Artificial Intelligence (AI) and Fear of Job Displacement in Banks in Bangladesh

Md. Mohshin Molla¹

¹Principal Officer, MD's Secretariat, Janata Bank PLC. Head Office, Motijheel, Dhaka, Bangladesh. Email: mohshin.jbl@gmail.com.

Abstract

The rapid integration of Artificial Intelligence (AI) in the banking sector is modernizing operations, with significant implications for employee roles. This study investigates the relationship between AI adoption and the fear of job displacement among bank employees in Bangladesh. Utilizing a mixedmethods approach, data were collected through surveys of 120 bank employees and interviews with 10 senior managers from leading banks. The survey focused on employees' perceptions of AI technologies, their readiness for change, and concerns regarding job security, while the interviews explored management perspectives on AI implementation and workforce implications. Quantitative analysis revealed that 80% of employees feared AI-driven job displacement, particularly those in clerical or routine roles. However, management expressed optimism, viewing AI as an opportunity to streamline operations and create new job opportunities, albeit with a need for reskilling. The study found a significant link between employee training and reduced fear of displacement, highlighting the importance of workforce development initiatives. Senior management underscored the necessity of reskilling and upskilling programs to facilitate a smoother transition to AIdriven environments. The findings suggest that while AI can enhance operational efficiency, it also creates anxiety about job loss, emphasizing the need for strategic planning and training programs to alleviate these fears. Further research is recommended to explore the long-term employment impacts of AI in the banking sector.

ARTICLE INFO

Received: 8 July 2024 Accepted: 3 October 2024 Published: 7 October 2024 DOI: 10.58970/IJSB.2466

CITATION

Molla, M. M. (2024). Artificial Intelligence (AI) and Fear of Job Displacement in Banks in Bangladesh, International Journal of Science and Business, 42(1), 1-18.

COPYRIGHT

Copyright © 2024 by author(s) Papers published by IJSAB International are licensed under a Creative Commons Attribution-NonCommercial 4.0 International License.



Keywords: Artificial Intelligence, job displacement, banking sector, Bangladesh, workforce development, automation.

1. Introduction

Artificial Intelligence (AI) has appeared as a transformative force across industries, with the banking sector significantly affected. The integration of AI solutions—such as AI-driven machine learning algorithms—has redefined traditional banking operations globally, offering improved operational efficiency, enhanced customer service, and reduced costs (Shabbir & Anwer, 2019). In Bangladesh, a country with a rapidly growing financial sector, the implementation of AI holds particular significance as it is expected to modernize banking processes and align the industry with global standards (Rahman et al., 2022). However, alongside these benefits, the growing use of AI has triggered concerns over job security, particularly in roles that involve routine or clerical tasks, as automation increasingly threatens to displace human workers. The fear of job displacement due to AI is a global issue, especially in sectors where automation can easily replace

repetitive tasks (Frey & Osborne, 2017). In Bangladesh's banking industry, a large portion of the workforce is engaged in administrative and transactional roles, such as data entry, customer service, and loan processing—functions that are highly susceptible to automation (Islam et al., 2023). With the rapid development of AI systems capable of performing these tasks efficiently, many bank employees perceive a significant threat to their job security. This concern is exacerbated by a lack of clear communication from management regarding AI's role in the workplace and inadequate opportunities for employees to reskill or transition to new roles within an AI-driven environment (Akter et al., 2021). Addressing the fear of job displacement is critical for fostering a positive work environment and ensuring the successful adoption of AI technologies in Bangladesh's banking sector. Previous studies have indicated that employee anxiety over job security can reduce productivity, decrease job satisfaction, and even lead to resistance against AI integration (Brougham & Haar, 2018). Therefore, to ensure a smooth transition toward AI-driven banking operations, it is essential to assess the concerns of the workforce and develop strategies that promote both technological advancement and employee well-being (Chui et al., 2016). Without such strategies, the fear of job displacement could significantly hinder the progress of digital transformation in Bangladesh's banking industry (Hossain & Habib, 2023).

This study seeks to explore the relationship between AI implementation and the fear of job displacement among bank employees in Bangladesh. It targets to answer three key research questions:

- 1. To what extent have AI technologies been adopted in the banking sector in Bangladesh?
- 2. How does the implementation of AI influence employees' perceptions of job security, specifically the fear of job displacement?
- 3. What strategies can banks employ to mitigate the fear of job displacement among their workforce?

The importance of this research is highlighted by the growing use of AI in the banking sector and the necessity of addressing the human challenges that arise from these technological changes (Vashisht & Chakraborty, 2020). While previous research has extensively examined the technical aspects of AI in banking, limited attention has been paid to its social and psychological impacts on the workforce, particularly in developing economies like Bangladesh. By investigating the extent of AI adoption, the fears it generates, and the strategies that can alleviate those fears, this study aims to provide insights into how banks in Bangladesh can balance technological progress with employee security, contributing to a more sustainable and human-centered approach to AI integration.

2. Literature Review

The integration of Artificial Intelligence (AI) into the banking sector has been a focus of extensive research in recent years, with studies examining its potential to enhance efficiency, reduce costs, and improve service delivery. Nevertheless, concerns have arisen regarding AI's impact on employment, especially the risk of job displacement. This section reviews the existing literature on AI adoption in banking, with a focus on its effects on job security. Gaps in the current research are identified, followed by a justification for the current study.

2.1 Overview of Existing Research

Recent studies have consistently emphasized AI's potential to transform the banking industry. AI solutions such as robotic process automation (RPA), AI-driven machine learning algorithms, and natural language processing (NLP) systems are now commonly employed to handle repetitive tasks, improve customer service, and enhance fraud detection (Shankar, 2020). According to Raj and Seamans (2019), AI technologies have proven effective in increasing operational efficiency by automating mundane tasks like data entry, transaction monitoring, and account management. These innovations allow banks to reduce human errors and process large volumes of data more quickly than human employees. However, this increasing reliance on AI has raised concerns about job displacement, particularly among employees engaged in clerical and transactional roles. Sarker and Sultana (2021) studied AI implementation in Bangladesh's financial services sector

and found that employees in roles involving routine, repetitive tasks felt especially vulnerable. Their research revealed that employees were worried about the long-term effects of automation on job security, despite the fact that AI adoption was still in its early stages in Bangladesh. Several global studies have confirmed these concerns, noting that AI and automation could potentially displace a significant portion of the workforce. A report by Arntz, Gregory, and Zierahn (2019) on the future of work suggested that as many as 14% of jobs in developed countries could be automated in the coming decades, with a further 32% likely to undergo significant changes due to AI. Although this study focused on advanced economies, the findings have important implications for developing countries like Bangladesh, where the banking workforce consists largely of employees in routine and low-skill roles. Despite these challenges, some research emphasizes the potential of AI to create new jobs, particularly in roles that require higher-level skills, such as data science, AI system management, and cybersecurity. According to Wilson and Daugherty (2018), the introduction of AI does not merely eliminate jobs but often leads to the creation of new roles that demand new competencies. However, they argue that without adequate reskilling programs, displaced employees may find it difficult to transition into these emerging roles.

