



ISSN: 2091-1467 (Print)

The Lumbini Journal of

EISSN: 3102-0240

Business and Economics

Peer Reviewed

Does Fintech Adoption Enhance Banks' Sustainability Performance? Competitiveness As A Mediator

Kripa Kunwar^{1*}, Dipak Bahadur Bhandari², Surya Bahadur G.C.³

Abstract

Article Info

Received:

05 October 2025

Revised:

07 November 2025

Accepted:

24 November 2025

Purpose: The study intends to investigate the impact of Fintech adoption and competitiveness on sustainability performance of the banks in Nepal.

Methods: The study is based on data collected from 209 bankers through a structured questionnaire in Nepal employing a convenience sampling technique. Additionally, to examine the hypothesized relationship between variables, the study applied the Partial least square structural equation modelling (PLS-SEM) for data analysis.

Results: The results demonstrate that Fintech adoption have a positive and significant ($\beta = .218$; $P < .01$) impact on sustainability performance of bank, and also confirms the partial mediating effect of competitiveness ($\beta = .141$; $P < .01$) within the relationship.

Conclusion: The study concludes that a bank can improve sustainability performance through the Fintech adoption. In addition, Fintech adoption enhances the competitiveness of the bank, which leads to improved sustainability performance. The study highlights the significance of Fintech adoption in improving sustainability performance. Moreover, this study will offer pivotal insights to the bank manager and regulator to develop a more inclusive and resilient banking system through Fintech adoption in Nepal.

Keywords: Bank, Competitiveness, Fintech, PLS-SEM, Sustainability performance

JEL Classification: G21, O33, Q56

I. Introduction

Recently, corporate sustainability performance has gained significant momentum across the world (Siddik et al., 2023). Banks play a primary role in achieving sustainable development goals by financing sustainable projects, providing technical assistance, and ensuring risk management (Suhardjo et al., 2025). Banks adopt a broad approach to sustainability performance, including environmental, social, governance, and economic factors that

¹Ms. Kunwar is a PhD scholar at FoM, Pokhara University, Nepal and Asst. Prof. at the School of Business, FoM, PU, Nepal. She can be reached at kripakunwar@pusob.edu.np; <https://orcid.org/0009-0008-7162-2313>

²Mr. Bhandari, PhD, is a professor at School of Business, FoM, PU, Nepal. He can be reached at dipakbhandari@pusob.edu.np, <https://orcid.org/0009-0005-4268-5065>

³Mr. G.C is an Associate Professor at School of Business, FoM, PU, Nepal. He can be reached at suryagc@pusob.edu.np, <https://orcid.org/0000-0001-7216-8759>

contribute to firm valuation as well as overall ESG risk rating (Suhardjo et al., 2025). Nepal has been committed to a green, inclusive, and resilient approach in banking practices to address the social and environmental issues, aligning with sustainable development goals (Nepal Rastra Bank, 2024). Priority sector lending, focusing on marginalized sectors, women, youth, small and medium enterprises, agriculture, hydro, and renewable energy, indicates that Nepalese banks are striving to align the global sustainability goals in their operations (Nepal Rastra Bank, 2023). In addition, Nepal Rastra Bank, the central bank of Nepal, has been enforcing sustainable banking practices through CSR compliances and ESRM policy.

The wide-reaching focus on sustainability forces corporate firms to integrate financial technology (Fintech) in their banking operation to achieve optimal sustainability performance (Hidayat-ur-Rehman & Hossain, 2024). In particular, the development of Fintech brought a revolution in the form of digital banking that changed the traditional way of doing business and competing with each other in the banking sector (Albelal et al., 2024). Fintech create opportunities to offer wide range of financial services and changes the traditional way of making payments and issuing debts, enabling the banking sector to provide efficient financial services (Boustani, 2020). Fintech adoption in the daily operations of the bank has increased, as it helps to gain more profit (Chen et al., 2021). There is significant progress and commitment towards Fintech adoption in Nepal; however, the presence of a coverage gap and a usage gap has been hindering the demand and adoption of digital technologies. Weak regulations, lack of affordability and digital skills, and slow expansion in rural areas are some causes that are hindering the adoption of digital technology in Nepal (World Bank, 2025).

