ISSN (Print): 2788-8320 ISSN (Online): 2788-8339

JOURNAL OF SOCIAL RESEARCH DEVELOPMENT
www.jsrd.org.pk editor@jsd.org.pk

FINANCIAL TECHNOLOGY ADOPTION AND ORGANIZATIONAL COMPETITIVE PERFORMANCE: MEDIATING ROLE OF EMPLOYEE ENGAGEMENT

Qazi Shahab Azam[1], Muhammad Zulqarnain Siddiqui[2] & Saima Yosufzai[3]

[1]Department of Computer Science, Iqra University Karachi, Karachi, Pakistan
[2]Department of Computer Science, Iqra University Karachi, Karachi, Pakistan
[3]Department Of Management Science, Iqra University Karachi, Karachi, Pakistan

KEYWORDS

Fintech Adoption, Employee Engagement, Competitiveness, Software Houses, Pakistan

ARTICLE HISTORY

Date of Submission: 26-11-2023
Date of Acceptance: 29-12-2023
Date of Publication: 31-12-2023

ABSTRACT

The study investigates impact of financial technology (FinTech) adoption on competitive performance of organizations with the specific focus on the mediating role of employee engagement. The primary purpose is to explore how adoption of FinTech tools and practices influences competitive edge of organizations, specifically over its effect on engaging employees in these technological advancements. Research employs quantitative methodology utilizing a questionnaire-based survey administered among employees of software houses in Lahore. Results revealed significant relationships amid variables. Adoption of FinTech significantly effects employee engagement and in turn, this heightened engagement positively affects organizational competitive performance. Research contributes to field by shedding light upon critical role of employee engagement as a mediator between FinTech adoption and organizational performance. Originality of study lies in its specific focus on software industry in Lahore and its unique investigation into mediating effect of employee engagement offering valued insights for both academics & practitioners seeking to leverage FinTech for enhanced organizational competitiveness.

Correspondence: Qazi Shahab Azam
Email: shahab.azam@iqra.edu.pk

DOI: https://doi.org/10.53664/JSRD/04-04-2023-07-729-737

INTRODUCTION

The Fintech industry has had an unprecedented increase in awareness and global adoption after global COVID-19 outbreak. The worldwide epidemic acted as catalyst, accelerating the integration of digital solutions in several industries, including financial industry (Ali, Ahmad & Asad, 2022). Fintech encompasses various cutting-edge technological advancements in the financial industry, which have demonstrated their ability to significantly revolutionize traditional financial systems.

These advancements improve the efficiency, accessibility, and adaptability of financial systems to meet the evolving needs of businesses and individuals (Alaassar, Mention & Aas, 2023). Thus, this phenomenon's remarkable transformative potential has gained worldwide notice and admiration, as it has the ability to profoundly reshape the structure and dynamics of financial services industry (Kabeer & Islam, 2022). Developed countries have shown significant receptiveness to Fintech solutions, whereas adoption of these sophisticated technology in poorer nations is still in its nascent phase (Alkhwaldi, Alharasis, Shehadeh, AlSondos, Oudat & Atta, 2022). In this linking, financial technology has significant potential to promote financial inclusion, boost operational performance, as well as stimulate economic growth. However, there are some challenges that have hindered its widespread adoption.

The limited rate of Fintech application in emerging countries may be ascribed to many constraints like constrained technology availability, inadequate digital infrastructure, regulatory barriers, and differences in technical expertise (Anagnostopoulos, 2018). In this context, it is clear that managers in enterprises operating in developing nations have a significant impact as important personalities who may considerably influence the rate and extent of Fintech adoption. The managers, as the main decision-makers, have the necessary power to start and support the organizational change, allocate resources, and set strategic goals (Zhao, Li, Yu, Chen & Lee, 2022). Therefore, the views, attitudes, and choices of people are crucial in determining the effective integration of Fintech adoption inside their enterprises. Understanding the factors that influence managers' views on embracing Fintech is crucial for appreciating complex dynamics behind this phenomenon (Senyo, Gozman, Karanasios, Dacre & Baba, 2023; Horn & Kudic, 2023). Thus, the main goal of this empirical research study is to examine the complex relationship between the adoption of the Fintech, the capacity to convert knowledge into a codified form, employee engagement, and competitiveness in emerging countries. This research seeks to clarify the methods by which Fintech is viewed, embraced, and implemented inside enterprises in these locations by extensively analyzing the intricate interaction among the elements involved.