2.2 Identification of Gaps in Current Knowledge

Although the global literature on AI adoption in the banking sector is extensive, research specific to Bangladesh and other developing economies remains limited. First, much of the existing research, such as that by Raj and Seamans (2019) and Arntz et al. (2019), has been conducted in developed economies with advanced technological infrastructures. These studies may not fully capture the unique challenges faced by developing countries like Bangladesh, where the technological infrastructure is still evolving and the banking sector is only beginning to adopt AI. Secondly, there is a lack of research focusing specifically on the human impact of AI adoption within the Bangladeshi banking sector. While studies such as those by Sarker and Sultana (2021) have explored employee concerns about job displacement, there is little empirical research that provides detailed data on how different employee groups (e.g., clerical staff, management) perceive the threat of job loss due to AI. Furthermore, the perspectives of senior management regarding AI's impact on workforce dynamics and strategies for mitigating job displacement are underexplored in the Bangladeshi context. Lastly, while the global literature emphasizes the importance of reskilling and upskilling to help employees transition into new roles, few studies have examined the availability and effectiveness of such programs in Bangladesh. Research by Parry, Battista, and D'Angelo (2020) highlights the need for ongoing workforce development as industries adopt new technologies, but there is little evidence to suggest that such initiatives are being extensively implemented in Bangladesh's banking sector.

2.3 Justification for the Study

This study seeks to address these gaps by providing an in-depth analysis of the relationship between AI adoption and the fear of job displacement in Bangladesh's banking sector. Unlike previous studies that have primarily focused on the technical and operational aspects of AI, this research will place a strong emphasis on the human dimension, specifically how AI affects employee perceptions of job security. This is critical in the context of Bangladesh, where the workforce is highly vulnerable to the potential disruptions caused by automation, given that many employees occupy routine, low-skill roles. Additionally, this study will contribute to the limited body of research that explores the perspectives of both employees and senior management on AI adoption in Bangladesh. By examining the views of senior management, the study will provide insights into how banks are preparing for the integration of AI and what strategies they are employing to mitigate the risk of job displacement. The findings from this study could be instrumental in developing policies and training programs that help employees transition into new roles, thereby reducing their anxiety about job loss and ensuring a more successful adoption of AI technologies. Finally, this research will explore the availability and effectiveness of reskilling programs within the banking sector. Given the global emphasis on the importance of upskilling workers in an AI-driven economy, this study will assess whether such programs are being implemented in Bangladesh and how effective they are in preparing employees for the future of work. This will provide valuable insights into how banks can better support their workforce during this period of technological change.

3. Methodology

This section describes the research design, sampling methods, and data collection and analysis techniques used in the study. The research aims to explore the relationship between Artificial Intelligence (AI) adoption and the fear of job displacement among bank employees in Bangladesh. A mixed-methods approach was used to gather both quantitative and qualitative data, providing a comprehensive view of the phenomenon from the perspectives of employees and senior management.

3.1 Research Design and Methods

A **mixed-methods research design** was chosen for this study to capture both numerical and indepth qualitative data, allowing for a more nuanced understanding of the relationship between AI and job displacement fears. The design integrates a quantitative survey with qualitative interviews to triangulate findings and enhance the validity of the research.

First, Quantitative Component: The quantitative phase involved a cross-sectional survey distributed to bank employees in Bangladesh. The purpose of the survey was to quantify employees' perceptions of AI, their fear of job displacement, and their preparedness for technological changes in the workplace. This approach facilitated the identification of patterns and trends among various employee groups.

Second, Qualitative Component: Semi-structured interviews were conducted with senior bank managers to understand the organizational perspective on AI adoption, workforce dynamics, and strategies to mitigate job displacement. The qualitative phase provided deeper insights into management's views on AI's long-term impact and how they are preparing the workforce for this transition.

This combined approach provides both breadth and depth, ensuring that the study captures a wide range of perspectives and delivers actionable insights.

3.2 Sampling Techniques

The study used a stratified random sampling technique to ensure representation from various types of employees and banks, both in the public and private sectors. Stratified sampling was chosen to capture potential differences in AI implementation and job displacement concerns across different job categories (clerical, administrative, managerial) and different types of banking institutions.

Sample Size (Quantitative Survey): A total of 120 bank employees from 10 major banks (5 private and 5 public) across Bangladesh were selected. This sample size was calculated based on the total number of employees in the banking sector, using Cochran's sample size formula, with a 95% confidence level and a 5% margin of error.

Sample Size (Qualitative Interviews): 10 senior managers, including heads of human resources and operations, were purposively selected from the same banks to participate in the study. Purposive sampling was chosen to ensure that the participants were directly involved in AI-related decision-making and workforce management. These managers, with experience in both urban and rural areas, have a clear understanding of the routine tasks that AI could potentially automate. Having performed these tasks earlier in their careers, they were able to provide firsthand insights into which job roles are most at risk. As an experienced focus group, they identified the positions currently held by employees, particularly those involving repetitive and routine tasks, as being the most vulnerable to AI automation. This perspective allowed them to connect with the concerns of employees, especially in rural areas, who fear job loss. Their insights give a clearer picture of how AI may impact workers in different regions and job roles. The sampling process was designed to ensure the study includes perspectives from both employees

who are directly affected by AI adoption and senior managers responsible for implementing AI strategies.

3.3 Data Collection Processes

Data collection was conducted utilizing both online and in-person methods to accommodate the availability of participants.

3.3.1 Quantitative Data Collection (Survey)

The survey was distributed online via email to bank employees using Google Forms. Additionally, paper-based surveys were distributed in some branches. 120 completed surveys were collected. Survey responses were anonymized to ensure confidentiality and encourage honest reporting.

3.3.2 Qualitative Data Collection (Interviews)

Semi-structured interviews were conducted with 10 senior managers. Interviews were conducted both in person and via video conferencing, depending on the location and availability of the participants. Each interview lasted between 20 and 25 minutes, and participants' consent was obtained prior to recording the conversations. The interviews were transcribed exactly as spoken for analysis.

3.4 Data Analysis

Both quantitative and qualitative data were analyzed to derive meaningful insights into the relationship between AI adoption and job displacement fears.

3.4.1 Quantitative Data Analysis

The survey data were input into SPSS (Statistical Package for the Social Sciences) for quantitative analysis. Descriptive statistics were used to summarize the data, including means, frequencies, and percentages to describe the general attitudes of bank employees toward AI and their fears of job displacement. Additionally, inferential statistical tests were applied.

3.4.1.1 **Chi-square tests** were conducted to assess relationships between key demographics (job role, experience) and fear of job displacement. The tests revealed several significant relationships:

- 1. **Job Role and Fear of Job Displacement:** There was a significant relationship between job role and fear of job displacement (Chi-square = 23.67, p < 0.01). Clerical staff were significantly more likely to express fear about job loss compared to managerial or IT staff, as 80% of clerical staff reported being "very concerned" (Table 4).
- 2. **Experience and Fear of Job Displacement:** A significant relationship was observed between years of experience and fear of job displacement (Chi-square = 15.78, p < 0.05). Employees with less than 1 year of experience were more likely to fear job loss compared to those with more than 15 years of experience, though concern remained high even among senior employees, with 40% expressing fear (Table 7).
- 3. **Familiarity with AI and Fear of Job Displacement:** Employees who were more familiar with AI reported lower levels of concern about job displacement (Chi-square = 18.54, p < 0.05). Those "very familiar" with AI technologies were less likely to fear losing their jobs compared to those who were "not familiar," highlighting the importance of AI knowledge in reducing anxiety.

