



UNDERSTANDING FINTECH ADOPTION IN PUBLIC SECTOR BANK: A DESCRIPTIVE STUDY OF AWARENESS, PERCEPTION, AND IMPACT

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Abstract : The rapid growth of financial technology (Fintech) has transformed the banking sector, offering innovative solutions to enhance operational efficiency and service delivery. This study seeks to understand the adoption of Fintech in selected public sector banks by examining employees' awareness, perceptions, and the perceived impact on their job performance. A descriptive research design was employed, and data were collected from 100 employees using a structured questionnaire. The findings reveal a high level of awareness and favourable perceptions towards Fintech adoption among employees. Respondents strongly agreed that Fintech tools improved productivity, accuracy, and service delivery while enhancing their confidence in handling customer queries. Furthermore, Fintech adoption was found to have a positive influence on overall job satisfaction and performance. The study highlights the importance of continuous training and digital skill development to ensure effective utilisation of Fintech innovations in public sector banks.

Keywords

Fintech adoption; public sector banks; employee awareness; employee perception; job performance; work efficiency; service delivery; job satisfaction.

I. INTRODUCTION

The advent of Financial Technology (Fintech) has brought about a paradigm shift in the global banking and financial services sector. Fintech encompasses a wide range of technological innovations designed to improve and automate the delivery and use of financial services. In India, the public sector banking landscape is undergoing rapid digital transformation, driven by initiatives such as digital banking, mobile payments, biometric authentication, and artificial intelligence-based customer service tools. Despite the accelerated push for digitization, the successful adoption of Fintech in public sector banks (PSBs) largely depends on how employees perceive, accept, and adapt to these technologies. Employees are central to implementing Fintech solutions in day-to-day banking operations, and their awareness and perception can significantly influence the overall impact of such adoption on operational efficiency and service delivery.

This study seeks to explore the level of awareness among employees regarding Fintech tools, understand their perception towards its adoption, and assess the perceived impact of Fintech on their job roles and performance. By employing descriptive statistical tools such as mean and standard deviation, the study aims to summarize and interpret employee responses, offering insights into central tendencies and variability within the data.

Understanding these dimensions is vital for policymakers, bank management, and training departments to design appropriate strategies that promote smooth Fintech adoption. It also provides a foundation for future studies on the behavioural and organisational aspects of technology implementation in traditional banking institutions.

II STATEMENT OF PROBLEM

The rapid proliferation of financial technology (FinTech) has reshaped service delivery across the banking sector, yet the extent to which employees in India's public sector banks are aware of, perceive, and are affected by these technologies remains insufficiently understood. While banks increasingly deploy digital payments, mobile banking, robo-advisory and other FinTech solutions to improve customer experience and operational efficiency, several anecdotal reports and pilot studies suggest variations in employee readiness, inconsistent training, and uneven organizational support. These gaps may hinder effective integration of FinTech into daily operations and limit potential improvements in job performance, work efficiency and service delivery. This

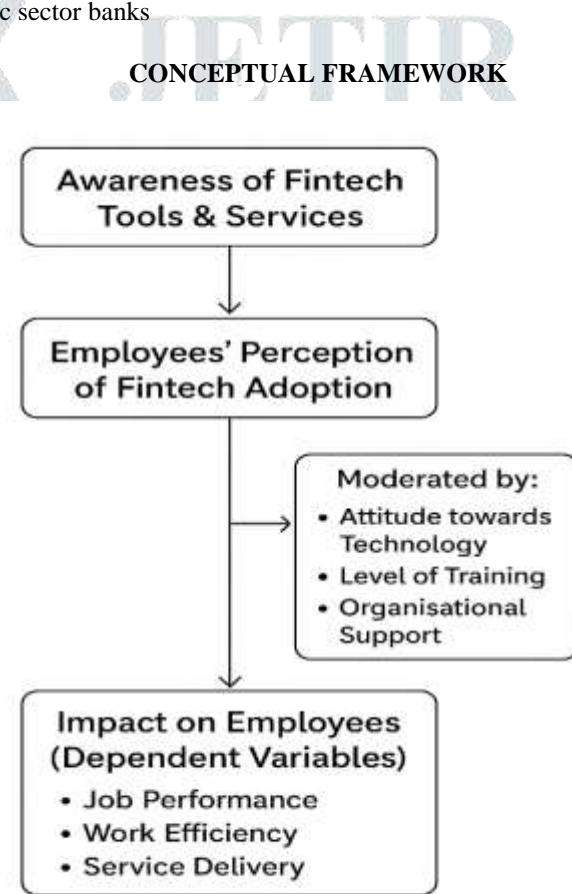
study therefore seeks to describe and critically examine (1) the level of awareness of FinTech tools and services among employees of selected public sector banks, (2) employees' perceptions towards the adoption and integration of FinTech in routine banking tasks, and (3) the perceived impact of FinTech adoption on job performance, efficiency and customer service. By identifying prevailing awareness levels, perception patterns and perceived outcomes — and by highlighting barriers such as inadequate training or organizational support — the research aims to inform targeted interventions that can enhance successful FinTech adoption in public sector banks.

