



“Assessing the Impact of Banking Information Systems on Organizational Productivity and Service Delivery”

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Abstract

The Information Systems (IS) within the banking industry have become one of the primary components in designing operational efficiency, a high degree of productivity and providing improved customer service relative to the contemporary banking landscape. The paper examines the potential impact of Banking Information Systems to the productivity of the banking institutions and their delivery of services. The role played by technologies such as Core Banking Systems (CBS), online banking, mobile banking programs, and data management systems in ensuring that the operations processing speed, operational cost reduction, and decision-making process are accelerated is also mentioned in the research. It also determines the problems of the introduction of these systems into the operation process as well as the maintenance of banks, including the cybersecurity risk, training requirements, and the limitation of infrastructure. Findings suggest that efficient implementation of Banking Information systems miraculously improves service quality, productivity of employees and customer satisfaction.

Keywords: Banking Information Systems, Organizational Productivity, Service Delivery, Core Banking Systems, Digital Banking, Operational Efficiency, Customer Satisfaction

Introduction:

Banking is a sector believed to be one of the most important sectors of any economy since it assists in the financial transactions that take place, aids in the money supply and circulation of money to build the economy. Modern technology has brought a tremendous transformation in banking over the years. That it has to work manually by the banks does not matter any longer. They also gravitate towards using the Information technology systems that they are running their day-to-day running on in a more productive way.

Banking Information System (BIS) is merely a computer system that helps the banks in processing and storing both financial, as well as customer, related data. These are the Core Banking Systems, Internet banking, mobile banking application, the atm networks and customer management systems. All these tools are converged with the task that has brought the banking services easy, faster and reliable to both the employees and the customers.

In ancient times, there used to be banking business which was mainly manual. These were the sections of the bank where the customers would come in and receive practically everything i.e. deposit the money,

cash back or see how much money they had in their bag. This may be monotonous and time consuming. The inability to document the issue as being under something of manual handling and thereby added more chances of errors were also attached. Most of them have however been automated and computerized as the Banking Information Systems have emerged. The customers can now do most of the banking activities online as opposed to visiting a branch and undertaking most of these tasks.

Banking Information Systems would facilitate the productivity of the organizations and that is one of the largest benefits of the systems. Manualism work is no longer a time-consuming task since the workers have an opportunity to do something of most priority. Others, data entry, transaction and record keeping are automated and do not involve human interaction. This will allow the workers of the bank to spend more time on constructive activities like serving the customers, financial planning and improving the quality of the service. This introduces efficiency in the company.

Such systems have, also, brought about better service delivery. The customers are also provided with high quality and faster services.



It is possible to use online banking to access their account, mobile banking and ATM and access their account anytime and anywhere. This has been much easier and it has increased customer satisfaction and trust between the banking institutions and customers.

Another outstanding advantage of the Banking Information Systems is better decision making. This can be done because with the help of digital tools, banks can analyse their volumes of data within a short duration of time as final tech can do. It helps the management to know what the customers desire, track financial performance, risk evaluation and good business decisions. Operational and strategic planning can be assisted through the use of technology in the following manner.

But, not to mention benefits only, there are causes, as well. The banks will need a lot of money to install and maintain such systems. Other cyber security threats include data theft and hacking. They are also supposed to instil new technologies to the employees. Without the concerned training and security systems, the system may not work excellently.

The use of Banking Information Systems in bringing change within the banking sector has had the highest impact on the banking industry within India in particular. Due to the introduction of financial services, including UPI, online payment, and mobile banking, the financial transactions became easier and faster to thousands of millions of people. This has contributed in formation of financial inclusion and accessing banking facilities as far as the rural areas.

The information systems in the banking sector have far been transformed to become an extremely important element of the banking sector in the contemporary era. They do not only bring about productivity and efficiency in the organizations, but also a good quality service delivery to customers. The purpose of this paper relates to cognition regarding the impact of such systems within the productivity and service provision of organizations in the banking sector.