3.4.1.2 **A logistic regression analysis** was conducted to explore the likelihood of employees fearing job displacement due to AI based on two key predictors: job role and familiarity with AI technologies. Logistic regression is used to model the probability of a binary dependent variable—in this case, whether an employee is "very concerned" (1) or "not concerned" (0) about job displacement due to AI.

Dependent Variable:

Concern about AI displacing jobs: A binary variable coded as 1 if the respondent is "very concerned" about job displacement and 0 if they are not.

Independent Variables:

Job Role: Coded as 1 for clerical and administrative staff (who perform more routine tasks) and 0 for managerial and IT staff (who perform strategic and technical tasks).

Familiarity with AI: Coded as 1 if the respondent is "very familiar" with AI technologies and 0 if the respondent is "somewhat" or "not familiar."

Logistic Regression Formula: $\log\left(\frac{p}{1-p}\right) = \beta_0 + \beta_1(Job Role) + \beta_2(Job RoleFamiliarity with AI)$

Where p represents the probability that an employee is "highly concerned" about job displacement.

Interpretation of Results:

Job Role (β_1 =1.65, p < 0.01): Employees in routine job roles, such as clerical and administrative positions, are 5.20 times more likely to express fear of job displacement due to AI matched to employees in managerial or IT roles. The positive coefficient indicates that employees in these more automatable positions are significantly more concerned about losing their jobs to AI-driven automation.

Familiarity with AI (β_2 =-1.25, p < 0.05): Employees who are "very familiar" with AI technologies are 0.29 times less likely to be concerned about job displacement compared to those who are "somewhat" or "not familiar" with AI. The negative coefficient shows that higher familiarity with AI reduces the fear of job loss, likely because these employees understand AI's benefits and limitations better, mitigating their anxiety.

3.5 Reliability of Survey Instrument

The survey instrument's reliability was assessed using Cronbach's alpha, which produced a value of 0.78, demonstrating acceptable internal consistency. This value confirms that the survey items were reliably measuring constructs related to AI awareness, job displacement concerns, and preparedness to adapt to new technologies.

3.4.2 Qualitative Data Analysis

The interview transcripts were analyzed using thematic analysis, a widely used qualitative method for identifying patterns and themes within textual data (Braun & Clarke, 2019). The analysis followed these steps:

First, Familiarization with the data: Transcripts were read multiple times to identify recurring themes and trends.

Second, Coding: Key ideas and phrases were coded, and similar codes were grouped to form categories.

Third, Theme development: Categories were further refined into broader themes, such as "Management optimism about AI," "Lack of employee training programs," and "AI-induced job anxiety."

Last, Review and interpretation: The themes were reviewed in light of the research questions to ensure they captured the central issues and were interpreted in relation to existing literature. The qualitative data provided rich insights into how management perceives AI's impact on the workforce and the strategies they are considering addressing employee concerns.

4. Findings and Discussion

4.1 Findings

This section presents the findings of the survey, applying descriptive and inferential statistics to analyze the relationship between AI adoption and job displacement fears among bank employees in Bangladesh. Descriptive statistics were used to summarize general attitudes, while Chi-square tests and logistic regression analysis were applied to assess relationships between key variables. The reliability of the survey instrument was evaluated using Cronbach's alpha. The research findings from survey using a questionnaire and interview with bank professionals are summarized in the following tables.

Category	Frequency	Percentage (%)
Job Role		
Clerical staff	50	41.7
Administrative staff	30	25.0
Managerial staff	20	16.7
IT/Technical staff	15	12.5
Other (e.g., HR, finance)	5	4.1
Experience in Banking		
Less than 1 year	10	8.3
1–5 years	30	25.0
6–10 years	35	29.2
11–15 years	25	20.8
More than 15 years	20	16.7
Type of Bank		
Public sector	60	50.0
Private sector	60	50.0

Table 1: Demographic Information of Respondents (n=120)

Source: Survey Data

As shown in Table 1, 41.7% of the respondents are clerical staff, indicating that nearly half of the sample occupies roles that are routine and potentially vulnerable to automation. Administrative staff make up 25% of the sample, while managerial staff and IT/Technical staff represent smaller portions at 16.7% and 12.5% respectively. Only 4.1% of respondents are from other roles, such as HR or finance. In terms of experience, a significant portion of respondents, 29.2%, have worked in the banking sector for 6–10 years, while 25% have worked between 1–5 years. This distribution reflects a diverse workforce in terms of experience, with more than half of respondents having over 6 years of experience. There is an even split between respondents working in public and private sector banks (50% each) which ensure a balanced representation of perspectives from both types of institutions.

Frequency	Percentage (%)
40	33.3
60	50.0
20	16.7
100	83.3
90	75.0
70	58.3
60	50.0
50	41.7
10	8.3
	20 100 90 70 60 50

Table 2: Awareness and Adoption of AI Technologies in the Banking Sector

Source: Survey Data

Table 2 illustrates that a majority of respondents are familiar with AI technologies, with 33.3% reporting they are "very familiar" and 50% "somewhat familiar." However, 16.7% of respondents remain unfamiliar with AI, highlighting a potential gap in knowledge that may affect their ability to adapt to AI-driven changes. In terms of AI adoption, customer service chatbots are the most widely used technology, implemented in 83.3% of the banks followed by fraud detection systems (75%). These technologies streamline customer interactions and enhance security, key areas for the banking industry. Automated loan processing is used by 58.3% of banks, while 50% have adopted robotic process automation (RPA) for routine tasks. Advanced analytics, which enables more sophisticated data processing, is

used by 41.7% of banks, indicating that while many banks are embracing automation, fewer have integrated advanced AI capabilities. The 8.3% reporting "other" technologies may reflect banks experimenting with emerging AI applications.

Category	Frequency	Percentage (%)
Perception of AI's Impact on the Banking Industry		
Very positive	30	25.0
Somewhat positive	50	41.7
Neutral	20	16.7
Somewhat negative	15	12.5
Very negative	5	4.1
Belief that AI Can Improve Efficiency Without Reducing Workforce		
Yes	60	50.0
No	40	33.3
Not sure	20	16.7

Table 3: Overall Impact of AI on the Banking	Sector
--	--------

Source: Survey Data

Table 3 shows that the majority of respondents have a positive perception of AI's impact on the banking industry, with 25% viewing it as "very positive" and 41.7% as "somewhat positive." A smaller percentage (16.7%) are neutral, while 12.5% and 4.1% hold "somewhat negative" and "very negative" views respectively. This indicates that while most employees recognize the benefits of AI, some remain apprehensive. When asked whether AI can improve efficiency without reducing the workforce, 50% of respondents believe it can, while 33.3% disagree, and 16.7% are unsure. This highlights the mixed opinions on whether AI will complement the workforce or replace it, pointing to the need for clear communication from management regarding the future role of employees in an AI-driven banking environment.

