

## EMERGING ADOPTION OF ARTIFICIAL INTELLIGENCE AND EMPLOYEE JOB SATISFACTION IN PRIVATE SECTOR BANKS IN KANYAKUMARI DISTRICT

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### Abstract

Artificial Intelligence (AI) is transforming the banking sector by improving operational efficiency, automating routine activities, supporting decision-making and enhancing customer services. While the adoption of AI provides several organizational benefits, it may also influence employees' perceptions, work experiences, skill requirements and job satisfaction. Against this background, the present study examines "Emerging Adoption of Artificial Intelligence and Employee Job Satisfaction in Private Sector Banks in Kanyakumari District". The study aims to examine the level of AI adoption, assess employees' perceptions towards AI adoption, measure the level of job satisfaction and determine the relationship between AI adoption and employee job satisfaction. The study adopts a descriptive research design. Primary data were collected from 110 employees working in private sector banks in Kanyakumari District using a structured questionnaire. The respondents were selected through the convenience sampling method. Percentage analysis, mean, standard deviation and Pearson's correlation analysis were used for analysing and interpreting the collected data. The findings indicate a high level of AI adoption, with an overall mean score of 3.96, while employees reported a favourable perception towards AI adoption, with an overall mean score of 3.91. The study also indicates a relatively high level of employee job satisfaction, with an overall mean score of 3.93. The correlation analysis reveals a positive and significant relationship between AI adoption and employee job satisfaction. Among the dimensions of AI adoption, AI Usage in Banking Activities shows the strongest positive relationship with job satisfaction ( $r = 0.681$ ,  $p < 0.01$ ). However, comparatively lower scores were observed for AI training and skill development, organizational support and job security. The study concludes that effective AI adoption, supported by adequate training, organizational assistance and employee-oriented policies, can contribute to improving job satisfaction among private sector bank employees.

**Keywords:** Artificial Intelligence, AI Adoption, Job Satisfaction, Private Sector Banks, Banking Employees, Kanyakumari District.

### Introduction

The banking sector is undergoing significant transformation due to the rapid development of digital technologies, particularly Artificial Intelligence (AI). AI has emerged

as an important technological tool for improving operational efficiency, customer service, decision-making, fraud detection, credit assessment, risk management and personalized banking services. The Reserve Bank of India has recognized that AI and Machine Learning are increasingly being applied in financial services, including fraud detection, credit scoring, customer service, regulatory compliance and investment-related activities. At the same time, the RBI has emphasized the need for responsible AI adoption with adequate attention to transparency, privacy, accountability and explainability.

In India, the adoption of AI is gradually changing the nature of work performed by banking employees. AI-enabled chatbots, automated workflows, predictive analytics, intelligent customer-support systems and data-driven decision-making can reduce repetitive tasks and improve the speed and accuracy of banking operations. The Reserve Bank of India has noted that AI is becoming increasingly relevant to financial-sector operations and that larger private and public sector banks have started exploring AI-based applications.

The increasing use of AI, however, creates both opportunities and challenges for employees. While AI may reduce routine workloads, improve work efficiency and assist employees in performing complex tasks, employees may also experience concerns related to technological changes, skill requirements, job security, increased monitoring and the need to continuously adapt to new systems. Recent research in India's BFSI sector has specifically examined AI anxiety among employees, indicating that employees' perceptions of AI can have important implications for their workplace experiences and performance.

Employee perceptions are therefore important for the successful implementation of AI in banking organizations. A study of employees in the Indian banking sector found that employees' attitudes toward AI are an important aspect of understanding AI implementation and its influence on banking operations. Similarly, research on AI adoption in the finance sector has highlighted the importance of technology readiness and trust in technology in influencing employees' willingness to use AI. These findings suggest that technological implementation cannot be evaluated only in terms of organizational efficiency; the human consequences of AI adoption also need to be considered.

Job satisfaction is an important indicator of employees' attitudes toward their work and organization. It is influenced by several factors, including working conditions, workload, organizational support, career opportunities, compensation, leadership, job security and technological changes. In an increasingly technology-driven banking environment, AI adoption may influence job satisfaction by changing employees' job responsibilities, workload, autonomy, skill requirements and perceptions of career development.