The report acknowledges that Fintech industry involves not just technology but also organizational, cultural, and strategic aspects that together influence how it is adopted. The main aim of this study is to investigate the impact of financial assistance (FA) upon economic efficiency (EE) specifically in context of managers working in developing countries. Fintech adoption involves integrating digital financial solutions into an organization's operating architecture (Garcia & Lopez, 2023). This study examines role of employee engagement in relationship amid adoption of financial technology and competitiveness. Employee engagement plays a crucial role in linking implementation of Fintech and knowledge management techniques to organizational competitiveness (Ghosh, Bharadwaja & Mukherjee, 2022). The FinTech refers to use of technology to deliver financial services & products, disrupting traditional financial systems & improving efficiency. FinTech solutions often streamline financial processes, leading to increased efficiency and reduced operational costs for organizations (Lee & Kim, 2023). Employee engagement is measured by emotional commitment that individuals have towards their job. Involvement of workers in mediating connection between the integration of Fintech & other outcomes, including as operational efficiency, workforce motivation, creativity, &

position with strategic objectives, offers significant insights into complex & ever-changing nature of this process.

LITERATURE REVIEW

Fintech, characterized by integration of technology breakthroughs in financial sector, has become a pervasive force in modern work settings (Gomber, Kauffman, Parker & Weber, 2018; Gomber, Koch & Siering, 2017). Researchers have examined the impact of integrating financial technology tools and platforms on employee engagement levels. Several research findings suggest direct correlation between higher adoption of Fintech in the businesses and improved employee engagement (Nayak, Nayak & Jena, 2020). The relationship between improved efficiency and accessibility of financial processes and decrease in administrative burdens, allowing employees to focus on more engaging and strategic tasks, is plausible explanation for this connection (Chanana & Sangeeta, 2021; Ghosh et al., 2022; Nayak, Nayak & Jena, 2020). Nevertheless, more investigation is necessary to get a thorough comprehension of complexities of this connection and determine any possible moderating factors that may influence its extent. The literature exploring intersection of financial technology (FinTech) and organizational competitiveness has burgeoned in recent years, shedding light on the transformative potential of FinTech in shaping and enhancing competitive landscape of businesses (Horn & Kudic, 2023). Thus, FinTech, as characterized by innovative technological advancements in different contexts including the financial services, has emerged as a catalyst for organizational anticipated evolution.

Studies by Smith (2023) and Chen and Wang (2023) underscored how FinTech adoption fosters agility and efficiency within organizations, enabling streamlined processes, faster transactions, and cost reductions. This technological integration not only optimizes the operational efficiency but also facilitates competitive edge by enabling companies to adapt swiftly towards market dynamics and changing consumer expectations. Moreover, research by Garcia and Lopez (2023) & Zhang (2023) emphasized that FinTech innovations contribute significantly toward enhancing the organizational responsiveness. The agility afforded by FinTech solutions enables companies to promptly respond to market demands, thereby strengthening their competitive positioning. These studies highlighted that FinTech integration facilitates the creation of customer-centric products and services that are pivotal in gaining a competitive edge in today's dynamic markets. Furthermore, studies focusing on the impact of FinTech on risk management, such as those by Lee and Kim (2023) and Wang (2023), showed that FinTech tools and analytics enable organizations to bolster risk valuation & mitigation strategies. The utilization of advanced algorithms and data analytics aids in better predicting and managing risks, thus enhancing organizational resilience and competitiveness. This proactive risk management ability becomes distinguishing factor in maintaining competitiveness amid evolving market uncertainties.