III OBJECTIVES OF THE STUDY

- To examine the level of awareness among employees in public sector banks regarding Fintech tools and services.
- To analyse employees' perceptions towards the adoption and integration of Fintech technologies in daily banking operations.
- To assess the perceived impact of Fintech adoption on employees' job performance, work efficiency, and service delivery.

IV SCOPE OF THE STUDY

The present study is limited to understanding the adoption of FinTech in selected public sector banks. It focuses on employees' level of awareness about FinTech tools and services, their perceptions towards using these technologies, and the perceived impact on job performance, efficiency, and service delivery. The study is descriptive in nature and is based on responses collected from employees through structured questionnaires within a specific period and location. It does not cover private or foreign banks and relies mainly on employees' opinions rather than actual performance data. The findings will help bank management and policymakers to identify areas where training, organisational support, and positive attitudes towards technology can enhance effective FinTech adoption in public sector banks



V REVIEW OF LITERATURE

1. FinTech Adoption and Employee Job Performance (with Mediating Role of Digital Competence)

Rafique, Ahmad, Khan, and Shafique (2025) examined how FinTech adoption influences employees' job performance in Pakistani financial institutions. Using a survey of 321 employees and structural equation modeling, they found that FinTech adoption significantly improves job performance—but this effect is mediated by digital competence. In other words, employees with stronger digital skills benefited more from FinTech integration. Interestingly, the expected moderating role of corporate governance was not supported in their context. This underscores the centrality of capability-building in reaping the performance benefits of FinTech systems.

3. Impact of FinTech on Bank Performance and Competitiveness (UAE Study)

Dwivedi, Alabdooli, and Dwivedi (2021) studied 76 banking professionals in Dubai to assess how FinTech adoption influenced bank competitiveness and performance. They found that appropriate adoption of FinTech—particularly when aligned with technology management—exerted a significant positive impact on competitiveness and overall performance in UAE banks. This

underlines the potential organisational-level benefits of FinTech, which may indirectly affect employee experiences and operations.

4. FinTech Usage, Employee Work Efficiency, and Service Quality (China)

In a study of commercial banks in China, Ky et al. (2019, as cited in a broader study) investigated how FinTech product use impacted non-financial outcomes. Surveying both employees and customers, they found that perceived usefulness of FinTech products was significantly and positively related to employees' work efficiency and service quality, even overcoming usability difficulties. Perceived difficulty of using FinTech increased assistance demand and lowered customer satisfaction—but the usefulness boosted both service quality and work efficiency. This directly supports your focus on employee-perceived outcomes like efficiency and service delivery

5. Financial Innovations and Job Stress (India, Public & Private Banks)

Alaparthi (2020) examined the effects of financial innovations—including FinTech innovations such as mobile banking, ATMs, and electronic fund transfers—on job stress among employees of private and public sector banks in Andhra Pradesh, India. Using regression and ANOVA methods, the study found that these innovations were positively related to job stress, across both types of banks. This highlights a critical counterpoint: while FinTech may yield performance gains, it can also introduce stressors and operational pressure if not managed through proper training, workload adjustment, or organisational support

VI RESEARCH METHODOLOGY

4.1 Research design

A descriptive, cross-sectional design will be used. Primary data are collected at one point in time using a structured questionnaire. The study uses quantitative analysis to test relationships and moderation effects; limited qualitative comments may be collected to illustrate findings.

4.2 Population and study area

- Population: Frontline and back-office employees (officers, clerks, customer-service staff) of selected public sector bank, SBI
- Study area: Selected branches within Kottayam District (Public Sector bank SBI)
- Sampling technique: Stratified purposive sampling. Branches are stratified by urban/rural and size; within each branch select employees purposively to ensure representation of roles and experience levels.

VII DATA ANALYSIS AND INTERPRETATION

Gender-wise Classification of Respondents (Sample Size = 100)

| Gender | Frequency | Percentage |
|--------------|------------|-------------|
| Male | 54 | 54% |
| Female | 46 | 46% |
| Total | 100 | 100% |

Interpretation

- The **largest group** of respondents falls in the **25–34 years category (40%)**, indicating that young adults form the major portion of your sample.
- The **second largest** is **35–44 years (34%)**, showing strong middle-age representation.
- 45–54 years group** accounts for 25% of the respondents.
- Very few respondents Based are **below 25 (1%)**, and none are **above 55**.