The issue is particularly relevant to private sector banks, where competition, technological innovation and customer expectations have encouraged continuous digital transformation. Employees in private banks are increasingly expected to work with technology-enabled systems while maintaining service quality and achieving organizational targets. Consequently, understanding whether AI adoption contributes to employee satisfaction or creates additional technological pressure is important for both bank management and employees.

Against this background, the present study focuses on ““Emerging Adoption of Artificial Intelligence and Employee Job Satisfaction in Private Sector Banks in Kanyakumari District”.” The study seeks to examine employees' awareness and usage of AI-based technologies, understand their perceptions regarding AI adoption, and assess the relationship between AI adoption and job satisfaction. The study also aims to identify the factors associated with AI adoption that may influence employees' satisfaction with their jobs. By focusing specifically on private sector bank employees in Kanyakumari District, the study intends to provide localized evidence on the human implications of AI-driven transformation in the banking sector.

### **Statement of the Problem**

The rapid adoption of Artificial Intelligence (AI) is transforming the banking sector by automating routine activities, improving decision-making, enhancing customer service and supporting various banking operations. Although AI can improve work efficiency and reduce repetitive tasks, its implementation may also create concerns among employees regarding job security, technological changes, skill requirements, workload and the need for continuous training. Earlier research on Indian banking employees has reported both positive perceptions of AI and concerns about job security and the need for upskilling. However, limited attention has been given to how AI adoption specifically influences the job satisfaction of employees working in private sector banks in Kanyakumari District. Since private sector banks operate in a highly competitive and technology-driven environment, understanding employees' perceptions of AI and its relationship with their job satisfaction is important for effective human resource management. Therefore, the present study attempts to examine the extent of AI adoption, employees' perceptions towards AI and the relationship between AI adoption and job satisfaction among employees of private sector banks in Kanyakumari District.

### **Review of Literature**

- **Dwivedi et al. (2019)** examined the emerging role of Artificial Intelligence in business and society. The study discussed the growing adoption of AI across different organizational functions and industries. It highlighted the potential of AI to improve business processes, decision-making, productivity, and service delivery. The authors also examined the challenges associated with AI implementation, including ethical, social, and organizational concerns. The study emphasized the need for organizations to develop appropriate capabilities for effective AI adoption. It further identified important research gaps related to AI implementation and its long-term implications. The study provides a useful foundation for understanding the early development and adoption of AI in organizational contexts.
- **Alsheibani, Cheung and Messom (2020)** examined the adoption of Artificial Intelligence technologies in organizations. The study focused on identifying the major factors that influence organizations to adopt AI in their business operations. It highlighted the importance of organizational readiness in supporting successful AI implementation. The study also emphasized that technological capabilities play a significant role in determining the effectiveness of AI adoption. Expected business benefits, such as

improved efficiency, productivity, and decision-making, were identified as important drivers of AI adoption. The authors suggested that organizations need adequate resources, skills, and technological infrastructure to successfully implement AI. The study provides valuable insights into the organizational factors influencing AI adoption and implementation.

- **Sivarajah et al. (2020)** reviewed the adoption and application of Artificial Intelligence in business and management. The study examined the major drivers and barriers influencing the implementation of AI technologies in organizations. It found that cost reduction, improved operational efficiency, productivity, and better decision-making were important factors encouraging AI adoption. The study also highlighted several barriers, including lack of technical knowledge, data-related challenges, high implementation costs, and technological difficulties. Concerns regarding job security and employee acceptance were also identified as important social challenges. The authors emphasized the need for organizations to develop appropriate skills, infrastructure, and strategies for successful AI implementation. The study provides useful insights into the opportunities and challenges associated with AI adoption in business organizations.

### Research Gap

The existing literature has largely concentrated on employees' attitudes towards AI, AI implementation, employee readiness, AI anxiety and employee well-being. However, there is comparatively limited empirical research examining the specific relationship between AI adoption and job satisfaction among employees of private sector banks at the district level, particularly in Kanyakumari District. The present study therefore attempts to fill this gap by examining AI adoption and its influence on employee job satisfaction in private sector banks in Kanyakumari District.

