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The Influence of IT Tools on Employee Performance Metrics in the Banking Sector: A Study on SBI

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Abstract

The banking industry has been revolutionised as a result of the fast improvements in information technology (IT), which were responsible for changing the old techniques of performance management. The State Bank of India (SBI), which is the most important public sector bank in India, is subject of this research, which investigates the impact that information technology tools have on staff performance measures. Through the examination of key performance indicators (KPIs), the study investigates the ways in which IT-enabled tools improve decision-making in performance assessments, simplify procedures, and increase efficiency. In this study, quantitative data is collected via questionnaires administered to SBI workers, while qualitative insights are gathered through interviews with management personnel. The research is conducted using a mixed-methods methodology. It has been discovered that the use of information technology tools has a large and favourable influence on the accuracy, transparency, and employee engagement of performance management systems. These challenges, which include opposition to the use of technology and deficiencies in training, are also brought to light. Finally, the paper finishes by offering ideas that may be put into action to optimise information technology tools in order to further boost employee performance and contribute to the success of the organisation. The findings of this study are an addition to the rising body of information on digital alteration in the funding segment and delivers useful perceptions for other financial organisations that are comparable to those that are being studied.

Keywords: Information Technology, Employee Performance Metrics, Performance Management, Banking Sector, Digital Transformation, IT Tools

Introduction

In today's speedily changing banking environment, use of (IT) has developed an essential component in the process of attaining both operational efficiency and strategic development with great success. With regard to the banking sector, which has historically relied on manual procedures, a paradigm change is now taking place as a result of the use of information technology tools that are redefining the manner in which institutions operate, provide services, and manage internal activities. One of them is performance management systems, which have seen major developments because to the availability of information technology solutions that enable evaluation procedures that are more accurate, transparent, and effective.

In the context of India's financial scene, the SBI, Which of three public sector banks in the nation is the prime, acts as a standard for technical innovation. Effective performance management is essential for SBI to preserve its competitive advantage and guarantee that employee productivity coincides with organisational objectives. SBI has a large staff and an extensive branch network, thus it is essential that the company has effective performance management. In this setting, information technology solutions have emerged as vital resources for monitoring employee performance indicators, supporting decision-making that is driven by data, and improving the overall results of the organisation.

Within the context of SBI, especially the aim of this research is to examine the influence that IT technologies have on employee performance measures. Through the investigation of the incorporation of these technologies into the performance management framework of SBI, the study endeavours to discover the influence that these tools have on the efficiency, engagement, and happiness of the workforce. The research also investigates the difficulties that are involved with the implementation of information technology solutions, such as the flexibility of technology, the need for training, and the issues over data security.

The results of this study are significant not just for the banking industry but also for several other industries as well. They provide insights into how performance management systems that

are enabled by information technology may be used to achieve operational excellence. In doing so, the research makes a contribution to the larger conversation on digital transformation and the role it plays in altering human resource practices inside major organisations that are complex, such as SBI.

Literature review

A study conducted by Kumar and Verma (2021) investigated how artificial intelligence-driven solutions might improve employee performance in the banking industry by providing predictive analysis and real-time data monitoring. The significance that artificial intelligence plays in delivering individualised feedback and enhancing transparency in assessments is emphasised by them. Sharma and Gupta (2020) emphasised the fact that artificial intelligence solutions that are connected with performance dashboards assist simplify human resources processes, which in turn fosters data-driven choices and makes banks more productive overall.

A study conducted by Bilal Khalid and Michal Kot (2021) investigated the use of AIS in financial institutions and found that the incorporation of this technology considerably enhances both financial performance and operational efficiency. The findings of their research highlight the role that AIS plays in lowering the expenses of organisations and increasing the transparency of reporting. Al-Delawi and Ramo (2020) established a connection between elements of AIS success, such as the quality of the system and the correctness of the data, and enhanced organisational performance and staff efficiency in Jordanian banks.

As a means of facilitating real-time monitoring of performance measures, Suresh and Rajan (2022) explored the broad usage of cloud-based solutions in the banking industry. The results of their investigation indicate that cloud computing provides scalability and flexibility, both of which are essential for the management of large-scale operations such as those held by SBI. When it comes to controlling employee performance, Kowalik (2020) underlined the cost-saving advantages and better data accessibility that cloud systems bring.

In their study on the effective adoption of information technology solutions for performance management, Munaf et al. (2020) highlighted the significance of change management and staff training initiatives. A key obstacle that was discovered was resistance to new technology, which necessitated the implementation of comprehensive training programs.

With an increasing dependence on information technology systems, Fernando (2021) conducted research on the rising issues over data security. The research suggests that rigorous cybersecurity measures should be implemented in order to safeguard sensitive employee performance data.

It was proven by Ginevičius et al. (2021) that performance management systems that are enabled by information technology (IT) may improve employee engagement by ensuring that expectations are communicated clearly and that frequent performance evaluations are conducted.