The integration of social and environmental aspects with economic issues is crucial to achieve overall sustainability goals. Fintech adoption in the financial institutions plays a significant role in achieving a nation's sustainable development goals (Nassiry, 2019). Digital payments, and blockchain technology are a few examples of Fintech adoption, which contributes significantly to enhancing overall sustainability performance (Almasria et al., 2024). According to Mertzanis (2023), Fintech finance is beneficial for improving the firm's socio-environmental performance. Integration of Fintech in financial practices in the banking sector enhances environmental performance (Bhuiyan et al., 2024). Specifically, Fintech adoption enhances the green investment of banks that upturn environmental performance as well (Guang-Wen & Siddik, 2023). Fintech innovation is the means to improve Fintech finance in the form of green credit and green investment, hence supporting green economic growth (Zhou et al., 2022). Likewise, Fintech has the potential to enhance positive social impacts by developing access to financial services, which is essential to fight the issue of poverty (Lagna & Ravishankar, 2022). Fintech seems beneficial to improve financial inclusion in Nepal (Kunwar & Chhetri, 2025); that is one of the major concerns of sustainability.

However, sustainability performance is a less explored area in Nepal. The dearth of research on the dynamic relationship among Fintech adoption, competitiveness, and sustainability performance, specifically in the Nepalese context, creates research gaps. In addition, there is a lack of research based on primary data. Consequently, the study aims to investigate the impact of Fintech adoption on the corporate sustainability performance of the bank, as well as the mediating role of competitiveness within the relationship in Nepal. To attain the research objectives, the study raised the research questions: what is the relationship between Fintech adoption, competitiveness, and sustainability performance of the bank? And does competitiveness mediate the relationship between Fintech adoption and sustainability performance?

II. Reviews

The growing sustainability challenges have brought a revolution in the technological advancement (Atayah et al., 2024). Fintech integrates traditional finance with information technology, which changes the way to conduct financial transactions (Udeagha & Ngapah, 2023). The banking industry plays a significant role in achieving a global sustainable development goal (Nizam et al., 2019). On the other hand, sustainability performance is a

multi-faceted concept including economic, social, and environmental aspects (Tjahjadi et al., 2021). Fintech adoption encourages sustainable banking practices such as green finance and green innovations, thereby promotes sustainability performance of the bank (Yan et al., 2022).

Fintech adoption enhances non- financial performance, which includes customer satisfaction, and work efficiency and service quality of employees in the context of Chinese commercial banks (Chen et al., 2021). Fintech firms maintain higher sustainability performance, indicating environment, social, and governance even during the time of Covid-19 pandemic (Okasha et al., 2025). Regarding the bank's performance, with the support of innovative Fintech, the bank achieved higher profitability and firm value, as well as demonstrated higher resilience during the pandemic. Udeagha and Ngepah (2023) asserted that environmental sustainability is significantly influenced by Fintech, green finance, and energy innovation practices. Nevertheless, there are some evidences indicating the inconsistencies in the existing studies. Non-Fintech firms seems better than Fintech firm when it comes to sustainability performance in the USA (Atayah et al., 2024).

Fintech Adoption and Sustainability Performance

Fintech is a technological innovation that enables financial institutions to serve products and services efficiently to their stakeholders (Dwivedi et al., 2021). According to Hidayat-ur-Rehman and Hossain (2024), Fintech adoption significantly contributes to the bank's sustainability performance in the context of Pakistan. Fintech adoption in an appropriate way in the banking operation enhances the overall performance of the bank (Dwivedi et al., 2021). Fintech adoption contributes to improve corporate sustainability performance of manufacturing companies as well (Siddik et al., 2023). In addition, Fintech adoption has a significant positive impact on sustainability performance and thereby the economic performance of the bank (Almaqtari, 2024). Fintech and sustainable finance share many similarities, as the Fintech adoption promotes sustainable banking practices through green finance initiatives (Rambaud & Pascual, 2023). Hence, the study going to examine the following hypothesized relationship:

H₁: Fintech adoption significantly improves the sustainability performance of the bank.