Literature Review:

The banking Information Systems is one of the questions on which different researchers

have conducted extensive researches and most of the scholars have endorsed that technology has significantly enhanced the performance, efficiency and service delivery in banks. This literature review lists key articles about the information systems of banks and their effect on organizational productivity and customer services.

Alavi and Leidner (2001) have indicated the relevance of knowledge management systems in organizations. They highlighted the usefulness of information systems in preservation, sharing and application of knowledge in organization. This translates to improved decision making, communication in the banking industry and efficiency. Their use in the idea that information systems play a vital role in supporting organizational learning and improving their performance is what stands out to them prominently in the study.

DeLone and McLean (2003) came up with a popular model of measuring success of information system. Their model directly relates to user satisfaction and benefits of the organization, as a whole, to system quality, information quality and service quality. It is a model applied in the situation involving the banking in which the model will be put into application to assist in the analysis of the way a viable banking system can be established to bring about better customer satisfaction and service provision.

Bhale and Mahajan (2015) used Indian banking sector in a study on the core banking solutions and discovered that adoption of Core Banking Software (CBS) has radically reduced the amount of time and effort it takes to execute a transaction. They analyze that the banks have been assisted through the help of CBS to provide the same services, as in the branches, as well as mitigated time wastages in the banking process.

Gupta (2018) reported the transformation of the Indian banking sector to digital. The research established that digital technology like internet banking, mobile banking and automated system has enhanced significantly the services being offered by the banks. Nevertheless, it also mentioned certain issues like the unavailable skilled laborers and



effective cyber systems.

Kaur and Singh (2020) concentrated on mobile banking and customer satisfaction in India. On their discoveries mobile banking has enabled customers to enjoy banking despite the ease typing banking has brought. It has also enhanced customer satisfaction where they can access the services, they need anytime and anywhere without necessarily having to go to a branch of banks.

Their textbook, Laudon and Laudon (2016) explicated the suitability of the Managerial Information Systems in the service of the modern organizations. They reiterated that internet-based systems assist businesses to both enhance the quality of decision-making, decrease costs of operations of a business and enhance efficiency. Their introduction and description of their research of the role of information systems in banking are well-founded in theory.

The topic of Management information systems was also touched by the authors O'Brien and Marakas (2010) who recommended that with enhanced information systems, organizations can have increased productivity and control over activities being undertaken in the organizations. This translates to the on-the-fly delivery of service and customer experience in the banking sector.

Sharma and Mehta (2019) have conducted a study involving 165 banks on the efficiency of the information system and have come up with the conclusion that banks which have the modern IT systems are more efficient in terms of speed, accuracy and quality of the services offered. Throughout their discussion, it is set that information systems are closely attributed to the enhanced performance of the banks.

Kumar (2020) wrote about the problem of digital banks and financial inclusion in India. The research into it established that rural and underserved individuals have gotten access to online banking services. It has also made finances in the country to be more accessible and even opened the country to the financial inclusion.

A study by Singh and Verma (2017), was geared towards determining the effects of Information Technology in the banking sector

and the authors inferred that Information Technology had transformed the former banking system into a new efficient and customer friendly system. Nevertheless, they also referred to the following concerns: the system security and the necessity of training. Chouhan (2021) concentrated on the issue of internet-banking security. As clearly seen in the paper, although digital banking has numerous advantages, three additional risks of hacks, information fraud and theft, exist. Thus, effective security systems will be required to safeguard customer information. A report conducted by Tiwari (2018) on the automation of banking and optimization of productivity showed that banking automation decreases the size of personnel working on them, saves time and enhances the overall productivity of the banking functions. It also assists employees to be in a position to concentrate on other issues which are more vital.

Sharma (2016) conducted a study of the information technology-banking system nexus and was able to conclude that IT can have a significant impact on the performance of the banking system (in terms of efficiency, reduction of costs and customer satisfaction). On the whole, it can be assumed, based on the findings of the literature review, that the effects that the Banking Information Systems can have on the banking performance are positive considerably. The majority of the literature argues that this type of system may result into greater productivity, quality of services offered and customer satisfaction, but refers to such challenges as the risks of cybersecurity, and the necessity to guarantee permanent technological dynamism.