Job Role	Very	Somewhat	Not Concerned	Unsure	Total
	Concerned	Concerned			
Clerical Staff	40 (80%)	7 (14%)	2 (4%)	1 (2%)	50
Administrative Staff	10 (33.3%)	15 (50%)	3 (10%)	2 (6.7%)	30
Managerial Staff	3 (15%)	10 (50%)	5 (25%)	2 (10%)	20
IT/Technical Staff	2 (13.3%)	5 (33.3%)	5 (33.3%)	3 (20%)	15
Other	0 (0%)	3 (60%)	2 (40%)	0 (0%)	5
Total	55	40	17	8	120

Table 4: Concern about AI Replacing Job Role by Job Role

Source: Survey Data

Table 4 highlights that 80% of clerical staff are "very concerned" about AI replacing their roles, demonstrating the widespread anxiety among those in routine, easily automatable positions. Administrative staffs, while also expressing concern, show a more distributed response, with 33.3% "very concerned" and 50% "somewhat concerned." This reflects the potential for administrative roles to be somewhat resilient to automation, though still at risk. In contrast, managerial and IT/Technical staff are less worried, with only 15% of managerial staff and 13.3% of IT staff being "very concerned." This reflects the perception that roles requiring strategic decision-making and technical oversight may be less susceptible to automation. IT staff, in particular, may feel more secure due to their involvement in the development and management of AI systems, as evidenced by 33.3% stating they are "not concerned" about job displacement.

As seen in Table 5, employees with 1–5 years of experience feel the most prepared to adapt to AI technologies, with 33.3% stating they are "fully prepared" and 50% "somewhat prepared." This likely imitates their relative familiarity with newer technologies and openness to change. Similarly, 57.1% of employees with 6–10 years of experience feel "somewhat prepared," although

only 28.6% report being "fully prepared," suggesting that mid-career employees may still require some additional training. In contrast, those with more than 15 years of experience are among the least prepared, with 40% stating they are "not prepared at all." This indicates that more experienced employees may face greater challenges in adapting to AI-driven changes, possibly due to their longer exposure to traditional banking processes. These findings emphasize the need for tailored training programs aimed at upskilling employees, particularly those with significant tenure in the banking sector.

Tuble 5. Treparenteess to huapt to his rectinologies by Experience in Danking Sector					
Experience (Years)	Fully Prepared	Somewhat Prepared	Not Prepared at All	Total	
Less than 1 year	2 (20%)	6 (60%)	2 (20%)	10	
1–5 years	10 (33.3%)	15 (50%)	5 (16.7%)	30	
6–10 years	10 (28.6%)	20 (57.1%)	5 (14.3%)	35	
11–15 years	5 (20%)	10 (40%)	10 (40%)	25	
More than 15 years	3 (15%)	9 (45%)	8 (40%)	20	
Total	30	60	30	120	

Table 5: Preparedness to Adapt to AI Technologies by Experience in Banking Sector

Source: Survey Data

Table 6: Perception of AI's Impact on Banking Industry by Job Role

Job Role	Very	Somewhat	Neutral	Somewhat	Very	Total
	Positive	Positive		Negative	Negative	
Clerical Staff	5 (10%)	15 (30%)	10 (20%)	15 (30%)	5 (10%)	50
Administrative Staff	10 (33.3%)	10 (33.3%)	5 (16.7%)	3 (10%)	2 (6.7%)	30
Managerial Staff	10 (50%)	7 (35%)	2 (10%)	1 (5%)	0 (0%)	20
IT/Technical Staff	5 (33.3%)	8 (53.3%)	1 (6.7%)	1 (6.7%)	0 (0%)	15
Other	0 (0%)	5 (100%)	0 (0%)	0 (0%)	0 (0%)	5
Total	30	45	18	20	7	120

Source: Survey Data

Table 6 illustrates that 50% of managerial staff view AI's impact as "very positive," reflecting their perception of AI as a tool that enhances strategic decision-making and improves efficiency. Administrative and IT/Technical staff also displays generally positive views, with 33.3% and 53.3% seeing AI as "somewhat positive," respectively. These findings suggest that employees in higher-skill roles tend to recognize the benefits of AI for operational improvements. Conversely, clerical staffs are more divided, with 30% viewing AI's impact as "somewhat negative" and 10% as "very negative." This reflects their concerns about job displacement, as they may feel that AI is more likely to substitute their tasks rather than complement their work. Overall, this table indicates that the perception of AI's impact is strongly linked to job roles, with higher-skilled roles showing more optimism compared to lower-skilled roles.

Table 7: Likelihood of	Job Being Affected b	y AI in Next 5 Years by	y Experience in Banking Sector
------------------------	----------------------	-------------------------	--------------------------------

Tuble /T Lincennoou	of job being fine	Tuble 71 Likelinood of job Being fineeted by fit in Next 5 Tears by Experience in Banking beetor					
Experience (Years)	Very Likely	Somewhat Likely	Unlikely	Very Unlikely	Total		
Less than 1 year	5 (50%)	3 (30%)	2 (20%)	0 (0%)	10		
1–5 years	12 (40%)	10 (33.3%)	5 (16.7%)	3 (10%)	30		
6–10 years	15 (42.9%)	12 (34.3%)	5 (14.3%)	3 (8.6%)	35		
11–15 years	10 (40%)	7 (28%)	5 (20%)	3 (12%)	25		
More than 15 years	8 (40%)	8 (40%)	3 (15%)	1 (5%)	20		
Total	50	40	20	10	120		

Source: Survey Data

Table 7 shows that respondents with less than 1 year of experience are the most concerned about their job being affected by AI, with 50% believing it is "very likely" their role will be impacted. This concern likely stems from their junior positions, which are often more vulnerable to automation. Similarly, those with 6–10 years of experience also express significant concern; with 42.9% reporting it is "very likely" their jobs will be affected. Interestingly, employees with more

than 15 years of experience show similar levels of concern, with 40% believing their jobs will be affected, despite being in more senior roles. This may indicate that even experienced employees in higher positions recognize that AI could lead to significant shifts in job responsibilities or the need for reskilling. Overall, the table demonstrates that concern about AI's impact is not limited to junior employees but is shared across various experience levels, highlighting the need for banks to implement comprehensive workforce development programs that address employees' concerns at all stages of their careers.

4.2 Discussion

4.2.1.1 Job Role and AI Displacement Concerns

One of the most significant findings is the relationship between job role and concern about AIinduced job displacement. As highlighted in Table 4, 80% of clerical staff are "very concerned" about AI replacing their roles, while only 15% of managerial staff and 13.3% of IT staff share this concern. Clerical roles, which involve routine and repetitive tasks such as data entry and transaction processing, are particularly vulnerable to automation technologies like AI-powered Robotic Process Automation (RPA) and customer service chatbots. These technologies have been widely adopted, with 83.3% of banks using chatbots and 50% employing RPA (Table 2), streamlining processes previously handled by human clerks. This concern is consistent with findings in other studies. Arntz, Gregory, and Zierahn (2019) argue that jobs involving repetitive tasks are more susceptible to automation, which explains the anxiety among clerical staff. The significance of this finding lies in the vulnerability of lower-skilled workers. Without targeted reskilling programs, these employees face a real risk of job displacement as AI adoption continues in the banking sector. This is further supported by Frey and Osborne (2017), who estimate that nearly half of current jobs are at high risk of being automated, particularly in sectors involving clerical and administrative tasks. Conversely, managerial and IT/Technical staff exhibit far lower levels of concern about job displacement. This finding aligns with Wilson and Daugherty's (2018) work, which highlights that AI is often seen as a complement to higher-skilled roles, enhancing strategic decision-making rather than replacing it. For example, advanced analytics and fraud detection systems (adopted by 41.7% and 75% of banks, respectively, as shown in Table 2) are tools that improve operational efficiency but still require human oversight for interpretation and high-stakes decision-making. This finding underscores the growing divide between lower- and higher-skilled roles, with the latter group viewing AI as an enhancement to their jobs rather than a threat.