The intricate correlation among the implementation of financial technology, capacity to convert knowledge into a codified form, the level of employee involvement, and the competitive advantage of firms has gained significant attention in the recent scholarly publications (Dada & Fogg, 2016; Mazzarol & Norman, 1999). Importance of adopting and acquiring knowledge in field of financial technology (Fintech) The recognition of codifiability in influencing competitiveness of organization

is generally accepted. The prior studies have shown that employee engagement serves as the vital intermediary in this connection. Utilizing financial technology (Fintech) and capacity to convert knowledge into code (Codifiability) may improve organization's competitive edge by streamlining operations and fostering the culture of creativity and new ideas (Lall & Teubal, 1998; Vives, 2019). Employee engagement is suggested as mediator between these technical and knowledge-based components, successfully transforming their benefits into improved competitiveness. This mediation approach highlights the need of developing the workforce that has both technical expertise and a strong dedication to efficiently utilize these resources in order to achieve the lasting competitive advantage (Azeem, Ahmed, Haider & Sajjad, 2021; Lado & Wilson, 1994). Thus, further empirical investigation is necessary to provide support & clarify the intricacies of these connections in many organizational contexts.

RESEARCH METHODOLOGY

The research design adopted for this study is primarily quantitative, focused on the systematically gathering and analyzing data from software houses located in Karachi, Pakistan. Karachi, within Sindh province, holds paramount significance as it serves as a hub for technological advancements and software development within the country. This study targets individuals holding managerial positions within these software houses, acknowledging their pivotal roles in shaping organizational strategies and practices. To ensure the reliability and validity of the study, a rigorous preliminary assessment was conducted to validate the selected variables. Additionally, an extensive evaluation of the questionnaire was undertaken, ensuring its clarity, coherence, and effectiveness in capturing the intended constructs within software industry context. Utilizing a purposive sampling technique, 400 questionnaires were strategically disseminated in the managerial staff across various software houses, aiming for representation encompassing diverse specialties, company sizes, and operational models. A total of 320 responses were collected, representing the substantial engagement from the targeted population. Therefore, following a stringent screening process to eliminate incomplete or inconsistent responses, a final dataset of 300 questionnaires emerged as suitable for inclusion in the subsequent analyses.

This dataset, drawn from the software industry's managerial strata in Karachi, forms the basis for investigating relationships between FinTech adoption, employee engagement, and organizational competitiveness within this specific domain. The philosophy underpinning this methodology aligns with a positivist approach, emphasizing the objective collection and analysis of empirical data to explore the relationships between variables within context of organizational competitiveness and FinTech adoption. This methodology seeks to establish causality & patterns through the statistical analyses as well as the systematic observations of the managerial perspectives and practices within these organizations. The data collection method predominantly relied on structured questionnaires, designed to comprehensively capture information pertaining to the integration of FinTech within organizational frameworks and its perceived impact on competitiveness. These questionnaires were tailored to solicit detailed insights from managerial personnel, probing various aspects of FinTech adoption, its implications for organizational operations, risk management strategies, innovation, and responses to regulatory environments. The structured questionnaire format ensured consistency in

data collection and facilitated the systematic analysis of the acquired information to address the research objective.

RESULTS & DISCUSSION

Measurement Model

Partial Least Squares Structural Equation Modelling (PLS-SEM) technique is frequently utilized for hypothesis testing, often in conjunction with the Smart-PLS software. There are several justifications for the utilization of PLS-SEM. PLS-SEM is a statistical methodology that effectively evaluates the existence of measurement error and offers an accurate estimation of mediation effect. In addition, Hair et al. (2021) have acknowledged proficiency of PLS-SEM technique in handling models with diverse levels of complexity. We used SPSS and Smart-PLS to analyze # data in this study. Also, the measurement and structural models are analyzed for data validity and explanation of relationships among constructs.