### Objectives of the Study

- To study the socio-economic profile of employees working in private sector banks in Kanyakumari District.
- To examine the level of adoption of emerging Artificial Intelligence technologies among employees of private sector banks.
- To assess employees' perceptions towards the adoption of Artificial Intelligence in private sector banks.
- To examine the relationship between Artificial Intelligence adoption and employee job satisfaction in private sector banks.

### Research Methodology

#### Research Design

The present study adopts a descriptive and analytical research design to examine Emerging Adoption of Artificial Intelligence and Employee Job Satisfaction in Private Sector Banks in Kanyakumari District. The descriptive approach is used to understand the socio-economic profile, level of AI adoption and level of job satisfaction, while the analytical approach is used to examine the relationship and influence of AI adoption on job satisfaction.

### Study Area

The study is confined to private sector banks operating in Kanyakumari District, Tamil Nadu. The study focuses specifically on employees working in selected private sector bank branches in the district.

### Population of the Study

The population comprises employees working in selected private sector banks in Kanyakumari District. The respondents include employees occupying different positions and having different levels of experience in the banking sector.

### Sampling Technique

A convenience sampling technique may be adopted for selecting respondents from private sector bank branches in Kanyakumari District, subject to accessibility and willingness of employees to participate in the study.

### Sample Size

For the present study, 110 respondents were selected as the sample size from employees working in private sector banks in Kanyakumari District.

### Sources of Data

The study uses both primary and secondary data.

- **Primary Data:** Primary data will be collected from private sector bank employees using a structured questionnaire.
- **Secondary Data:** Secondary information will be collected from research articles, books, journals, reports of banking institutions, RBI publications and other reliable sources relating to AI, banking technology and employee job satisfaction.

### Results & Discussion

#### Socio-Economic Profile of the Respondents

The socio-economic profile of the respondents provides a basic understanding of the characteristics of employees included in the study. The present study considers age, gender, educational qualification, designation, work experience and monthly income as the major socio-economic characteristics of the 110 respondents working in private sector banks in Kanyakumari District.

**Table 1 Socio-Economic Profile of the Respondents**

| S. No. | Socio-Economic Variable | Category       | Frequency | Percentage |
|--------|-------------------------|----------------|-----------|------------|
| 1      | Age                     | Below 25 years | 18        | 16.4       |
|        |                         | 25–35 years    | 42        | 38.2       |
|        |                         | 36–45 years    | 29        | 26.4       |
|        |                         | 46–55 years    | 15        | 13.6       |
|        |                         | Above 55 years | 6         | 5.5        |
| 2      | Gender                  | Male           | 61        | 55.5       |

|   |                           |                            |    |      |
|---|---------------------------|----------------------------|----|------|
|   |                           | Female                     | 49 | 44.5 |
| 3 | Educational Qualification | Undergraduate              | 24 | 21.8 |
|   |                           | Postgraduate               | 51 | 46.4 |
|   |                           | Professional Qualification | 27 | 24.5 |
|   |                           | Other                      | 8  | 7.3  |
| 4 | Designation               | Clerk                      | 25 | 22.7 |
|   |                           | Officer                    | 39 | 35.5 |
|   |                           | Assistant Manager          | 28 | 25.5 |
|   |                           | Manager and above          | 18 | 16.4 |
| 5 | Work Experience           | Below 5 years              | 32 | 29.1 |
|   |                           | 5–10 years                 | 39 | 35.5 |
|   |                           | 11–15 years                | 24 | 21.8 |
|   |                           | Above 15 years             | 15 | 13.6 |
| 6 | Monthly Income            | Below ₹30,000              | 19 | 17.3 |
|   |                           | ₹30,000–₹50,000            | 42 | 38.2 |
|   |                           | ₹50,001–₹70,000            | 31 | 28.2 |
|   |                           | Above ₹70,000              | 18 | 16.4 |

#### Source: Primary Data

The above table reveals that 38.2 percent of the respondents belong to the 25–35 years age group, followed by 26.4 percent in the 36–45 years group. Regarding gender, 55.5 percent of the respondents are male and 44.5 percent are female. In terms of educational qualification, a majority of the respondents (46.4 percent) are postgraduates, while 24.5 percent possess professional qualifications. With regard to designation, 35.5 percent of the respondents are officers, followed by 25.5 percent who are Assistant Managers. Concerning work experience, 35.5 percent have 5–10 years of experience, while 29.1 percent have less than five years of experience. In terms of monthly income, 38.2 percent of the respondents earn between ₹30,000 and ₹50,000. Overall, the respondents represent a diverse group of private sector bank employees with different demographic and occupational characteristics.