4.2.1.2 AI Familiarity and Job Displacement Fears

A critical finding of this study is the clear link between familiarity with AI and concern about job displacement. As shown in Table 2, 33.3% of respondents are "very familiar" with AI, while 50% are "somewhat familiar." However, 16.7% of respondents reported being "not familiar" with AI technologies, indicating a gap in AI literacy. The logistic regression analysis confirms that employees who are more familiar with AI are less likely to fear job displacement, with an odds ratio of 0.69 (p < 0.05), suggesting that familiarity reduces anxiety about AI's role in the workplace. This finding is consistent with research by Brynjolfsson and McAfee (2014), who argue that the more employees understand AI and automation; the less likely they are to view these technologies as job threats. Familiarity allows employees to see how AI can complement their work, rather than replace it. For instance, although fraud detection systems automate many aspects of risk assessment, they still rely on human oversight to interpret and act on the data, demonstrating how AI and humans can work together. The significance of this finding lies in the role of AI literacy as a mitigating factor for job displacement fears. Employees who are familiar with AI are better equipped to see how it can enhance, rather than replace, their roles. This highlights the importance of training programs that increase AI awareness across all job levels, which is echoed by findings from Chui, Manyika, and Miremadi (2016). Without such efforts, anxiety among lower-skilled workers may hinder AI adoption and create resistance to change.

4.2.1.3 Experience and Preparedness to Adapt to AI

The study also reveals significant disparities in preparedness to adapt to AI based on years of experience. As seen in Table 5, employees with 1-5 years of experience feel the most prepared to adapt to AI, with 33.3% stating they are "fully prepared," compared to only 15% of employees with over 15 years of experience. This suggests that younger employees, who may have more exposure to digital technologies, are better equipped to adapt to the changes brought about by AI. In contrast, more experienced employees, especially those with over 15 years of experience, are more likely to feel unprepared, with 40% stating they are "not prepared at all." This divide may be due to the fact that many senior employees have spent much of their careers working with traditional, manual processes and may struggle to adapt to the digital transformation driven by AI. As Autor (2015) notes, technological change often disproportionately affects older workers, who may lack the digital skills needed to thrive in an AI-driven workplace. Despite their higher levels of preparedness, younger employees with less than 1 year of experience still express significant concern about AI's impact on their jobs, with 50% believing it is "very likely" that their role will be affected by AI in the next five years (Table 7). This paradox can be explained by the vulnerability of entry-level positions, which are often more routine-based and therefore more susceptible to automation. This finding aligns with Ford's (2015) argument that automation is likely to impact routine-based tasks first, making younger employees anxious despite their familiarity with AI technologies. The significance of this finding lies in the need for targeted reskilling programs that focus on preparing both senior and junior employees for the AI-driven future. For older workers, the focus should be on upskilling them in new technologies, while younger employees may benefit from programs that develop their strategic and managerial skills, helping them move beyond routine tasks that are most vulnerable to automation.

4.2.1.4 Perception of AI's Impact by Job Role

Perception of AI's impact on the banking industry also varies significantly by job role as outlined in Table 6. Managerial staffs are the most optimistic, with 50% viewing AI's impact as "very positive." This aligns with the research of Wilson and Daugherty (2018), who found that higherskilled employees often view AI as a productivity-enhancing tool. For example, AI technologies like advanced analytics enable managers to make data-driven decisions more effectively, allowing them to focus on more complex and strategic initiatives. On the other hand, only 10% of clerical staff view AI's impact as "very positive," with 30% seeing it as "somewhat negative" or "very negative." This reflects their heightened concern about job security, given that clerical roles are among the most vulnerable to automation. The negative perception of AI among clerical staff is consistent with Frey and Osborne's (2017) findings that jobs with a high proportion of routine tasks, like clerical work, are the most at risk of being replaced by machines. The significance of this finding is that employees' perception of AI is closely tied to their job security. Those who feel that AI enhances their role, such as managerial and IT staff, are more likely to view it positively, while those who feel threatened by automation view it negatively. This highlights the need for management to communicate AI's benefits clearly and provide reassurance that AI will complement, not replace, human labor. As noted by Bessen (2019), clear and transparent communication about AI's role in the workplace can help reduce fear and resistance to change.

4.2.1.5 Job Security and Strategic Communication

Finally, the study reveals a split in opinion regarding whether AI can improve efficiency without reducing the workforce. As shown in Table 3, 50% of respondents believe AI can improve efficiency without cutting jobs, while 33.3% disagree, and 16.7% remain unsure. This uncertainty reflects a lack of clarity about how AI will be implemented in the workplace and whether it will ultimately lead to job cuts or enhance job performance. The importance of strategic communication cannot be overstated. Research by Davenport and Kirby (2016) suggests that transparent communication about how AI will be integrated into organizational processes is critical for gaining employee buy-in. Without a clear understanding of how AI will affect their roles, employees may default to assuming that AI will replace them, fueling anxiety and

resistance. The significance of this finding is that management must take a proactive approach to communicating how AI will be used to augment human capabilities, rather than replace human jobs. Clear messaging about how AI will enhance job performance, improve operational efficiency, and create new opportunities for employees is essential for reducing fear and ensuring smooth AI adoption.

4.2.1.6 AI's Potential Benefits and Unequal Threat to Job Roles

While the concern over AI-driven job displacement, particularly in clerical and routine roles, is significant, recent research provides counterarguments emphasizing AI's potential benefits and its unequal impact across various job roles. One of the primary benefits of AI is job creation, especially in sectors requiring higher-level skills like data science, AI system management, and cyber-security. The World Economic Forum's (2023) report highlights that while some jobs in clerical roles may decline, new opportunities in fields such as AI, machine learning, and digital transformation are expected to rise sharply. Thus, AI is not solely a disruptive force but also a key driver of innovation and new job creation (World Economic Forum, 2023). Furthermore, AI is likely to augment rather than replace many higher-skilled jobs. For example, while AI can handle routine data processing tasks, roles that require complex decision-making, creativity, and emotional intelligence—such as managerial positions—are less vulnerable to automation. These jobs depend heavily on human oversight, problem-solving, and interpersonal skills, which AI technologies currently struggle to replicate (Jarrahi, 2023; Brynjolfsson & McAfee, 2023). This creates an unequal threat across job roles, where lower-skilled and routine tasks are more likely to be automated, while higher-skilled jobs are enhanced by AI. Additionally, AI offers the potential to significantly improve productivity in roles that combine both human and machine capabilities. For instance, in banking, AI technologies such as fraud detection and advanced data analytics can handle vast amounts of data, allowing professionals to focus on strategic decision-making. This complementary relationship between AI and human workers can enhance operational efficiency without leading to mass job losses in higher-skilled roles (Chui et al., 2023).

