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INFLUENCE OF AI- ENABLED FIN-TECH ON THE JOB ROLES IN FINANCIAL SERVICES

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ABSTRACT

The Banking Financial Services and Insurance (BFSI) sector is experiencing transformative changes driven by the integration of Artificial Intelligence (AI), particularly within the realm of Financial Technology (FinTech). AI adoption in FinTech has significantly enhanced the efficiency, accuracy and security of traditional financial services, reshaping job roles and operational dynamics. This research paper aims to investigate the key factors influencing job roles within financial services, with a specific focus on AI-enabled FinTech applications. Employing a descriptive research design, the study utilizes both primary and secondary data to provide an empirical analysis of the evolving landscape. Findings reveal that customer service and support are among the most influential factors affecting job roles, highlighting the growing need for AI-augmented skillsets and adaptive workforce strategies in the BFSI domain.

Keywords: AI, Digital Banking, Mobile Banking, FinTech and New Job Roles

INTRODUCTION

The rapid advancement and integration of Artificial Intelligence (AI) in the Banking Financial Services and Insurance (BFSI) sector is significantly reshaping traditional job roles. With AI technologies such as machine learning

algorithms, natural language processing and predictive analytics, financial institutions are witnessing a paradigm shift in how services are delivered and how employees perform their functions. These innovations enable faster credit assessments, enhanced fraud detection and highly personalized customer experiences, while automating previously labour-intensive and error-prone tasks. For instance, loan officers now utilize AI-driven systems for real-time credit analysis, improving both speed and accuracy. Similarly, customer service roles are evolving as AI-powered chatbots manage routine interactions, allowing human agents to engage in more complex problem-solving and relationship-building tasks. These developments point to a broader trend: AI is not replacing the human workforce entirely but is augmenting their capabilities, promoting a transition from transactional roles to more strategic and analytical functions. Despite the operational advantages and efficiency gains, the growing reliance on AI introduces new challenges and uncertainties for employees. The transformation of job roles necessitates reskilling, adaptability and a redefinition of core competencies in financial services. Yet, there remains a knowledge gap in understanding how these AI-driven changes specifically impact various job roles and the workforce at large in the BFSI sector.

While AI-enabled FinTech solutions offer substantial benefits to financial institutions, there is limited empirical evidence on how these technologies are influencing the nature, scope, and expectations of finance-related job roles. Without a clear understanding, organizations may struggle to adapt workforce strategies and professionals may face barriers to career progression in an evolving AI-centric environment. Given the increasing penetration of AI in FinTech, it is crucial to investigate the specific factors impacting job roles in the BFSI sector. This study seeks to fill this gap by exploring how AI is transforming tasks, expectations and skill requirements in finance-related positions. The findings aim to support stakeholders—ranging from policymakers to human resource managers—in designing effective strategies for workforce development, thereby ensuring alignment with technological progress while preserving human value in financial services. The application of Artificial Intelligence (AI) in the Financial Technology (FinTech) sector has become a transformative force in the global Banking, Financial Services, and Insurance (BFSI) industry. Scholarly

literature reflects growing consensus that AI has moved beyond experimental use to become central in operational and strategic processes across financial institutions (Arner *et al.*, 2017; Gomber *et al.*, 2018). With the proliferation of technologies such as Machine Learning (ML), Natural Language Processing (NLP) and Robotic Process Automation (RPA), institutions are not only enhancing efficiency but also redefining the workforce landscape.

AI impacts job roles by automating routine tasks, facilitating data-driven decision-making, and introducing new digital interfaces in customer interactions. Brynjolfsson and McAfee (2014) emphasize the concept of "augmentation" over "replacement," suggesting that AI enhances human performance rather than eliminating the need for human workers (James Bessen, 2018). An evolving roles such as Machine Learning Engineer, Data Scientist, AI Product Manager, AI-focused fraud analysts, and quantitative analysts driving AI adoption in fintech. These roles reflect increased demand for AI skills in financial services (Vault, 2025)

This study aims to explore the factors impacting job roles in financial services, with a specific focus on Artificial Intelligence (AI)-enabled Financial Technology (FinTech). To achieve this objective, a descriptive research design was adopted, as it allows for systematic and accurate description of variables and their relationships without manipulating the study environment. This design is appropriate for understanding perceptions, experiences, and attitudes related to evolving job roles within the BFSI sector.

RESEARCH METHODOLOGY

In the present research work, both primary and secondary data were employed to strengthen the empirical foundation of the study. Secondary data were gathered from peer-reviewed journals, industry reports and government publications to build the theoretical framework and contextual understanding. The primary data were collected using a structured questionnaire designed to capture the perceptions of respondents regarding the impact of AI in FinTech on financial job roles.

The study utilized convenience sampling, a non-probability technique, due to ease of access and time constraints. A total of 80 student respondents from undergraduate and postgraduate Commerce and Management programmes in Madurai city were surveyed. The rationale for

choosing student participants lies in their potential role as future professionals in the BFSI sector. These respondents, being digitally literate and academically oriented toward financial services, represent an emerging workforce that will interface with AI-enabled systems.