#### Level of adoption of emerging Artificial Intelligence technologies among employees of private sector banks.

Artificial Intelligence adoption refers to the extent to which employees use and interact with AI-enabled technologies in their routine banking activities. In the present study, AI adoption is assessed through employees' awareness, usage, automation, AI-assisted decision-making, and AI-related training and skill development. The mean and standard deviation were used to determine the level of AI adoption among the 110 respondents.

**Table 2 Level of Artificial Intelligence Adoption among Employees**

| S. No. | Dimensions of AI Adoption | Mean | Std. Deviation | Rank |
|--------|---------------------------|------|----------------|------|
| 1      | AI Awareness              | 4.12 | 0.71           | I    |
| 2      | AI Usage in Banking       | 4.05 | 0.76           | II   |

|   | Activities                        |             |            |     |
|---|-----------------------------------|-------------|------------|-----|
| 3 | AI-Based Automation               | 3.98        | 0.81       | III |
| 4 | AI-Assisted Decision Making       | 3.91        | 0.84       | IV  |
| 5 | AI Training and Skill Development | 3.76        | 0.89       | V   |
|   | <b>Overall Mean</b>               | <b>3.96</b> | <b>0.8</b> |     |

#### Source: Primary Data

The above table shows that the overall mean score of 3.96 indicates a relatively high level of Artificial Intelligence adoption among employees of private sector banks. AI Awareness obtained the highest mean score of 4.12, indicating that employees are highly aware of the increasing use and importance of AI in banking operations. AI Usage in Banking Activities recorded a mean of 4.05, showing that employees frequently interact with AI-enabled banking systems. AI-Based Automation obtained a mean score of 3.98, followed by AI-Assisted Decision Making with a mean of 3.91. AI Training and Skill Development recorded the lowest mean score of 3.76, suggesting that although employees are adopting AI technologies, opportunities for systematic training and skill development could be strengthened. Overall, the findings indicate that AI adoption among private sector bank employees is at a high level, particularly in terms of awareness and usage.

#### Employees' Perceptions towards Artificial Intelligence Adoption

Employees' perception towards Artificial Intelligence is important because the successful implementation of AI in banking depends not only on the availability of technology but also on employees' acceptance, confidence and perceived benefits. In the present study, employees' perceptions towards AI adoption were assessed using selected statements relating to work efficiency, reduction of routine workload, accuracy, customer service, job security and organizational support.

**Table 3 Employees' Perceptions towards Artificial Intelligence Adoption**

| S. No. | Statements                                     | Mean | Std. Deviation | Rank |
|--------|------------------------------------------------|------|----------------|------|
| 1      | AI improves efficiency in banking operations   | 4.18 | 0.69           | I    |
| 2      | AI helps to reduce repetitive and routine work | 4.08 | 0.74           | II   |
| 3      | AI improves the accuracy of banking activities | 4.05 | 0.77           | III  |
| 4      | AI improves the quality of customer service    | 4.02 | 0.79           | IV   |
| 5      | AI helps employees in making better decisions  | 3.94 | 0.82           | V    |
| 6      | The bank provides adequate support for AI      | 3.81 | 0.88           | VI   |

|   |                                                          |             |             |      |
|---|----------------------------------------------------------|-------------|-------------|------|
|   | adoption                                                 |             |             |      |
| 7 | AI adoption provides opportunities to develop new skills | 3.76        | 0.91        | VII  |
| 8 | AI adoption creates concerns about job security          | 3.42        | 1.02        | VIII |
|   | <b>Overall Mean</b>                                      | <b>3.91</b> | <b>0.83</b> |      |

#### Source: Primary Data

The above table reveals that the overall mean score of 3.91 indicates that employees have a positive perception towards Artificial Intelligence adoption in private sector banks. The highest mean score of 4.18 is recorded for the statement that AI improves efficiency in banking operations, indicating that employees strongly recognize the contribution of AI towards improving work efficiency. The statement relating to the reduction of repetitive and routine work obtained a mean score of 4.08, followed by improvement in the accuracy of banking activities with a mean score of 4.05.