1	able of offee	dai Threat to Job Roles in Dangiadesh
Job Role	Threat Level	Impact of AI
Clerical Staff	High	Routine tasks like data entry and transaction processing are highly automatable.
Administrative Staff	Moderate	Some automation, but tasks involving decision-making are less vulnerable.
Managerial Staff	Low	AI supports decision-making but cannot replace human oversight.
IT/Technical Staff	Low	AI enhances technical work but relies on human expertise for system management and problem-solving.

Table 8: Unequal Threat to Job Roles in Banks in Bangladesh

This table reflects the varying degrees of AI's impact across different job roles, highlighting that the threat of automation is more pronounced in routine and clerical positions, while higher-skilled roles are likely to benefit from AI's augmentation rather than face replacement.

4.2.2 Comparison with Prior Research

The findings of this study align with much of the existing literature on AI adoption and job displacement, particularly in sectors where routine tasks dominate. However, there are also important distinctions, particularly in the context of Bangladesh and other developing economies. One of the key takeaways from this study is the high level of concern among lower-skilled workers, particularly clerical staff, regarding job displacement. This mirrors the findings of Arntz, Gregory, and Zierahn (2019), who concluded that jobs with a high proportion of routine tasks are particularly vulnerable to automation. As shown in Table 4, 80% of clerical staff in this study are "very concerned" about AI replacing their jobs, which aligns with global patterns of automation risk. Similarly, Frey and Osborne (2017) estimated that up to 47% of jobs in the U.S. are at risk of automation, particularly in industries that involve repetitive, low-skill tasks. Managerial and IT staff exhibited optimism toward AI also reflects findings from Wilson and Daugherty (2018), who argue that AI has the potential to complement human labor in higher-skilled roles, particularly in decision-making and strategic oversight. As shown in Table 6, 50% of managerial staff views AI's

impact as "very positive," reflecting the growing role of AI in augmenting human capabilities rather than replacing them. In these roles, AI helps professionals process large amounts of data, make informed decisions, and improve efficiency. The relatively low concern about job displacement among these groups indicates that AI is perceived as a tool for improvement rather than a threat. Despite the alignment with global trends, the findings of this study diverge from prior research in key areas, particularly with regard to senior employees. While studies in developed economies, such as Autor (2015), suggest that younger employees in entry-level roles are more at risk of displacement, this study finds that even employees with more than 15 years of experience are significantly concerned about AI's impact. As shown in Table 7, 40% of these senior employees believe that their job is "very likely" to be affected by AI within the next five years. This may be due to the fact that in developing economies like Bangladesh, even senior roles may involve routine tasks that can be automated, unlike in developed economies where senior roles are more likely to involve strategic decision-making that is less susceptible to automation.

This finding is significant because it suggests that in developing economies, the effects of AI may be felt more broadly across the workforce, affecting not just entry-level or routine jobs but also mid- and senior-level positions. This has important implications for how reskilling programs are designed, as they need to cater to employees across the entire spectrum of experience, not just those in junior positions. Another key divergence from prior research is the relatively low level of AI literacy in the workforce, as shown by the 16.7% of respondents who reported being "not familiar" with AI (Table 2). This contrasts with findings from studies conducted in more technologically advanced economies, where AI literacy tends to be higher. For example, Bessen (2019) found that in economies with more advanced technological infrastructures, employees tend to have a better understanding of AI, which reduces their anxiety about job displacement. The relatively low AI literacy in Bangladesh suggests that education and training programs need to be prioritized to address this gap and reduce resistance to AI adoption. The role of reskilling in mitigating job displacement fears is a recurrent theme in both this study and prior research. Parry, Battista, and D'Angelo (2020) emphasize that employees who receive training in AI-related skills are significantly less likely to fear job loss, as they are better equipped to transition into new roles. This is supported by the findings of this study, where employees with higher familiarity with AI reported lower levels of concern about job displacement (Table 2). The logistic regression analysis further supports this, indicating that access to training programs significantly reduces the likelihood of fearing job displacement, with an odds ratio of 0.57 (p < 0.05). These findings underscore the need for banks in Bangladesh to invest heavily in workforce development programs that provide employees with the skills they need to work alongside AI. Davenport and Kirby (2016) argue that companies that invest in their workforce's ability to adapt to AI are more likely to experience smoother transitions and less resistance from employees. This is particularly important for clerical and administrative staff, who are the most vulnerable to job displacement, as shown in Table 4.

4.2.3 Broader Implications of the Results

The broader implications of these findings extend beyond immediate concerns about job displacement in Bangladesh's banking sector. They highlight the critical need for workforce development, AI adoption strategies, and policy reform not only in banking but also across sectors where AI is increasingly prevalent. Firstly, the study underscores the necessity for targeted reskilling and training programs. Given that 80% of clerical and administrative workers express deep concerns about job displacement, it is essential for banks to invest in comprehensive training that helps employees transition into roles less vulnerable to automation. Automation will likely replace routine tasks first, but as Chui, Manyika, and Miremadi (2016) suggest, it will also create new opportunities in areas like data analysis and AI system management. Bangladesh's banking sector, therefore, needs to prepare employees—especially senior staff, 40% of whom report feeling unprepared (Table 5)—for more strategic and specialized roles. Drawing from the success of India's "AI for All" initiative, Bangladesh could implement similar AI literacy campaigns

to provide free training, particularly for clerical workers at risk of displacement, helping them shift to roles that require oversight of AI technologies (Gupta & Basu, 2023). Secondly, the significant relationship between AI literacy and reduced fear of job displacement highlights the need for better education on AI. Employees who are more familiar with AI technologies are significantly less likely to fear job loss, with an odds ratio of 0.69 (p < 0.05) (Table 2). This indicates that Bangladesh's banking sector must prioritize programs that explain Al's role, its limitations, and how it can be integrated into job functions. Such initiatives could help employees, especially in rural banks, where automation fears are more pronounced. Brazil's financial sector has set a useful example by retraining clerical workers to manage AI systems instead of replacing them, thus maintaining relevance in an AI-driven environment (Lima & Andrade, 2023). For Bangladesh, adopting similar retraining programs could help rural bank workers transition into roles requiring human oversight of AI, addressing their job displacement concerns. Thirdly, clear communication from management is essential to alleviating anxiety about AI integration. As shown in Table 3, opinions are mixed regarding AI's potential to improve efficiency without cutting jobs. Transparent and proactive communication about how AI technologies will complement rather than replace human labor is critical to easing employee concerns. Previous studies by Davenport and Kirby (2016) emphasize that open dialogue between management and employees is key to gaining buy-in and ensuring a smooth transition to AI-driven workplaces. Last but not least, the policy implications for Bangladesh's banking sector are substantial. The experiences of countries like India, South Africa, and Brazil offer important lessons. In South Africa, tax incentives for businesses investing in workforce retraining have successfully encouraged companies in labor-intensive sectors, such as mining, to support employees' transition into higher-skilled roles (Mkhize & Nkosi, 2023). Bangladesh could implement a similar model, offering tax breaks to banks that invest in employee reskilling programs. Furthermore, public-private partnerships could help ensure that training programs are standardized and accessible to all employees, particularly those in vulnerable positions. As Bessen (2019) points out, the success of AI integration hinges on how well the workforce is prepared to adapt to technological changes. By adopting a combined strategy of AI literacy campaigns, tax incentives, and collaborative initiatives, Bangladesh's banking sector can mitigate job displacement fears while embracing technological advancements.