Fintech Adoption, Competitiveness, and Sustainability Performance

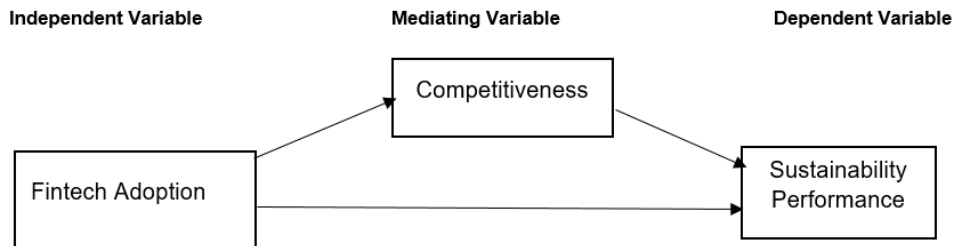
Fintech adoption is a means to gain competitiveness for the bank, which leads to performance growth; hence, it supports the mediating effect of competitiveness in the relationship between Fintech adoption and sustainability performance (Dwivedi et al., 2021). There is a mediating role for green finance (Hidayat-ur-Rehman & Hossain, 2024) and green innovation that ensures an indirect relationship between Fintech adoption and sustainability performance as well (Yan et al., 2022). In particular, the association between Fintech adoption and a bank's sustainability performance is mediated by competitiveness (Hidayat-ur-Rehman & Hossain, 2024). Based on the review of prior studies, the study has developed the following hypothesis:

H₂: Competitiveness significantly mediates the association between Fintech adoption and sustainability performance of the bank.

H_{2a}: Fintech adoption significantly improves competitiveness of the bank.

H_{2b}: Competitiveness significantly enhances sustainability performance of the bank.

The study developed the conceptual framework based on the prior literature and theories. Figure 1 displays the proposed conceptual framework of the study to investigate the hypothesized relationship among dependent, independent and mediating variables.

Figure 1*Research Framework*

III. Methodology

This study has followed the quantitative research approach. Hence, a structured questionnaire was used to record the agreement and disagreement of the respondents while conducting a survey with bankers. Employees working at commercial banks and development banks in Nepal, at the officer level and above, were the population for the study. The convenience sampling method was employed to select the sample for the study. Samples were taken from different commercial banks and development banks in various cities of the country to maintain diversity. Data were collected from 209 samples by administering the cross-sectional survey in Nepal through an online survey.

Respondents were requested to provide their view regarding the measure of the study variables, such as Fintech adoption, competitiveness, and sustainability performance, on a five-point Likert scale beginning from strongly disagree (1) to strongly agree (5). The study applied an eight-item scale of Fintech adoption and a five-item scale of competitiveness that were adopted from an empirical study (Dwivedi et al., 2021). Similarly, the study adopted a ten-item scale to assess the sustainability performance of the bank from the literature (Ghobakhloo et al., 2023; Zheng et al., 2021), after needful amendments. For ethical consideration, the study took the prior informed consent from the respondents for voluntary participation in the survey. In addition, it was assured that the data provided by respondents would maintain confidentiality and anonymity.

Furthermore, the study used the causal and descriptive research design to analyze the data. The partial least square structural equation modelling (PLS-SEM) was employed to investigate the interrelationship among Fintech adoption, competitiveness, and sustainability performance of banks. PLS-SEM is best tool to analyze the interrelationship among variables even with small sample size (Hair et al., 2019). Likewise, frequency and percentage were used to describe the general status of the respondents.

IV. Results and Discussion

Results

Table 1 presents the general information about the respondents, including gender, current designation, educational qualification, types of bank, and working experience. Table 1 indicates that the majority of the respondents are male, working at the officer level. Likewise, the majority of the respondents are from commercial banks, and have banking experience of 11 to 15 years.

Table 1*Respondents Profile*

Variable	Category	Frequency	Percentage
Gender	Male	118	56.5
	Female	91	43.5
Designation	Officer Level	144	68.9
	Managerial Level	65	31.1
	Bachelors	24	11.5
Educational Qualification	Masters	183	87.6
	MPhil or PhD	2	1
Types of Banks	Development Banks	76	36.4
	Commercial Banks	133	63.6
Working Experience	1 - 5 years	5	2.4
	6 - 10 years	50	23.9
	11 - 15 years	94	45.0
	Above 15 years	60	28.7

Note. N = 209, Source: Author's 2025

Common Method Bias

The study administers a self-reported cross-sectional survey to collect data regarding exogenous, mediating, and endogenous constructs by using a common instrument. Hence, the study examines whether there are issues of common method bias (CMB) that affect the responses due to collinearity. Harman (1976) explains the conditions that indicate the presence of CMB when a particular factor accounts for the majority of the variance in the data. To examine the CMB, this study followed Harman's single-factor test and undertook Exploratory Factor Analysis (EFA). According to this technique, it is considered that CMB exists if one particular factor has a variance above 50 percent in the model. The result suggests that CMB does not exist in the data, as the variance explained by a single factor is 32.672. Therefore, the study moves forward to the assessment of the measurement model in the next step.