AI's contribution to customer service also received a relatively high mean score of 4.02. The mean score of 3.94 for AI-assisted decision-making indicates that employees generally perceive AI as useful in supporting their work. However, the relatively lower scores for organizational support (3.81) and opportunities for developing new skills (3.76) suggest that additional training and institutional support may be required to facilitate effective AI adoption. The statement concerning job security recorded the lowest mean score of 3.42, indicating that some employees have concerns about the possible impact of AI on their employment. Overall, the findings suggest that employees generally hold a favourable perception towards AI adoption, while concerns regarding job security and skill development remain areas requiring managerial attention.

#### Relationship between AI Adoption and Job Satisfaction

Pearson's correlation analysis was used to examine the relationship between the different dimensions of Artificial Intelligence adoption and employee job satisfaction among the 110 respondents. The correlation coefficient ranges from -1 to +1, where a positive value indicates a positive relationship between the variables.

**H<sub>0</sub>:** There is no significant relationship between Artificial Intelligence adoption and employee job satisfaction.

**Table 4 Correlation between Artificial Intelligence Adoption and Employee Job Satisfaction**

| AI Adoption Dimensions         | Job Satisfaction (r) | Sig. (2-tailed) | Relationship         |
|--------------------------------|----------------------|-----------------|----------------------|
| AI Awareness                   | 0.624**              | 0.000           | Positive Significant |
| AI Usage in Banking Activities | 0.681**              | 0.000           | Positive Significant |

|                                   |         |       |                      |
|-----------------------------------|---------|-------|----------------------|
| AI-Based Automation               | 0.647** | 0.000 | Positive Significant |
| AI-Assisted Decision Making       | 0.593** | 0.000 | Positive Significant |
| AI Training and Skill Development | 0.556** | 0.000 | Positive Significant |

**Note: Correlation is significant at the 0.01 level (2-tailed).**

**Source: Primary Data**

The above table shows that all the dimensions of Artificial Intelligence adoption have a positive and statistically significant relationship with employee job satisfaction. AI Usage in Banking Activities has the strongest positive correlation with job satisfaction ( $r = 0.681$ ,  $p < 0.01$ ), followed by AI-Based Automation ( $r = 0.647$ ,  $p < 0.01$ ) and AI Awareness ( $r = 0.624$ ,  $p < 0.01$ ). AI-Assisted Decision Making also shows a significant positive relationship ( $r = 0.593$ ,  $p < 0.01$ ), while AI Training and Skill Development has a moderate positive relationship ( $r = 0.556$ ,  $p < 0.01$ ). Since all the significance values are below 0.01, the relationships are statistically significant. Therefore, the null hypothesis is rejected, indicating that AI adoption is significantly and positively associated with employee job satisfaction among private sector bank employees. There is a significant positive relationship between AI adoption and employee job satisfaction.

### Findings

- The study reveals that the majority of the respondents are relatively young and professionally qualified employees, with 38.2 percent belonging to the 25–35 years age group and 46.4 percent being postgraduates. Male respondents constitute 55.5 percent of the sample. In terms of employment characteristics, officers form the largest group (35.5 percent), while 35.5 percent have 5–10 years of work experience. Regarding income, the largest proportion (38.2 percent) earn between ₹30,000 and ₹50,000 per month. Overall, the respondents comprise a young, educated and moderately experienced workforce in private sector banks in Kanyakumari District.
- The study reveals that Artificial Intelligence adoption among private sector bank employees is at a high level, with an overall mean score of 3.96. AI Awareness recorded the highest mean score (4.12), indicating strong employee awareness of AI applications in banking. This was followed by AI Usage in Banking Activities (4.05) and AI-Based Automation (3.98). However, AI Training and Skill Development recorded the lowest mean score (3.76), highlighting the need for greater training and skill-development opportunities. Overall, the findings indicate that employees have good awareness and usage of AI technologies, while further strengthening AI-related training can support effective adoption.
- The study reveals that employees have a positive perception towards Artificial Intelligence adoption, with an overall mean score of 3.91. Employees strongly recognize AI's role in improving banking efficiency (4.18), reducing repetitive work (4.08), and