5. Conclusion

5.1 Summary

This study explored the relationship between AI adoption and job displacement fears among bank employees in Bangladesh, analyzing key demographic variables, job roles, and AI familiarity. Key findings indicate that clerical staff are the most vulnerable to automation, with 80% expressing high concern about losing their jobs to AI (Table 4). In contrast, managerial and IT/Technical staff showed significantly lower anxiety, viewing AI as a tool that complements their roles rather than replacing them (Table 6). Additionally, familiarity with AI technologies was linked to reduced fears of job displacement, highlighting the need for AI literacy programs (Table 2). Despite some optimism about AI's ability to enhance operational efficiency, there remains uncertainty about its impact on the workforce, with 50% of respondents expressing confidence in AI's potential to improve efficiency without cutting jobs (Table 3).

5.2 Workforce Development

The findings emphasize the critical importance of reskilling and training programs tailored to employees across different experience levels. Junior employees with 1–5 years of experience felt more prepared to adapt to AI technologies, but also showed significant concern about job displacement in routine-based roles (Table 7). Meanwhile, senior employees with over 15 years of experience reported feeling the least prepared, with 40% stating they are "not prepared at all" to adapt to AI-driven changes (Table 5). These results suggest a clear need for targeted training, focusing not only on technical AI skills but also on strategic and decision-making abilities that are less vulnerable to automation.

5.3 AI Literacy and Communication

A crucial insight from this study is the role of AI familiarity in mitigating fears of job displacement. Employees who are more familiar with AI are less likely to fear job loss, indicating that AI education can play a vital role in reducing workplace anxiety. Furthermore, the study underscores the importance of strategic communication from management regarding AI's role in the organization. Clear messaging about how AI will augment human capabilities and the steps being taken to upskill employees is essential to fostering a more optimistic perception of AI's impact.

5.4 Future Research Directions

While this study provides valuable insights into AI adoption and job displacement concerns in the banking sector of Bangladesh, further research is needed to explore several areas:

First of all, unlike cross-sectional studies, which capture employee perceptions at a single point in time, longitudinal research can monitor shifts in attitudes and concerns as AI integration progresses. For instance, initial fears of job displacement due to technologies such as robotic process automation (RPA) or machine learning may change as employees experience reskilling initiatives or observe AI's role in augmenting, rather than replacing, human work (Brynjolfsson & McAfee, 2023; Jarrahi, 2023). Longitudinal studies are particularly valuable in assessing whether interventions, such as training programs or strategic communication efforts, reduce employees' anxiety over time. They would also help determine if the perceived benefits of AI in higher-skilled roles are sustained or if new concerns emerge as AI adoption expands across more job categories. Moreover, longitudinal research can examine differences across demographic variables, such as experience levels and job roles, providing insights into how perceptions shift within specific groups (Chui, Manyika, & Miremadi, 2023). Secondly, Cross-industry comparisons can be performed to investigate whether the fears observed in the banking sector are consistent across other labor-intensive industries in Bangladesh. Thirdly, Gender-specific analysis can be done, as this study did not examine whether men and women perceive AI-related job displacement differently. Fourthly, Impact of government policies on AI adoption and workforce preparedness, particularly in developing economies like Bangladesh can be done. Last but not least, Psychological impacts of AI adoption, exploring how job displacement fears affect mental health and employee productivity can be done. In conclusion, as AI continues to reshape the workforce in Bangladesh's banking sector, both companies and governments must focus on upskilling employees, ensuring clear communication, and adopting policies that promote inclusive development. These steps are crucial to ensuring that AI serves as a tool for enhancing human capabilities rather than exacerbating job displacement fears.

6. Recommendations

To get employees free from job displacement, banks can draw from successful global practices and tailor them to their specific contexts in Bangladesh. Below are some practical examples and approaches for each strategy: Firstly, Comprehensive AI training should be developed for all job levels, ensuring clerical, administrative, and managerial employees receive targeted training. In this case, clerical workers could benefit from basic training in AI tools like chatbots and data automation, while administrative and managerial staff can be upskilled for data analysis and decision-making roles. Programs like JP Morgan Chase's AI training for analytics and AI operation roles serve as an example. In collaboration with local institutions or online platforms such as Coursera or edX, banks can provide accessible, continuous learning opportunities (Chui, Manyika, & Miremadi, 2023). Secondly, AI awareness can be enhanced by hosting regular workshops featuring industry leaders and AI experts, to explain how AI is an augmentation rather than a replacement. For instance, HSBC holds monthly leadership-led town hall meetings to explain tech-driven changes, which has fostered transparency and trust among employees (Wilson & Daugherty, 2018). Interactive learning platforms where employees can simulate AI use cases would demystify AI technologies and showcase their benefits. Thirdly, in terms of communication and change management, a structured plan detailing AI's impact on each role, accompanied by regular updates, will ease uncertainties. Barclays' communication approach, which includes clear roadmaps and feedback loops to monitor employee concerns, could serve as a blueprint. Establishing regular anonymous surveys and feedback systems would enable management to address concerns swiftly and adapt communication strategies to employee needs (Davenport & Kirby, 2016). Fourthly, to promote internal career mobility, banks should create clear pathways for transitioning from vulnerable positions to more resilient roles. Bank of America provides "career pathing" tools that help employees map out their progression into AI-enhanced roles. Reskilling programs focused on transitioning clerical employees into tech-driven positions such as data management or AI monitoring would enable mobility while reducing anxiety (Chui et al., 2023). Fifthly, tailored support for at-risk employees can be enhanced through focused mentorship and job shadowing programs, where clerical workers could gain hands-on experience in AI operations. HSBC and Santander already offer reskilling initiatives for clerical employees, allowing them to transition into higher-skilled roles such as system management, minimizing job displacement risks (Jarrahi, 2023). Last but not least, collaboration with government and industry bodies to create standardized training programs will ensure that AI skills are uniformly applied across the banking sector. For example, South Africa's model of tax incentives for workforce retraining could be adopted, encouraging banks to invest in reskilling programs for their employees. Government partnerships with banks could also extend to public-private initiatives similar to Singapore's AI Ethics and Governance Training, ensuring ethical AI use and workforce adaptation (Mkhize & Nkosi, 2023).

7. Acknowledgments

I would like to express my honest gratitude to all those who backed to the completion of this study. I am deeply thankful to the participating bank employees and senior managers for their valuable time and insights, which were essential to this research. I am also grateful to the administrative staff who assisted with data collection and provided access to necessary resources. Lastly, I wish to thank my colleagues, family, and friends for their unbroken inspiration and support.

8. Limitations

This study has several limitations that can affect the generalizability and depth of its findings: *8.1 Sample Size and Representation*

Though the sample size may seem non-representative, consisting of 120 employees from major banks, it provides a reliable view of AI's impact on the most advanced sectors of Bangladesh's banking industry. Major Banks are leading the adoption of AI technologies, making their employees the first to experience its effects on job displacement. The findings here likely represent a conservative estimate, as the situation in smaller, rural banks—where technological adaptation is slower and workforce development resources are fewer—could be even more challenging. Therefore, while this sample captures the forefront of AI adoption, future research should consider expanding to rural banks, where job displacement risks may be more pronounced.

8.2 Sectoral and Geographic Focus

The study is limited to the banking sector in Bangladesh, and results may not apply to other industries or regions. Different sectors may experience AI's impact differently, limiting cross-industry generalization.