Assessment of the Measurement Model

The study employed two-stage PLS-SEM to evaluate and validate the hypothesized relationship. The assessment of measurement model was performed in the first stage to examine the reliability and validity of the scale. Cronbach alpha (α), and composite reliability (CR) are the measure of reliability, whereas significant item's loading value (Λ) and average variance extracted (AVE) are used to assess convergent validity. Likewise, the Fornell-Larcker criterion as well as HTMT ratio assess the discriminant validity (Hair et al., 2021).

Table 2*Assessment of Reliability and Validity*

Construct/ Items	Λ	A	CR	AVE
Fintech (FTH)		.710	.804	.510
FTH1	.579			
FTH 2	.616			
FTH 3	.587			
FTH 4	.751			
FTH 5	.808			
Copetitiveness (COMP)		.859	.898	.640
COMP1	.692			
COMP 2	.734			
COMP 3	.902			
COMP 4	.739			
COMP5	.907			
Sustainability Performance (CSP)		.892	.913	.618
CSP1	.715			
CSP 2	.754			
CSP 4	.751			
CSP 5	.805			
CSP 6	.870			
CSP 7	.754			
CSP 8	.791			
CSP 9	.862			
CSP10	.759			

Note. Author's Calculation

Table 2 shows the result of reliability and convergent validity. The results of Cronbach's alpha, which is a measure of internal consistency, are .710, .859, and .923 for Fintech adoption, competitiveness, and corporate sustainability performance, respectively. Similarly, results of composite reliability are .804, .898, and .936 for Fintech adoption, competitiveness, and corporate sustainability performance, respectively. The result of Cronbach's alpha and composite reliability indicates that sufficient reliability exists in the data since all the values are greater than the threshold value .70 (Hair et al., 2019). Similarly, Table 2 also presents the result of the convergent validity, assessed through item loading and average variance extracted (AVE). Regarding item loading, three items were dropped from the construct Fintech adoption, and one item was dropped from the construct corporate sustainability performance (CSP) to improve the measurement model. According to Hair et al. (2019), items with loading values higher than .50 are acceptable, while those above .708 are preferable. Therefore, the remaining item loading values are significant and acceptable. Furthermore, the recommended value of AVE is 0.50 or higher (Hair et al., 2019). Table 2 shows that the AVE values for the constructs of Fintech adoption, competitiveness, and CSP are .510, .640, and .618, respectively, all of which are higher than the suggested value of .50. Hence, the results

of item loading and AVE show sufficient convergent validity in the measurement model.