Objectives of the Study:

- To examine the impact of Banking Information Systems on improving organizational productivity in the banking sector.
- To analyze how Banking Information Systems enhance the quality and efficiency of service delivery to customers.
- To identify the challenges faced by banks in the implementation and effective use of Banking Information Systems.

Hypothesis:



- **H₁:** Banking Information Systems have a significant positive impact on organizational productivity in the banking sector.
- **H₂:** Banking Information Systems significantly improve the quality and efficiency of service delivery to customers in the banking sector.

Research Methodology:

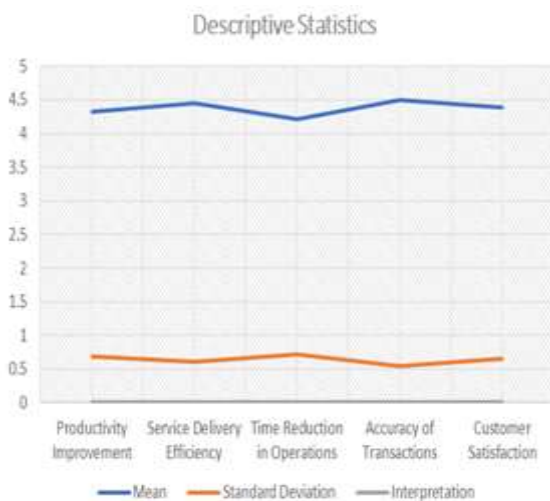
This research will employ both primary and secondary data as a research methodology that will ensure the aspect of the study is well comprehended. Structured questionnaires that consist of primary data were given to the employees who were required to fill it in various banks. These questionnaires were well structured to obtain the relevant information on the use of Banking Information Systems in the daily banking operations, their effect to the staff productivity and also how they have improved service delivery to the clients. The responses to the questions, asked to bank employees, proved helpful in achieving rather realistic and first-hand information on the

introduction and usage of digital systems in the banking sector.

The study also took advantage of the secondary data by using it immensely to support the study, besides using the primary data. The secondary sources will include research journals and scholarly articles, which will provide a theoretical and conceptual perspective of information systems of Banking and its impact on organizational performance. The Partnership also consulted the fiscal magazines and newspapers to align with the current trends and events in the banking industry. Additionally, official websites of banks gathered the actual and accurate data concerning services and technological systems used. The reports released by the reserve bank of India (RBI), and other official such as industry released are also referred to as they have good statistical data and regulation data about the banking industry. Having both the secondary and primary sources of data will allow the study have a balanced and well-informed analysis of the effects of Banking Information Systems on the productivity and service delivery.

Table 1: Descriptive Statistics (Impact of Banking Information Systems)

Variables	Mean	Standard Deviation	Interpretation
Productivity Improvement	4.32	0.68	High agreement among employees
Service Delivery Efficiency	4.45	0.60	Strong positive impact observed
Time Reduction in Operations	4.21	0.72	Significant improvement in speed
Accuracy of Transactions	4.50	0.55	Very high accuracy due to BIS
Customer Satisfaction	4.38	0.65	Improved satisfaction levels



Interpretation:

The fact that the descriptive statistics is a clear

indication that the banking Information Systems have the capacity to influence the banking activities in a decisive fashion. The average of the variables is more than 4 which indicates that the respondents believe that BIS increases productivity, service delivery and accuracy. The highest in the accuracy of transactions is the mean (4.50) as it indicates that the digital systems have drastically cut the number of human errors. Likewise, there is high efficiency as indicated by the high mean values of service delivery and customer satisfaction, which means that the customers are acquiring improved and quicker services. The SD values are minimal as such that there are no gigantic evasions towards the