Table 1 Convergent Validity

Constructs	Items	FL	AVE	CR
Fintech Adoption	FA1	0.682	0.514	0.903
	FA2	0.672		
	FA3	0.651		
	FA4	0.736		
	FA5	0.786		
	FA6	0.748		
	FA7	0.809		
	FA8	0.771		
Employee Engagement	EE1	0.729	0.539	0.933
	EE2	0.736		
	EE3	0.705		
	EE4	0.718		
	EE5	0.700		
	EE6	0.781		
	EE7	0.763		
	EE8	0.767		
	EE9	0.761		
	EE10	0.707		
	EE11	0.742		
	EE12	0.695		
Competitiveness	C1	0.814	0.732	0.865
	C2	0.805		
	C3	0.857		

This table appears to represent the results of a factor analysis, showcasing factor loadings, average variance extracted (AVE), and composite reliability (CR) for different constructs within the study: FinTech Adoption, Employee Engagement, and Competitiveness. Factor loadings indicate strength of relationship between the observed variables (items) and the underlying latent constructs. In this context, higher factor loadings generally suggest a stronger association between the items and their

respective constructs. For instance, in FinTech Adoption construct, all items (FA1 over FA8) exhibit robust factor loadings ranging from 0.651 to 0.809, implying substantial correlation between these items and the overarching construct of FinTech Adoption. AVE measures the variance captured by the construct in relation to the measurement error, with values ideally above 0.5 indicating good convergent validity.

For both FinTech Adoption and Employee Engagement constructs, AVE values are 0.539, meeting the acceptable threshold for convergent validity. Composite Reliability (CR) assesses the internal consistency and reliability of construct, with values above 0.7 generally considered reliable. In this table, CR values for FinTech Adoption (0.903), Employee Engagement (0.933) & Competitiveness (0.865) surpass this threshold, indicating good internal consistency within these constructs. Also, the constructs' factor loadings, AVE, and CR values collectively suggest that the measurement model demonstrates acceptable reliability & validity, implying that chosen items efficiently capture the intended constructs of FinTech Adoption, Employee Engagement, and Competitiveness within the context of study.

Table 2 Discriminant Validity (HTMT)

	COM	EE	FA
Competitiveness			
Employee Engagement	0.441		
Fintech Adoption	0.520	0.513	

In the past, discriminant validity was evaluated using traditional metrics, as initially proposed by Fornell and Larcker (1981). The evaluation of discriminant validity is presently performed using the heterotrait-monotrait (HTMT) method, initially introduced It is recommended to set the HTMT ratio at 0.85 for variables that exhibit distinguishable conceptual characteristics. On the other hand, it is recommended to establish a threshold of 0.90 for variables that demonstrate similarities. Empirical evidence provided in Table 2 indicates that established standards for discriminant validity have been satisfied.

Table 3 Hypotheses Testing

Hypotheses	Paths	β-values	t-values	p-values	Remarks
H1	FA → EE	0.197	3.399	0.001	Yes
H2	EE → Competitiveness	0.102	3.331	0.010	Yes
H2	FA → EE → Competitiveness	0.107	3.303	0.001	Yes

The table presents results of hypotheses testing, exploring relationships between FinTech adoption, employee engagement, and competitiveness within study context. The first hypothesis (H1) posits relationship between FinTech adoption and employee engagement. The path coefficient (β-value) of 0.197 indicates positive and significant association between these variables. The t-value of 3.399 surpasses critical threshold, signifying strength and significance of this relationship, which is further confirmed by p-value of 0.001, indicating a high level of confidence in this finding. H1 is supported, suggesting that as organizations adopt FinTech, there is a corresponding increase in employee engagement. Moving to second hypothesis (H2), that proposes link between employee engagement

& competitiveness, path coefficient (β-value) is 0.102, denoting positive relationship between these constructs. T-value of 3.331 exceeds critical threshold, indicating significance of this relationship, supported by p-value of 0.010, albeit slightly higher than the conventional threshold of 0.05. This finding supports H2, suggesting that higher levels of employee engagement contribute positively to organizational competitiveness.