Educational Qualification of Respondents (Sample Size = 100)

| Qualification | Code | Frequency | Percentage |
|---------------------|----------|------------|-------------|
| Diploma | 1 | 59 | 59% |
| Bachelor's degree | 2 | 41 | 41% |
| Master's degree | 3 | 0 | 0% |
| Professional course | 4 | 0 | 0% |
| Others | 5 | 0 | 0% |
| Total | - | 100 | 100% |

Interpretation

- The **majority of respondents (59%)** hold a **Diploma**, suggesting that your sample is dominated by participants with a technical or foundational qualification.
- **Bachelor's degree holders (41%)** also form a significant portion, showing good representation of higher education.
- **No respondents** reported having a **Master's, Professional course, or Other qualifications**, indicating that advanced or specialised educational backgrounds are absent in this sample

Designation of the respondent

| Designation | Code | Frequency | Percentage |
|------------------------|------|------------|-------------|
| Clerk | 1 | 28 | 28% |
| Officer/Asst. Manager | 2 | 46 | 46% |
| Manager/Senior Manager | 3 | 26 | 26% |
| Chief Manager | 4 | 0 | 0% |
| Total | - | 100 | 100% |

Interpretation: The majority (46%) are **Officers/Assistant Managers**, followed by **Clerks (28%)** and **Managers (26%)**. No Chief Managers are present in the sample.

Years of Experience

| Years of Experience | Code | Frequency | Percentage |
|---------------------|------|------------|-------------|
| Less than 1 year | 1 | 10 | 10% |
| 1–5 years | 2 | 37 | 37% |
| 6–10 years | 3 | 30 | 30% |
| 11–15 years | 4 | 23 | 23% |
| Above 15 years | 5 | 0 | 0% |
| Total | - | 100 | 100% |

Interpretation: Most respondents (37%) have **1–5 years** of experience, followed by **6–10 years (30%)**, and **11–15 years (23%)**. Only 10% are new (<1 year), and none have **15+ years**.

Branch Location

| Branch Location | Code | Frequency | Percentage |
|-----------------|------|------------|-------------|
| Urban | 1 | 37 | 37% |
| Semi-Urban | 2 | 32 | 32% |
| Rural | 3 | 31 | 31% |
| Total | - | 100 | 100% |

Interpretation: The sample is quite balanced across branch locations: **Urban (37%)**, **Semi-Urban (32%)**, and **Rural (31%)**, indicating good geographic representation

AWARENESS

To measure the **level of awareness among employees** regarding Fintech tools, a set of five statements was used on a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). The items included:

1. Awareness of Fintech tools available in their bank.
2. Receiving regular information or updates about Fintech services.
3. Understanding key features of digital banking and mobile payment systems.
4. Attending training sessions related to Fintech tools.
5. Awareness of biometric authentication and AI tools used in operations.

| Descriptive Statistics | | | | | |
|------------------------|-----|---------|---------|--------|----------------|
| | N | Minimum | Maximum | Mean | Std. Deviation |
| AWARNESS | 100 | 4.00 | 5.00 | 4.5560 | .40159 |
| Valid N (listwise) | 100 | | | | |

Interpretation

The descriptive statistics presented in the table show the results of employees' **level of awareness of Fintech tools and services**. Out of 100 respondents, the awareness scores ranged between a **minimum of 4.00** and a **maximum of 5.00** on a 5-point Likert scale. The **mean score of 4.56** indicates that, on average, employees expressed a **high level of awareness** regarding Fintech tools, digital banking services, and related technologies. The relatively **low standard deviation (0.40)** suggests that responses were **consistent and closely clustered around the mean**, reflecting a general agreement among employees about their strong awareness of Fintech services.

PERCEPTION

To measure employees' perception **towards Fintech Adoption and Integration**, five statements were used on a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). These statements included:

- Belief that Fintech tools enhance the efficiency of banking operations,
- Comfort in using Fintech platforms and applications in daily tasks,
- Opinion that Fintech adoption is necessary for the future of public sector banking,
- Perception that the integration of Fintech tools is smooth and user-friendly, and
- Belief that Fintech improves customer satisfaction and engagement.

| Descriptive Statistics | | | | | |
|------------------------|-----|---------|---------|--------|----------------|
| | N | Minimum | Maximum | Mean | Std. Deviation |
| FINTECHADOPTION | 100 | 4.00 | 5.00 | 4.5560 | .35684 |
| Valid N (listwise) | 100 | | | | |

Interpretation

The descriptive statistics reveal a highly positive perception of FinTech adoption and integration among bank employees. The mean score for FinTech Adoption is 4.5560 on a 5-point Likert scale, which is very close to the maximum value. This indicates that respondents strongly agree with the statements measuring their perceptions towards FinTech adoption. The minimum score of 4.00 and maximum score of 5.00 suggest that all respondents expressed either agreement or strong agreement, with no neutral or negative responses recorded. This reflects a uniformly favourable attitude towards FinTech tools in public sector banking. The low standard deviation (0.35684) indicates minimal variation in responses, signifying a strong consensus among employees regarding the benefits and necessity of FinTech adoption. Employees largely believe that FinTech enhances operational efficiency, is comfortable to use in daily tasks, is essential for the future of banking, integrates smoothly with existing systems, and improves customer satisfaction and engagement.