Table 3

Assessment of Discriminant Validity

	FTH	COMP	CSP
FTH	.675	.308	.404
COMP	.259	.800	.624
CSP	.359	.600	.786

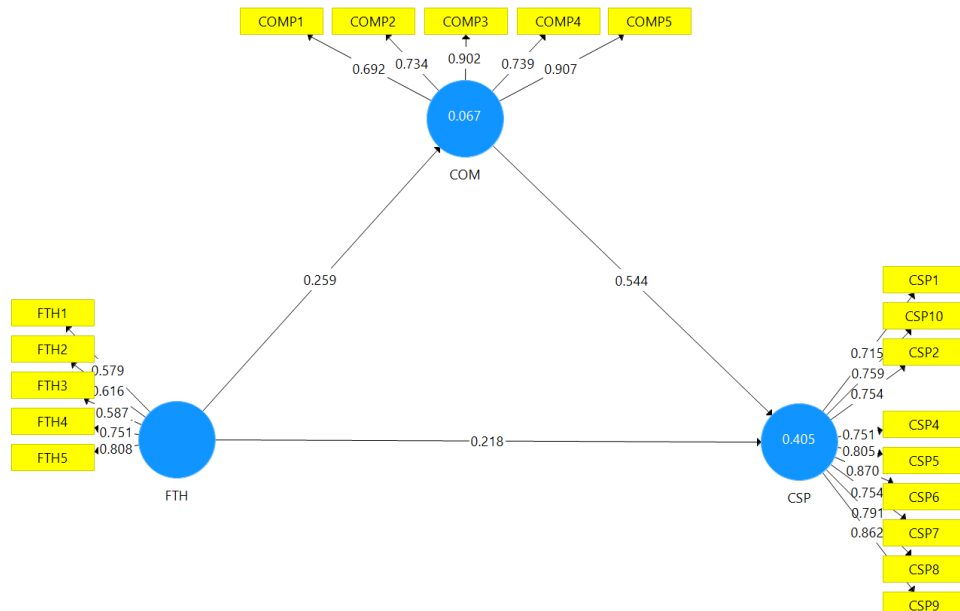
Note. Author's Calculation

The assessment of the Fornell-Larcker Criterion and the Heterotrait-Monotrait (HTMT) ratio was used to evaluate the discriminant validity. Table 3 presents the result of discriminant validity. The values in the diagonal, presented in bold, signify square root values of AVE. The off-diagonal values placed below the diagonal are correlations between constructs, the result of the Fornell-Larcker criterion. Table 3 displays that the square root value of AVE is greater than the correlation value. Likewise, off-diagonal values above the diagonal are the result of the Heterotrait-Monotrait (HTMT) ratio. All HTMT ratios are less than the threshold value of .085. Hence, the result of the Fornell-Larcker Criterion and the Heterotrait-Monotrait (HTMT) ratio ensures the establishment of discriminant validity. The assessment of the measurement model ensures the sufficient reliability and validity of the model. On the other hand, VIF values are 1.000, 1.702, and 1.701 for the constructs of Fintech adoption, competitiveness, and CSP, respectively, indicating no issue of multi-collinearity. Thus, the study moves forward to the assessment of the structural model in the next step.

Assessment of the Structural Model

The structural model estimates the fit and strength of the relationship among the constructs in the study model. There are three constructs in the model, such as Fintech adoption, competitiveness, and CSP. The assessment of the structural model is based on the evaluation of the path coefficient (β). Table 4 displays the results of the hypothesized relationship examined in the study. H1 investigates the relationship between Fintech adoption (FTH) and bank's sustainability performance (CSP). The study confirms H1, as the path coefficient is significant and lies in between +1 and -1 ($\beta = .218$; $P < .01$). Likewise, the study supports H2a ($\beta = .259$; $P < .01$) and H_{2b} ($\beta = .545$; $P < .01$) that endorse the impact of Fintech adoption on competitiveness and effect of competitiveness on CSP, respectively. Similarly, Table 4 offers the result of the mediating effect of competitiveness. H2 investigates the mediating effect of competitiveness in the relationship between Fintech adoption and CSP. The study supports H2 since the path coefficient is significant ($\beta = .141$; $P < .01$). Hence, the study claims the partial mediation effect of competitiveness, as the study also found the direct relationship between Fintech adoption and CSP.

Furthermore, the coefficient of determination (R^2) for CSP is .405, indicating sufficient predictive accuracy of the study model. However, the value of R^2 for competitiveness is only .067, demonstrating nominal predictive power of the model for the respective construct. Nevertheless, the study validates only the partial mediation of competitiveness in the relationship between Fintech adoption and CSP.

Figure 2*The Structural Model***Table 4***Evaluating Path Coefficients of Structural Model*

Hypothesis	Relationship	β	M	STD	T Stat	P	2.50%	97.50%	Decision
H1	FTH -> CSP	.218	.222	.051	4.260	.000	.110	.315	Supported
H2a	FTH -> COMP	.259	.274	.071	3.626	.000	.126	.401	Supported
H2b	COMP -> CSP	.545	.546	.042	12.886	.000	.458	.627	Supported
Mediation result									
H2	FTH -> COMP -> CSP	.141	.149	.038	3.666	.000	.071	.221	Supported
R2	CSP = 0.405, COMP = .067								

Note. Path coefficient = β , Sample Mean = M, Standard Deviation = STD, T Stat = (O/STDEV), P Values = P

Discussion

The study investigated the effect of Fintech adoption (FTH) on the bank's sustainability performance (CSP) of Nepal. It also examined the mediating effect of competitiveness within the relationship. The results of the study endorse the claim of the previous research but, on the other hand disregard it as well. Regarding the direct relationship between Fintech adoption and CSP, the study aligns the findings of Almaqtari (2024), Dwivedi et al. (2021),