While exclusive reliance on students limits the external validity and generalizability of findings to the broader BFSI workforce, it offers valuable insights into the expectations, preparedness and awareness of future finance professionals. Their perceptions are indicative of evolving educational trends and serve as early indicators of readiness for AI integration in financial roles. Nevertheless, this limitation is acknowledged and the findings should be interpreted as exploratory and indicative rather than conclusive.

The structured questionnaire used in the primary data collection comprised both closed-ended and Likert-scale items focused on factors such as customer service transformation, task automation, skill development and technology readiness. A pilot test was conducted on a small sample to refine the wording and sequence of questions. The Cronbach's alpha value for the finalized instrument was 0.81, indicating a high level of internal consistency and reliability.

This study employed primary data collected through a structured questionnaire administered to 80 undergraduate and postgraduate students in Madurai city. To validate the suitability of the data for factor analysis and ensure statistical robustness, a series of preliminary tests and statistical techniques were employed.

RESULTS AND DISCUSSION

KMO and Bartlett's Test are used for sample adequacy. The Kaiser-Meyer-Olkin measure of sampling adequacy helps to establish whether the data is suitable for factor analysis. As a thumb rule, if the KMO test comes out at 0.5 or higher, then the data is suitable for factor analysis.

Table 1. KMO and Bartlett's Test

Kaiser-Meyer- Olkin Measure of Sample Adequacy		.850
Bartlett's Test of Sphericity	Approx. Chi-Square	4158.52
	Df	190
	Sig.	.000

Source: *Computed Data*

From Table 1, it is found that the KMO value is 0.850 and the result shows that the sample is adequate to segment the variables into predominant factors.

The factor analysis results in three important factors that influence the job role

of finance services specifically artificial intelligence enabled financial technology (FinTech). They are customer service and support, digital banking perception and impact of AI in banking operations factors.

The job role of finance services specifically artificial intelligence-enabled financial technology (FinTech) is influenced by so many variables. In the present study, 20 variables are taken and rated at five-point scale. The details of 20 variables, the related factor score are given in the Table 2-5.

Table 2. Rotated Factor Matrix

Variable No.	1	2	3	H^2
V20	**.895**	.308	.286	.843
V4	**.895**	.308	.286	.977
V9	**.895**	.308	.286	.977
V8	**.895**	.308	.286	.977
V19	**.895**	.308	.286	.977
V15	**.723**	.265	.554	.900
V2	.307	**.816**	.288	.977
V1	.191	**.781**	.364	.779
V16	.465	**.779**	.241	.882
V14	.660	**.670**	.239	.943
V18	.660	**.670**	.239	.943
V12	.660	**.670**	.239	.943
V3	.541	**.567**	.495	.943
V17	.321	.236	**.852**	.885
V11	.456	.104	**.758**	.794
V13	.528	.336	**.724**	.916
V6	-.047	.478	**.703**	.724
V10	.390	.572	.662	**.919**
V5	.444	.565	.614	**.894**
V7	.444	.565	.614	**.894**
Eigenvalues	15.129	1.695	1.179	-

Source: *Computed Data*

The variables and the factor scores that were clustered under "Customer Service and Support Factor" are presented in table 3.

Table 3. Customer Service and Support Factor (Factor 1)

Variable No.	Variable	Score	H2
V20	I believe that traditional banks will remain dominant in the financial industry for the next decade despite the rise of FinTech.	.895	.843
V4	Artificial Intelligence (AI) has a positive impact on the customer service experience in the banking sector.	.895	.977
V9	AI-powered chatbots and virtual assistants can provide effective customer support in the financial sector.	.895	.977
V8	AI will continue to play a growing role in financial decision-making, such as in credit scoring, investment strategies and fraud detection.	.895	.977
V19	The rise of AI in finance will lead to the creation of new jobs, such as data scientists and AI specialists, while reducing the demand for traditional roles.	.895	.977
V15	I trust AI-driven financial services (e.g., robo-advisors, automated trading) as much as traditional financial services provided by humans.	.723	.900

Source: *Computed Data*

Table 3 shows that the variables namely 'I believe that traditional banks will remain dominant in the financial industry for the next decade despite the rise of FinTech', 'Artificial Intelligence (AI) has a positive

impact on the customer service experience in the banking sector', 'AI-powered chatbots and virtual assistants can provide effective customer support in the financial sector', 'AI will continue to play a growing role in financial decision-making, such as in credit scoring, investment strategies and fraud detection', 'The rise of AI in finance will lead to the creation of new jobs, such as data scientists and AI specialists, while reducing the demand for traditional roles' and 'I trust AI-driven financial services (e.g., robo-advisors, automated trading) as much as traditional financial services provided by humans'. As above variables are assistance provided by the banks for their customers, it is denoted as Customer Service and Support Factor.