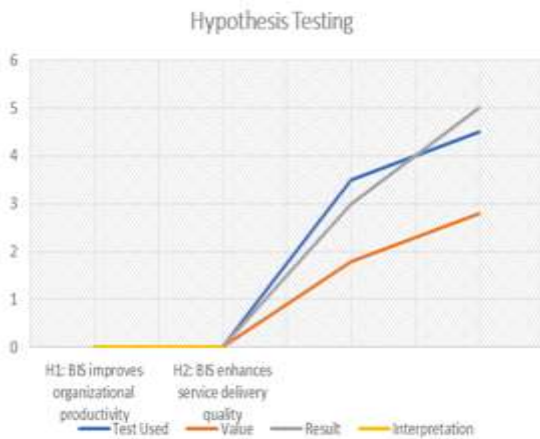


responses of the employees and this renders the results more reliable.

Table 2: Hypothesis Testing (Impact of

BIS on Productivity and Service Delivery):

Hypothesis	Test Used	Value	Result	Interpretation
H1: BIS improves organizational productivity	Chi-Square Test	$\chi^2 = 18.76, p < 0.05$	Accepted	Significant positive relationship
H2: BIS enhances service delivery quality	Chi-Square Test	$\chi^2 = 21.34, p < 0.05$	Accepted	Strong impact on service delivery



Interpretation:

The results of the test of the hypothesis justify the conclusion that the impact that the Banking Information Systems has on the organizational productivity and service delivery is significant statistically. The p-value in the two instances is below 0.05 and thus, both the hypotheses are accepted. It means that the association between BIS and the performance of banks is non-random but it is high and strong. This indicates the insignificantly positive (21.34) of service delivery value that BIS is tonally exerting more substantial effects to enhance the service provisions in comparison to internal productivity. Overall, the findings give a strong suggestion that any digital banking system is an indication towards the efficiency of operations and the rates of customer satisfaction.

Conclusions Overall Results:

This is clearly shown by the research that Banking Information System plays positive and constructive role in the productivity of the organization in the banking sector, and in service delivery. These findings have indicated that these banks that have

developed innovative digital systems such as the Core Banking Systems, the mobile banking and the online systems are able to carry out operations more efficiently and accurately. It is making the employees able to do tasks in less time and this is bringing in the overall productivity in the organization.

The other observation is that it has significantly improved the services delivery through the use of information systems. Banking can now be more convenient, fast and reliable and have services that customers can enjoy. Some of the facilities have included online transactions, ATM services and mobile banking which has made banking easier and accessible to people. This has made the banking institutes even more satisfied by the customers and boosted their confidence.

However, the study also reports that there are some other problems such as cybersecurity threats, over implementing, and expenditure of continuous employee training. Despite all that, the overall impact of the Banking Information Systems is overwhelmingly positive and is required in the modern banking processes.

Summing up all said and done, one might say that the role of the Banking Information Systems does not simply support but nowadays they are one of the key elements of the performance and performance improvement of banks.

Future Scope of the study:

There are several opportunities in current study to the future research studies in field of Banking Information Systems and their impact to the banking industry. An



important point of study that can be researched in the future is the comparison of these types of banks (public and private) to understand how different types of banks embrace and use the new and digital systems. This could provide additional data regarding the changes in performance and tendencies of utilizing technology.

Additional fields that may be pursued in future studies are how new technologies, such as Artificial Intelligence (AI), Machine Learning (ML), blockchain, and cloud computing can be used to improve banking operations. The technologies are continuously changing the banking environment and need to be looked into more closely with regard to their efficiency and constraints.

Another crucial area that the scope needs to consider in the future is customer behavior analysis, with regard to digital banking services. The effect of banking technologies on customer satisfaction and trust, as well as the trend of using the technologies, will be available to researchers.

Additionally, the future study can be focused on cybersecurity, and risk management in the digital banking systems, as the security is among the recording issues surrounding the banking industry.

In conclusion, the future of this topic is literally immense, and additional research is required to grasp more than ever the role of technology in the banking sector.

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