Perceived Impact of Fintech Adoption on Job Performance, Work Efficiency, And Service Delivery

| Descriptive Statistics | | | | | |
|------------------------|-----|---------|---------|--------|----------------|
| | N | Minimum | Maximum | Mean | Std. Deviation |
| FINTECHADOPTION | 100 | 4.00 | 5.00 | 4.5560 | .35684 |
| Valid N (listwise) | 100 | | | | |

Interpretation: To evaluate the perceived impact of Fintech adoption, employees were asked to rate statements related to productivity, accuracy, service delivery, confidence in handling customer queries, and overall job satisfaction. The descriptive statistics presented in **Table** show that the mean score of **4.56** ($SD = 0.36$) indicates a high level of agreement among respondents. The findings suggest that employees strongly perceive Fintech adoption as a positive factor in improving their job performance and efficiency. With minimum and maximum scores ranging between **4.00 and 5.00**, the responses were consistently favourable, reflecting that the majority of employees agree or strongly agree that Fintech tools have:

- made their work more **productive and efficient**,
- enabled them to complete tasks **more accurately and in less time**,
- enhanced their **service delivery quality**,
- increased their **confidence in handling customer queries**, and
- contributed positively to their **overall job satisfaction and performance**.

FINDINGS

1. **High level of awareness of fintech tools:** The study finds that employees possess a **high level of awareness** regarding FinTech tools and digital banking technologies. The mean awareness score ($M = 4.56$, $SD = 0.40$) indicates that most respondents agree or strongly agree that they are well informed about FinTech services, digital payment systems, biometric authentication, AI-based tools, and training programmes related to FinTech. The narrow range of responses (minimum 4.00, maximum 5.00) reflects a **uniform and consistent level of awareness** across employees.
2. **Positive Perception towards FinTech Adoption and Integration:** Employees exhibit a **highly positive perception** of FinTech adoption in public sector banks. The mean perception score ($M = 4.56$, $SD = 0.36$) suggests strong agreement that FinTech tools enhance operational efficiency, are comfortable to use, are essential for the future of banking, integrate smoothly with existing systems, and improve customer satisfaction. The low standard deviation indicates a **strong consensus** among employees, highlighting widespread acceptance of FinTech initiatives.
3. **Strong Perceived Impact on Job Performance and Work Efficiency:** The findings reveal that employees strongly perceive FinTech adoption as having a **positive impact on their job performance, work efficiency, and service delivery**. With a high mean score ($M = 4.56$, $SD = 0.36$), respondents agree that FinTech tools have improved productivity, accuracy, speed of task completion, service quality, and confidence in handling customer queries. Additionally, FinTech adoption is perceived to contribute positively to overall job satisfaction and performance.
4. **Consistency and Agreement among Employees:** Across all dimensions—awareness, perception, and perceived impact—the responses are closely clustered around high mean values with low variability. This indicates **consistent agreement among employees** regarding the importance and benefits of FinTech adoption in banking operations.
5. **Supportive Environment for Digital Transformation:** Overall, the findings suggest that public sector bank employees are **well prepared, positively inclined, and supportive** of FinTech-driven digital transformation. High awareness combined with favourable perceptions and perceived performance benefits creates a conducive environment for the successful implementation and expansion of FinTech initiatives.

CONCLUSION

The study concludes that public sector bank employees demonstrate a **high level of awareness and a strongly positive perception** of FinTech adoption, supported by consistent agreement across all dimensions examined. Employees are well informed about FinTech tools, digital banking technologies, and related training initiatives, and they widely acknowledge the necessity and benefits of FinTech for the future of banking. The findings further reveal that FinTech adoption is perceived to have a **significant positive impact on job performance, work efficiency, service delivery, and job satisfaction**, enhancing productivity, accuracy, and confidence in handling customer interactions. The low variability in responses indicates a strong consensus among employees, reflecting organizational readiness and support for digital transformation. Overall, the study affirms that effective FinTech adoption, coupled with employee awareness and favourable attitudes, creates a conducive environment for successful and sustainable digital transformation in public sector banks.

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