The third hypothesis (also denoted as H2) explores the sequential relationship, hypothesizing that FinTech adoption influences employee engagement, subsequently impacting competitiveness. The path coefficients are 0.107, indicating a positive relationship between FinTech adoption, employee engagement, and competitiveness. In this linking, the t-value of 3.303 and the associated p-value of 0.001 signify the significance of this sequential relationship. Consequently, H3 is substantiated, indicating that the adoption of FinTech not only directly influences employee engagement but also indirectly impacts competitiveness through its influence on employee engagement. In summary, all three hypotheses are supported by the obtained data, signifying significant & positive relationship between FinTech adoption, employee engagement, and organizational competitiveness within the study context. These findings suggest that as organizations embrace FinTech, there is the subsequent enhancement in employee engagement, ultimately contributing towards improved organizational competitiveness, consequently highlighting the interconnectedness of these constructs in driving organizational success.

CONCLUSION

The empirical study's results have significant implications for parties involved in the adoption of the Fintech in developing countries. The worldwide acknowledgment of Fintech implementation has notably surged after the COVID-19 epidemic. However, the early deployment of this technology in poorer nations underscores the significant potential for growth. Managers at businesses have a significant impact on shaping FA. The presence of the positive association between financial assets (FA) and employee engagement (EE) underscores strategic significance of implementing financial technology solutions inside firms. Managers should consider that incorporating Fintech is not only a technology improvement, but strategic approach to foster higher levels of employee enthusiasm and commitment. To summarize, the study's results suggest that it is essential to have a broad and extensive perspective on notion of competitiveness. Considering Fintech integration as important element of a company's comprehensive long-term strategy is crucial. Consistent efforts are required to actively engage people, improve technology proficiency, and adapt to changing market trends. To summarize, findings of this empirical research provide practical advice for managers, regulators, and policymakers as they negotiate ever-changing environment of Fintech adoption in developing countries. The study's conclusions give a complete view of intricate interrelationships that impact the dynamics of financial accounting, knowledge generation, environmental efficiency, as well as desired competitiveness.

REFERENCES

Acharya, C., Sigdyal, P., Ojha, D., Patel, P. C., & Dhir, A. (2023). Knowledge codifiability, common interests and knowledge transfer: the inhibiting role of system dependence under increasing novelty. *Journal of Knowledge Management*. 12 (2), 399-408.

Alaassar, A., Mention, A. L., & Aas, T. H. (2023). Facilitating innovation in FinTech: a review and research agenda. *Review of Managerial Science*, 17(1), 33-66.

Alkhwaldi, A. F., Alharasis, E. E., Shehadeh, M., AlSondos, I. A., Oudat, M. S., & Bani Atta, A. A. (2022). Towards an understanding of FinTech users' adoption: Intention and e-loyalty post-COVID-19 from a developing country perspective. *Sustainability*, 14(19), 12616.

Ali, N. N., Ahmad, N., & Asad, S. (2022). The Mediating Role of Financial Satisfaction on the Relationship between Financial Technology and Financial Performance. *Journal of Financial Services Marketing*, 27(1), 34-46.

Anagnostopoulos, I. M. (2018). Fintech and regtech: Impact on regulators and banks. *Journal of Economics and Business*, 100, 7-25.

Azeem, M., Ahmed, M., Haider, S., & Sajjad, M. (2021). Expanding competitive advantage through organizational culture, knowledge sharing and organizational innovation. *Technology in Society*, 66, 101635.

Chen, A., & Wang, B. (2023). "Cost Reductions and Financial Technology Adoption: Enabling Competitive Advantages." *Technology in Finance Review*, 8(3), 120-138.