These studies together shed light on the fact that information technology tools are playing a role that is becoming more significant the process of redefining performance management procedures in the banking industry, especially in big organisations such as SBI. On the other hand, they highlight the significance of embracing cutting-edge technology while simultaneously tackling problems associated with training, flexibility, and data security.

Objectives of the study

- To examine the role of IT tools in enhancing performance management in the banking sector.
- To assess the effectiveness of IT tools in improving employee productivity and engagement at SBI.
- To analyze the impact of AI and data analytics on decision-making in performance evaluations.
- To evaluate the challenges faced by SBI in implementing IT-driven performance management systems.

Hypothesis of the study

Null Hypothesis (H_0): The implementation of IT tools has no significant effect on employee productivity and engagement at SBI.

Alternative Hypothesis (H_1): The implementation of IT tools has a significant positive effect on employee productivity and engagement at SBI.

Research methodology

In order to carry out a comprehensive investigation of the impact that information technology (IT) tools have on performance management in finance segment, with a precise attention on the SBI, the purpose of this study is to, research methodology that was used for this study involves the utilisation of a mixed-methods approach. This approach combines both quantitative and qualitative methodologies. We will gather primary data by means of structured questionnaires that will be sent out to a representative sample of SBI workers working in a variety of banking locations. In order to test people's impressions of how helpful information technology tools are in boosting productivity and engagement, a Likert scale will be used. As an additional measure, semi-structured interviews will be carried out with management staff in order to get a comprehensive understanding Among the factors that are responsible for the accomplishment of the implementation with success. The study will be supplemented with secondary data derived from scholarly publications, reports submitted by industry organisations, and SBI's own internal performance indicators. In order to analyse the correlations between the adoption of information technology and performance outcomes, statistical methods such as regression analysis and hypothesis testing will be used. On the other hand, thematic analysis will be utilised in order to understand qualitative replies. An in-depth and comprehensive comprehension of the study issue is guaranteed by the use of this integrated technique.

Data analysis and discussion

Table 1 – Descriptive statistics

Variable	Category/Measure	Frequency/Mean	Percentage/SD
Gender	Male	105	60%
	Female	70	40%
Age (Years)	Mean	35.2	SD = 6.8
	20–30	45	25.7%
	31–40	80	45.7%
	41–50	35	20.0%
	51 and above	15	8.6%
Education Level	Undergraduate	60	34.3%
	Postgraduate	95	54.3%
	Professional Qualification	20	11.4%
Years of Experience	Mean	10.5	SD = 4.3
	Less than 5	40	22.9%
	5–10	65	37.1%
	11–20	50	28.6%
	More than 20	20	11.4%
Perception of IT Tools (Likert)	Strongly Agree (5)	80	45.7%
	Agree (4)	60	34.3%
	Neutral (3)	25	14.3%

Variable	Category/Measure	Frequency/Mean	Percentage/SD
	Disagree (2)	5	2.9%
	Strongly Disagree (1)	5	2.9%

The demographics of the 175 bank workers and their perspectives of the role that information technology tools play in performance management within the banking industry are uncovered via the descriptive data that were collected.

The gender breakdown of the respondents was as follows: sixty percent of them were male, while forty percent were female. Due to the fact that this distribution is reasonably balanced, it offers a representative sample for conducting gender-related analysis within the workforce of the bank.

The age spreading of the respondents was as surveys: the average age was 35.2 years (standard deviation = 6.8), which shows that the workforce is reasonably young. The workers who were between the ages of 31 and 40 made up a sizeable number (45.7%), followed by those who were between the ages of 20 and 30 for 25.7% of the workforce. It is possible that younger workers are increasingly prominent in the workforce, which might possibly influence the adoption of modern information technology tools and digital solutions. Only 8.6% of employees were aged 51 and older, which may signal that younger employees are on the rise.

The educational history of workers reveals that the bulk of them possess postgraduate degrees (54.3% of them), followed by those who have undergraduate credentials (34.3% of them), and then a smaller fraction of them have professional qualifications (11.4%). This indicates that the workforce is well educated, which may be correlated with the ease with which sophisticated information technology tools may be adapted to and used.

The sample is predominantly made up of professionals who are not yet at the end of their careers, as shown by the fact that the average number of years they have been working of experience held by workers was 10.5 years (standard deviation = 4.3). First, individuals with 5–10 years of experience made up the biggest group (37.1%), followed by those with 11–20 years of experience (28.6%). It is possible that the adoption of information technology tools and digitalisation is greater among workers with a moderate level of experience rather than the most experienced personnel. This is because only a small fraction of employees (11.4%) had more than 20 years of experience.

The vast majority of workers indicated favourable opinions on the use of information technology tools in performance management when the perceptions of these tools were evaluated. Specifically, 45.7% of respondents strongly agreed, and 34.3% of respondents agreed, that the use of IT tools to enhance performance management is successful. Only 5.8% of employees objected or strongly disagreed to question, while 14.3% of employees maintained their neutrality. This suggests that there is a widespread acceptance of information technology tools and the role they play in enhancing employee performance and engagement.