The variables and the factor scores representing adaptability attitude factor are presented in the table 4.

Table 4 shows the variables namely, 'the rise of FinTech companies will lead to better services in the banking industry', 'I believe that digital-only banks offer better customer experiences than traditional banks' and 'AI enhances the security of banking systems by detecting and preventing cybersecurity threats more quickly than human security experts' are important.

Table 4. Digital Banking Perception Factor (Factor-2)

Variable No.	Variable	Score	H2
V2	The rise of FinTech companies will lead to better services in the banking industry.	.816	.977
V1	I believe that digital-only banks offer better customer experiences than traditional banks.	.781	.779
V16	AI enhances the security of banking systems by detecting and preventing cybersecurity threats more quickly than human security experts.	.779	.882
V14	The use of AI in financial services raises ethical concerns, especially in areas such as bias in lending and investment algorithms.	.670	.943
V18	AI systems used by banks and financial institutions are secure enough to protect my personal and financial data.	.670	.943
V12	AI can help financial institutions stay compliant with regulations by automating reporting and compliance tasks.	.670	.943
V3	The user interface of my bank's mobile app is easy to navigate.	.567	.943

Source: *Computed Data*

The variables and the factor scores of the variables relating to learning awareness factor are presented in the table 5.

Table 5 shows that variables namely, 'the automation of banking operations through AI will improve efficiency and reduce human errors', 'AI can make fairer and more objective lending decisions

Table 5. Impact of AI in Banking Operations Factor(Factor-3)

Variable No.	Variable	Score	H2
V17	The automation of banking operations through AI will improve efficiency and reduce human errors.	.852	.885
V11	AI can make fairer and more objective lending decisions compared to human loan officers.	.758	.794
V13	AI-powered wealth management tools can help individuals manage their finances more effectively than traditional financial advisors.	.724	.916
V6	AI-driven chatbots and virtual assistants enhance customer service by providing 24/7 support, reducing response time and lowering operational costs.	.703	.724
V10	AI can significantly improve risk management in the financial sector by predicting market trends and potential losses.	.662	.919
V5	The rise of FinTech has negatively impacted employment in the banking sector, especially for traditional roles such as bank tellers and clerks.	.614	.894
V7	FinTech has driven significant innovation in the banking sector, introducing new financial products and services.	.614	.894

Source: *Computed Data*

compared to human loan officers', 'AI-powered wealth management tools can help individuals manage their finances more effectively than traditional financial advisors' and 'AI-driven chatbots and virtual assistants enhance customer service by providing 24/7 support, reducing response time and lowering operational costs' are significant.

DISCUSSION

The findings of this study underscore the growing influence of Artificial Intelligence (AI) on job roles within the Banking, Financial Services, and Insurance (BFSI) sector, particularly through the lens of AI-enabled Financial Technology (FinTech). As the sector increasingly adopts intelligent systems for automation, customer service and decision-making, the workforce is experiencing a fundamental transformation in role expectations, competencies and daily functions.

Pazouki *et al.*, (2025) in their study on "Transformative Impact of AI and Digital Technologies on the FinTech Industry: A Comprehensive Review." summarizing how AI-enabled strategies increase operational efficiency in financial services and create new digital roles while presenting technological and regulatory challenges.

Keith Delle Donne (2025) he observes over recent years that AI's impact on financial services workforce is significant but manageable with appropriate change management. AI augments many tasks rather than fully replacing jobs and creates new roles that entail technical and ethical oversight of AI systems, pushing workforce evolution toward hybrid human-AI collaboration. The factor analysis identified customer service and support as a primary dimension influencing job roles. This reflects a broader trend where AI takes over routine inquiries, freeing human employees to focus on complex and relationship-oriented tasks.

Additionally, the perception of digital banking and the impact of AI in banking operations emerged as significant factors. These include AI's role in streamlining processes such as credit assessment, risk modeling, and fraud detection—activities previously reliant on manual intervention. Such transformation calls for finance professionals to adopt hybrid skillsets that combine technical knowledge with strategic thinking and interpersonal communication, as supported by the Socio-Technical Systems Theory (STS) and Technology Acceptance Model (TAM).

However, the study's reliance on student respondents limits its generalizability. While students represent the future workforce, their perceptions may not fully capture the lived experiences and practical realities of current professionals in the BFSI sector. Nonetheless, the insights remain valuable for understanding emerging expectations and preparing educational institutions and HR strategies accordingly.

In conclusion, AI-enabled FinTech is not merely transforming systems but reshaping the human dimensions of financial services. Customer-centricity, digital literacy, and adaptability are becoming core to finance job roles. Organizations that prioritize upskilling and reskilling, foster AI-human collaboration, and retain the human touch in service delivery are more likely to thrive in this evolving landscape. Future research should incorporate a more diverse respondent base—including working professionals across banking and insurance sectors—to enrich the findings and offer more sector-wide implications.

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