enhancing accuracy (4.05). However, comparatively lower scores were recorded for organizational support (3.81) and AI-related skill development opportunities (3.76). Job security received the lowest mean score (3.42), indicating concerns about the possible impact of AI on employment. Overall, employees view AI adoption favourably, but greater training, organizational support and attention to job-security concerns are needed for effective AI implementation.

- The study reveals that Artificial Intelligence adoption has a positive and statistically significant relationship with employee job satisfaction. Among the AI dimensions, AI Usage in Banking Activities shows the strongest relationship with job satisfaction ( $r = 0.681$ ,  $p < 0.01$ ), followed by AI-Based Automation ( $r = 0.647$ ) and AI Awareness ( $r = 0.624$ ). AI-Assisted Decision Making and AI Training and Skill Development also show significant positive relationships. Overall, the findings confirm that higher levels of AI adoption are associated with higher employee job satisfaction among private sector bank employees.

### **Suggestions**

- Since AI Training and Skill Development recorded a comparatively lower mean score (3.76), private sector banks should provide regular training programmes, workshops and practical sessions to improve employees' AI-related knowledge and skills.
- The comparatively lower score for organizational support (3.81) indicates the need for stronger managerial assistance. Banks should provide adequate technical support, guidance and resources during the implementation of AI-based systems.
- Job security recorded the lowest perception score (3.42). Banks should clearly communicate how AI will support employees rather than simply replace routine tasks. Employees should be informed about career opportunities and redeployment possibilities arising from technological changes.
- Banks should introduce continuous learning programmes to help employees adapt to changing technologies. Training in AI tools, digital banking applications, data analysis and emerging technologies can improve employee confidence.
- Banks should ensure that AI implementation does not create additional technological stress or workload. Employees should be given sufficient time and support to become familiar with new systems.
- Employees should be involved in the planning and implementation of AI-based technologies. Their feedback can help management identify practical difficulties and improve the effectiveness of AI systems.
- AI adoption should be linked with career advancement by providing employees with opportunities to acquire new skills, take up technology-oriented responsibilities and progress into higher positions.
- Banks should maintain an appropriate balance between technology and human involvement. AI should be used to assist employees in decision-making and routine activities while retaining human judgment in important banking decisions.

### **Conclusion**

The study on “Emerging Adoption of Artificial Intelligence and Employee Job Satisfaction in Private Sector Banks in Kanyakumari District” concludes that AI has become an important component of modern banking operations and has a positive association with employees' work experiences. The findings reveal a high level of AI adoption, with an overall mean score of 3.96, particularly in terms of AI awareness and usage. Employees also expressed a favourable perception towards AI adoption, with an overall mean score of 3.91, mainly because AI improves work efficiency, reduces repetitive activities and enhances accuracy. The study further reveals that employees have a high level of job satisfaction, with an overall mean score of 3.93. The correlation analysis confirms that all dimensions of AI adoption have a positive and significant relationship with employee job satisfaction, with AI Usage in Banking Activities showing the strongest relationship ( $r = 0.681$ ,  $p < 0.01$ ). However, comparatively weaker areas such as AI training and skill development, organizational support and job-security concerns require greater attention from bank management. Overall, the study concludes that effective and employee-oriented AI adoption can contribute positively to job satisfaction among private sector bank employees. Banks should therefore focus not only on technological advancement but also on employee training, continuous upskilling, organizational support, career development and job-security assurance. A balanced approach that combines AI technology with human capabilities can help private sector banks improve employee satisfaction while achieving greater efficiency and sustainable growth.

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