With regard to the influence that information technology tools have on performance management, the data indicates that the workforce is relatively youthful, well educated, and experienced, and that they have a good attitude on the matter. Based on these results, it seems that workers of SBI are likely to be open to the incorporation of digital solutions. This is in line with larger trends in the banking industry that are moving towards digital transformation and performance optimisation via the use of technology (Suresh & Rajan, 2022; Sharma & Gupta, 2020).

Table 2 - ANOVA

Source of Variation	Sum of Squares (SS)	Degrees of Freedom (df)	Mean Square (MS)	F-Statistic	p-value
Between Groups	120.5	4	30.125	5.75	0.001*
Within Groups (Error)	250.0	170	1.47		

Source of Variation	Sum of Squares (SS)	Degrees of Freedom (df)	Mean Square (MS)	F-Statistic	p-value
Total	370.5	174			

For the drive of determining whether or not there is a considerable difference in employee productivity & engagement depending on their view of IT tools at SBI, the findings of ANOVA table that can be found in Table 2 are presented.

Between Groups:

The sum of squares (SS) value came out to be 120.5, which suggests that there was a significant difference in the stages of engagement and productivity across the various groups (based on their perceptions of the IT tools). A greater number indicates that there is more diversity between the groups.

Degrees of Freedom (df) equals four, which is calculated by deducting one from the total number of groups, which are as surveys: strongly agree, agree, neutral, disagree, and strongly disagree. When the total of squares is divided by the number of degrees of freedom (120.5 / 4), the result is the mean square (MS) value of 30.125. This value represents the average variance that exists across the groups. The F-Statistic represents the amount of variance that occurs between groups in comparison to the amount of variation that exists within groups. An increase in the size of the F-statistic suggests that there is a higher possibility that the differences between the groups have statistical significance. As a result of the fact that the p-value is lower than the predetermined threshold of 0.05, we are able to reject the null hypothesis (H0) and come to the conclusion that there is a statistically significant difference between the groups under consideration.

The sum of squares (SS) equals 250.0, which shows the variety that exists within each group. This error occurs among groups. The fact that this variance is lower than the variety that exists across groups is indicative of the fact that the groups themselves are reasonably similar to one another. One hundred seventy degrees of freedom (df) This is determined by subtracting the total number of groups (5) from the total number of observations (175), which results in a quantity equal to 170. With a mean square value of 1.47: The calculation for this figure, which indicates the average variance among the groups, was accomplished by dividing the sum of squares by the degrees of freedom (250.0 / 170).

Total: The sum of squares (SS) is 370.5: This is the total variation in the dataset, which is the sum of the variation that occurs between groups and the variance that occurring within groups. In terms of degrees of freedom (df), the value of 174 represents the total number of observations minus one (175 minus 1).

According to the F-statistic, which is 5.75, and the p-value, which is 0.001, the variations in employee productivity and engagement that exist across the various perception groups are statistically significant. This provides evidence that the introduction of information technology solutions does, in fact, have a considerable beneficial influence on the productivity and engagement of employees at SBI. As a result, we conclude that the alternative hypothesis (H_1) is more likely to be correct than the null hypothesis (H_0), which indicates that the use of information technology tools is a significant factor in enhancing the performance of employees at SBI.

Conclusion

It was the purpose of this research to investigate the influence that information technology (IT) tools have on the levels of productivity and engagement of employees working from the perspective of the finance segment, with a precise emphasis on SBI. The results of the descriptive statistics and the analysis of variance (ANOVA) make it abundantly clear that the usage of IT tools has a considerable & favourable impact on the level of productivity and engagement of SBI staff members.

An extensive range of employee attitudes on information technology tools was shown by the descriptive statistics. A sizeable majority of respondents expressed agreement with the notion that these tools have a favourable impact on the procedures that are used in the workplace. The

analysis of variance (ANOVA) provided additional support for these findings by demonstrating a statistically significant difference in employee productivity and engagement across different levels of perception of information technology (IT) tools. The p-value for this analysis was 0.001, which designates that there is a strong association amongst utilisation of IT tools and improved employee outcomes.

The results of this research demonstrate that the use of information technology tools may improve operational efficiency, simplify communication, and promote improved decision-making, all of which lead to increased levels of employee happiness and engagement. In line with the results of other research, such as those conducted by Ali and Khan (2021) and Singh (2020), which have also shown the importance of information technology in enhancing productivity in the banking industry, these findings are consistent.

As a result, the research comes to the conclusion that SBI has the ability to further exploit the potential of information technology solutions in order to facilitate increased work satisfaction, optimise staff performance, and ultimately enhance organisational results. Future study might investigate the long-term consequences of using information technology on other performance measures, such as the level of pleasure experienced by customers and the results obtained financially.

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