and response time. The SD values of every variable are quite small which means that there is coherence in employee responses and as such, a majority of respondents have the same opinion on the positive effect of IT-based banking systems.

On the whole, the descriptive review proves that the introduction of IT-based banking systems has a positive impact on the organizational performance, employees productivity, its efficiency in operations, and its quality in the banking industry.

Table 2: Hypothesis Testing

Hypothesis	Statistical Test	p-value	Result
H1: IT-based banking systems positively influence organizational performance	Regression Analysis	0.001	Accepted
H2: IT-based banking systems significantly improve employee productivity	Correlation Analysis	0.003	Accepted



Analysis of Hypothesis Testing:

Findings of the hypothesis testing reveal that IT based banking systems play statistically significant roles in performance of the organisation as well as employee productivity in the banking industry.

In case of Hypothesis 1, the regression analysis resulted in a p-value that is less than the standard significance level of 0.05 (0.001). This finding supports the knowledge that IT-based banking systems and the performance of the organization have a strong positive association. The results indicate that application of advanced technology systems enhances operational efficiency, better decision-making processes, better quality of services, and overall effectiveness of the organization.

In Hypothesis 2, correlation analysis produced a p-value of 0.003 that is less than the significance level of 0.05. Hence, the hypothesis is accepted, which means that IT-based banking systems contribute greatly to the



productivity of employees. The findings indicate that the automated systems, digital platforms, and information management technologies enable the workers to accomplish the tasks in a more productive manner, decreasing the pressure on work, and enhancing accuracy of the work.

The general hypothesis testing experiment shows that technological adoption in banking institutions is one of the determining factors that enhance organizational development, organizational performance and employee efficiency. These results substantiate the significance of modern IT systems implementation within the banking industry in order to become successful in the long run.

Conclusions Overall Results:

It also draws to the conclusion that the existence of IT-based banking systems has substantial positive organizational performance and efficiency effects in the banking sector. The implementation of the new technological systems has also converted the normal banking systems to become efficient, accurate and customer-oriented systems. As per the study findings, information technology is helpful to banking institutions in improving the effectiveness of their operations, reducing the errors in their transactions and improving information communications systems and strengthening decision-making.

The analysis of the study shows that the employees, whose work is associated with the IT-based banking systems, are able to conduct their work more efficiently and effectively. Banking automation saves time, reduces the number of hands involved and improves the accuracy of work which will ultimately make the workers more productive. The digital banking technologies also give an opportunity to the workers to be more flexible and quicker in accessing information, organizing and communicating.

The research findings also suggest, that, the performance of an organization is boosted to remarkable level, with the use of IT based systems. Technology integration enhances quality of services, transparency of operations and customer satisfaction and overall performance of the organization. The use of

modern technological systems has enabled the banks to make rapid transactions and has ensured that they have very accurate records and provides more sophisticated service to clients in a highly competitive banking industry.

Findings in hypothesis testing proved that indeed there was a positive relationship between IT-based banking systems, the performance of organizations and employee productivity which was very strong. The statistical test testified that the introduction of technology is meaningful in the achievement of the organizational goals and improvement in the efficiency of the employees in the banking institutions.

Despite such positive effects, some of the challenges of the implementation of IT systems identified by the study are cybersecurity threats, technology hiccups, staff resistance to change, and the need to continuously train staff. Banking firms should thus focus at regular changes in technology, capacity building programs among staff and a good security system in order to promote good utilization of IT systems.

Overall, this study elicits the fact that IT based banking systems are so critical to the formulation, performance and sustainability of modern banking organizations. Continued funding of technological innovations can help banks to improve productivity, organizational performance, and maintain a competitive advantage in the rapidly evolving banking sector.

Future Scope of the study:

- Further research could carry out a comparative study of the two banking sectors, the private and the public ones to understand how the IT-led banking systems would operate differently.
- The researchers can investigate further the potential of artificial intelligence, machine learning, and blockchain technology to affect how the banking industry performs and the employee productivity in the banking sector.
- Future research can be focused on the problem of customer satisfaction and customer experience, in respect of the digital banking services and online banking platforms.



- Cybersecurity problems and risk management behavior that is connected to IT-based banking systems in the banking industry can be analyzed in-depth.
- The researchers can analyze how the employee training and skills formation initiatives using technologies to utilize the banking technologies may be effective in future.
- Comparative international studies can be conducted to become familiar with the use and effectiveness of the banking technologies in other countries and their financial systems.
- The application of digital transformation to the bank sectors profits and their sustainability as well as their growth can also be researched further.
- This is only a few of the problems that the researcher can study using the impacts of mobile banking applications and fintech innovations on employee performance and efficiency in banking.

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