Hidayat-ur-Rehman and Hossain (2024), and Siddik et al. (2023) and claims that Fintech adoption significantly contributes to enhancing the sustainability performance of the bank. Likewise, the study also endorses the findings of Dwivedi et al. (2021) and asserts the impact of Fintech adoption on improving the competitiveness of banks. Furthermore, this study found the mediating role of competitiveness in the relationship between Fintech adoption and sustainability performance. The result is consistent with the findings of Dwivedi et al. (2021), and Hidayat-ur-Rehman and Hossain (2024). The result is partially consistent with the study of Yan et al. (2022), which also recognizes the mediating effect in the relationship between Fintech adoption and CSP.

The banking industry of Nepal is different from other contexts. Since the R^2 value is .067, it indicates the weak relationship between Fintech adoption and competitiveness and also shows the lower explanatory power of the model. Fintech adoption is an emerging practice in Nepalese banks (World Bank, 2025). The nominal impact of Fintech on the competitiveness of banks suggests the presence of other significant factors. The study directs the need for further research to investigate the factors that influence banking competitiveness. Likewise, the result should be inferred with caution, as the convenience sampling method of the study may limit its generalizability. Overall, the positive and significant result of the study claims that Fintech adoption, directly and indirectly, through competitiveness, enhances the sustainability performance of the bank.

V. Conclusion and Implications

The study intended to examine the influence of Fintech adoption on improving the overall sustainability performance of the banks in Nepal. Additionally, it investigated the mediating role of competitiveness within the relationship. The study asserts that Fintech adoption seems beneficial for enhancing banking sustainability performance. Moreover, it confirms that Fintech adoption is a way to strengthen a bank's competitiveness to some extent, which contributes to improved sustainability performance.

This study contributes to the existing literature on Fintech and sustainability. It recognizes the role of competitiveness in the relationship between Fintech adoption and the sustainability performance of the bank in Nepal. Hence, the study highlights the significance of Fintech adoption in improving the competitiveness and sustainability performance of the bank. Moreover, this study will offer pivotal insights to the bank manager and regulator to develop a more inclusive and resilient banking system through Fintech adoption in Nepal. However, the study is based on self-reported responses from a limited sample; hence, it indicates certain limitations inherent in the study.

References

- Albelal, H. A., Hamdan, A., & Binsaddig, R. (2024). Impact of FinTech adoption on competitiveness and performance of the banks. In *Business Development via AI and Digitalization: Volume 1* (pp. 741-751). Cham: Springer Nature Switzerland.
- Atayah, O. F., Najaf, K., Ali, M. H., & Marashdeh, H. (2024). Sustainability, market performance and FinTech firms. *Meditari Accountancy Research*, 32(2), 317-345.
- Almasria, N. A., Alhatabat, Z., Ershaid, D., Ibrahim, A., & Ahmed, S. (2024). The mediating impact of organizational innovation on the relationship between fintech innovations and sustainability performance. *Sustainability*, 16(22), 10044.
- Almaqtari, F. A. (2024). The moderating role of IT governance on the relationship between FinTech and sustainability performance. *Journal of Open Innovation: Technology, Market, and Complexity*, 10(2), 100267.
- Bhuiyan, M. A., Rahman, M. K., Patwary, A. K., Akter, R., Zhang, Q., & Feng, X. (2024). Fintech adoption and environmental performance in banks: Exploring employee efficiency and green initiatives. *IEEE Transactions on Engineering Management*, 71, 11346-11360.