8.3 Cross-sectional Data

The data provide a snapshot of employee perceptions at one point in time. As AI adoption evolves, employee attitudes may change, and a longitudinal study would offer more insight.

8.4 Self-reported Data

Relying on self-reported survey data may introduce response bias, with employees potentially overstating or understating their concerns about job displacement.

8.5 Limited Qualitative Insights

The study focused mainly on quantitative data, and more qualitative research could have provided deeper insights into employee and management perspectives on AI and job security.

References

- Akter, S., Jamal, N., & Kabir, M. (2021). The impact of automation and artificial intelligence on job displacement in the banking sector of Bangladesh. *Bangladesh Journal of Finance and Banking*, 16(2), 35-47.
- Arntz, M., Gregory, T., & Zierahn, U. (2019). Digitalization and the future of work: Macroeconomic consequences. *OECD Economic Outlook*, 104, 7-24.
- Autor, D. H. (2015). Why are there still so many jobs? The history and future of workplace automation. *Journal of Economic Perspectives*, 29(3), 3-30.
- Bessen, J. (2019). AI and jobs: The role of demand. National Bureau of Economic Research, Working Paper No. 24235.
- Brougham, D., & Haar, J. (2018). Smart technology, artificial intelligence, robotics, and algorithms (STARA): Employees' perceptions of our future workplace. *Journal of Management & Organization*, 24(2), 239-257.
- Brynjolfsson, E., & McAfee, A. (2014). The second machine age: Work, progress, and prosperity in a time of brilliant technologies. W.W. Norton & Company.
- Chui, M., Manyika, J., & Miremadi, M. (2016). Where machines could replace humans—and where they can't (yet). McKinsey Quarterly.
- Davenport, T. H., & Kirby, J. (2016). Only humans need apply: Winners and losers in the age of smart machines. Harvard Business Review Press.
- Ford, M. (2015). Rise of the robots: Technology and the threat of a jobless future. Basic Books.
- Frey, C. B., & Osborne, M. A. (2017). The future of employment: How susceptible are jobs to computerization? *Technological Forecasting and Social Change*, 114, 254-280.
- Gupta, A., & Basu, S. (2023). AI for all: An initiative towards upskilling India's workforce. *Indian Journal of Technology and Society*, 18(2), 89-103.
- Hossain, M., & Habib, M. (2023). The role of AI in digital transformation: A case study of the banking industry in Bangladesh. *Journal of Business and Management*, 12(1), 45-58.
- Islam, N., Haque, F., & Sultana, R. (2023). AI and the changing landscape of work: Case of the financial services sector in Bangladesh. *Bangladesh Economic Review*, 40(1), 64-79.
- Jarrahi, M. H. (2023). Artificial intelligence and the future of work: The intersection of humans and intelligent machines. *International Journal of Information Management*, 60, 102-122.
- Lima, R. D., & Andrade, L. (2023). Reskilling for the future: A case study of AI retraining in Brazil's banking sector. *Brazilian Journal of Business Innovation*, 10(1), 23-37.
- Mkhize, M., & Nkosi, Z. (2023). The role of tax incentives in fostering workforce reskilling in South Africa's labor-intensive industries. *South African Journal of Economics*, 91(2), 321-340.
- Parry, E., Battista, V., & D'Angelo, M. (2020). Workforce development and AI adoption in financial services. *European Journal of Training and Development*, 44(5), 487-504.
- Rahman, M., Hossain, N., & Ahmed, K. (2022). The future of banking in Bangladesh: Embracing AI and technological advancements. *Asian Journal of Finance and Banking*, 15(3), 88-105.
- Raj, M., & Seamans, R. (2019). AI, labor, productivity, and the need for reskilling. Harvard Business Review.
- Sarker, S., & Sultana, T. (2021). AI adoption and its impact on job security in Bangladesh's financial services industry. *Journal of Emerging Economies*, 8(1), 54-73.
- Shabbir, J., & Anwer, T. (2019). Artificial Intelligence and its role in banking sector. *International Journal of Finance and Banking Studies*, 8(1), 76-91.
- Shankar, V. (2020). The role of AI in financial services: A review and research agenda. *Journal of the Academy of Marketing Science*, 48(1), 135-154.
- Vashisht, S., & Chakraborty, T. (2020). AI and its impact on employment: A study on the banking industry. *International Journal of Business and Society*, 21(4), 657-675.
- Wilson, H. J., & Daugherty, P. R. (2018). Collaborative intelligence: Humans and AI are joining forces. Harvard Business Review. World Economic Forum. (2023). The future of jobs report. https://www.weforum.org/reports/the-future-of-jobs-2023

Appendices:

AI and Job Displacement Questionnaire Section 1: Demographics

- 01. What is your job role in the bank?
 - A. Clerical staff
 - Administrative staff B.
 - C. Managerial staff
 - D. IT/Technical staff
 - Other (Please specify): E.
- 02. How long have you been working in the banking sector?
 - Less than 1 year A.
 - 1–5 years B.
 - C. 6-10 years
 - 11-15 years D.
 - More than 15 years E
- 03. Which type of bank do you work for?
 - A. Public sector bank
 - Private sector bank B.

Section 2: Awareness of AI in the Banking Sector

04. How familiar are you with the use of AI technologies in your bank?

- Very familiar A.
- B. Somewhat familiar
- Not familiar С.

05. Which AI technologies are used in your bank? (Check all that apply)

- Customer service chatbots A.
- B. Fraud detection systems
- C. Automated loan processing
- Robotic process automation (RPA) D.
- Advanced analytics E.
- F. Other (Please specify):

Section 3: Perceptions of Job Displacement

06. How concerned are you that AI will replace your specific job role?

- A. Very concerned
- B. Somewhat concerned
- C. Not concerned
- D. Unsure

07. Which job roles do you think are most at risk of being replaced by AI in your bank?

- A. Clerical staff
- Administrative staff B.
- C. IT/Technical staff
- Managerial staff D.
- All roles are equally at risk E.
- F. None of the roles

08. How likely do you think it is that your job will be affected by AI in the next 5 years?

- Very likely A.
- B. Somewhat likely
- Unlikely C.
- Very unlikely D

Section 4: Preparedness and Training

09. Has your bank provided any training related to AI technologies?

- A. Yes
- B. No
- C. Not sure

10. If yes, what type of AI training have you received? (Check all that apply)

- Basic AI awareness A.
- B. Technical AI skills (e.g., using AI tools)
- Understanding how AI affects job roles С.
- D. No AI training received
- Other (Please specify): E.

11. Do you feel prepared to adapt to AI technologies in your role?

- Yes, I feel fully prepared A.
- Somewhat prepared B.
- Not prepared at all C.

12. Would you be interested in receiving additional training to improve your AI-related skills?

- Yes A.
- B. No
- С. Mavbe
- Section 5: Overall Impact of AI

13. How do you view the impact of AI on the banking industry?

- Very positive A.
- B. Somewhat positive
- C. Neutral
- Somewhat negative D.
- Very negative E.

14. Do you believe AI can improve the efficiency of banking operations without reducing the workforce?

- Α. Yes
- B. No
- C. Not sure
- 15. What strategies do you think your bank should implement to address job displacement fears caused by AI? (Open-ended)

Published by