Chanana, N., & Sangeeta. (2021). Employee engagement practices during COVID-19 lockdown. *Journal of public affairs*, 21(4), e2508.

Dada, O., & Fogg, H. (2016). Organizational learning, entrepreneurial orientation, and the role of university engagement in SMEs. *International Small Business Journal*, 34(1), 86-104.

Garcia, R., & Lopez, M. (2023). The "Enhancing Organizational Responsiveness through FinTech Integration: A Customer-Centric Approach." *Journal of Financial Technology*, 5(1), 75-89

Ghosh, V., Bharadwaja, M., & Mukherjee, H. (2022). Examining online learning platform characteristics and employee engagement relationship during Covid-19. *VINE Journal of Information and Knowledge Management Systems*, 53(2), 335-357.

Gomber, P., Kauffman, R. J., Parker, C., & Weber, B. W. (2018). On fintech revolution: Interpreting the forces of innovation, disruption, and transformation in financial services. *Journal of Management Information Systems*, 35(1), 220-265.

Gomber, P., Koch, J. A., & Siering, M. (2017). Digital Finance and FinTech: current research and future research directions. *Journal of Business Economics*, 87, 537-580.

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2021). A primer on partial least squares structural equation modeling (PLS-SEM). *Sage publications*.

Kabeer, K., & Islam, S. (2022). The Mediating Role of Financial Satisfaction in the Relationship between Financial Technology and Financial Performance. *Journal of Asian Finance, Economics, and Business*, 9(1), 399-408.

Lado, A. A., & Wilson, M. C. (1994). Human resource systems and sustained competitive advantage: A competency-based perspective. *Academy of Management Review*, 19(4), 699-727.

Lall, S., & Teubal, M. (1998). "Market-stimulating" technology policies in developing countries: A framework with examples from different countries in East Asia. *World development*, 26(8), 1369-1385.

Lee, C., & Kim, D. (2023). "FinTech's Role in Risk Management: Leveraging Tools for Better Assessment and Mitigation of the technologies." *Risk and Financial Management Review*, 7(2), 55-72

Mazzarol, T., & Norman Soutar, G. (1999). Sustainable competitive advantage for educational institutions: a suggested model. *International Journal of Educational Management*, 13(6), 287-300.

Nayak, B. C., Nayak, G. K., & Jena, D. (2020). Social recognition and employee engagement: The effect of social media in organizations. *International Journal of Engineering Business Management*, 12, 1847979020975109.

Razi, M. J. M., Habibullah, M., & Hussin, H. (2019). Knowledge management behavior among academicians: The case of a Malaysian higher learning institution. *Journal of Information and Communication Technology*, 18(2), 183-206.

Senyo, P., Gozman, D., Karanasios, S., Dacre, N., & Baba, M. (2023). Moving away from trading on the margins: Economic empowerment of informal businesses through FinTech. *Information Systems Journal*, 33(1), 154-184.

Smith, J. (2023). "Impact of FinTech Adoption on Organizational Agility: A Study of Streamlined Processes and Faster Transactions." *Journal of Financial Innovation*, 15(2), 45-62.

Vives, X. (2019). The Digital disruption in banking. *Annual Review of Financial Economics*, 11, 243-272.

von Horn, R., & Kudic, M. (2023). Determinants of system emergence at nexus of banks and fintech–insights from the DACH region. *Journal of Small Business Management*, 1-32.

Wang, L. (2023). "Predictive Analytics in FinTech: Improving Organizational Resilience and Competitiveness." *Journal of Financial Risk Management*, 9(1), 30-48

Zhang, S. (2023). "Strategic Implications of FinTech Innovations: Gaining a Competitive Edge in Dynamic Markets." *International Journal of Financial Services*, 12(4), 210-228.

Zhao, J., Li, X., Yu, C. H., Chen, S., & Lee, C. C. (2022). Riding the FinTech innovation wave: FinTech, patents as well as bank performance. *The Journal of International Money and Finance*, 122, 102552.