- Boustani, N. M. (2020). Traditional banks and fintech: survival, future and threats. In *ICT for an Inclusive World: Industry 4.0–Towards the Smart Enterprise* (pp. 345-359). Cham: Springer International Publishing.
- Chen, X., You, X., & Chang, V. (2021). FinTech and commercial banks' performance in China: A leap forward or survival of the fittest?. *Technological Forecasting and Social Change*, 166, 120645.
- Cruz Rambaud, S., & López Pascual, J. (2023). Insurtech, proptech, and fintech environment: sustainability, global trends and opportunities. *Sustainability*, 15(12), 9574.
- Dwivedi, P., Alabdooli, J. I., & Dwivedi, R. (2021). Role of FinTech adoption for competitiveness and performance of the bank: a study of banking industry in UAE. *International Journal of Global Business and Competitiveness*, 16(2), 130-138.
- Ghobakhloo, M., Asadi, S., Iranmanesh, M., Foroughi, B., Mubarak, M. F., & Yadegaridehkordi, E. (2023). Intelligent automation implementation and corporate sustainability performance: The enabling role of corporate social responsibility strategy. *Technology in Society*, 74, 102301.
- Guang-Wen, Z., & Siddik, A. B. (2023). The effect of Fintech adoption on green finance and environmental performance of banking institutions during the COVID-19 pandemic: the role of green innovation. *Environmental Science and Pollution Research*, 30(10), 25959-25971.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis* (8th ed.). Cengage Learning.
- Harman, H. H. (1976). *Modern factor analysis* (3rd ed.). The University of Chicago Press.
- Hidayat-ur-Rehman, I., & Hossain, M. N. (2024). The impacts of Fintech adoption, green finance and competitiveness on banks' sustainable performance: digital transformation as moderator. *Asia-Pacific Journal of Business Administration*.
- Kakinuma, Y., & Likitratcharoen, D. (2025). Fintech-driven resilience amid pandemic: a text mining analysis of the banking industry with ESG dynamics. *Journal of Financial Regulation and Compliance*.
- Kunwar, K., & Chhetri, S. D. (2025). Role of Fintech in driving financial inclusion: Evidence from Kaski. *The Batuk*, 11(2), 14-27.
- Lagna, A., & Ravishankar, M. N. (2022). Making the world a better place with fintech research. *Information Systems Journal*, 32(1), 61-102.
- Mertzanis, C. (2023). FinTech finance and social-environmental performance around the world. *Finance Research Letters*, 56, 104107.
- Najaf, K., Haj Khalifa, A., Obaid, S. M., Rashidi, A. A., & Ataya, A. (2023). Does sustainability matter for Fintech firms? Evidence from United States firms. *Competitiveness Review: An International Business Journal*, 33(1), 161-180.
- Nassiry, D. (2019). The role of fintech in unlocking green finance. In *Handbook of green finance* (pp. 315-336). Springer, Singapore.
- Nepal Rastra Bank. (2024). *Green finance taxonomy 2024: Guideline for financial sectors*. <https://www.nrb.org.np/contents/uploads/2024/10/Nepal-Green-Finance-Taxonomy-2024-V1.pdf>
- Nepal Rastra Bank. (2023). *Unified directives, A, B and C 2080*. <https://www.nrb.org.np/contents/uploads/2023/10/Unified-Directives-2080-Final-Upload.pdf>
- Nizam, E., Ng, A., Dewandaru, G., Nagayev, R., & Nkoba, M. A. (2019). The impact of social and environmental sustainability on financial performance: A global analysis of the banking sector. *Journal Multinational Financial Management*, 49, 35-53.
- Okasha, S., Ali, H., & Tarek, A. (2025). What did firms do during COVID-19? An examination of corporate sustainability performance in Fintech firms. *Journal of Global Responsibility*.
- Siddik, A. B., Rahman, M. N., & Yong, L. (2023). Do fintech adoption and financial literacy improve corporate

- sustainability performance? The mediating role of access to finance. *Journal of Cleaner Production*, 421, 137658.
- Siddik, A. B., Yong, L., & Rahman, M. N. (2023). The role of Fintech in circular economy practices to improve sustainability performance: A two-staged SEM-ANN approach. *Environmental Science and Pollution Research*, 30(49), 107465-107486.
- Suhardjo, I., Akroyd, C., & Suparman, M. (2025). Beyond the bottom line: A qualitative content analysis of sustainability performance drivers in Indonesian banks. *Qualitative Research in Financial Markets*.
- Tjahjadi, B., Soewarno, N., & Mustikaningtyas, F. (2021). Good corporate governance and corporate sustainability performance in Indonesia: A triple bottom line approach. *Heliyon*, 7(3).
- Udeagha, M. C., & Ngepah, N. (2023). The drivers of environmental sustainability in BRICS economies: Do green finance and fintech matter? *World Development Sustainability*, 3, 100096.
- World Bank. (2025). *Nepal country economic memorandum 2025: Unlocking Nepal's growth potential*. <https://documents1.worldbank.org/curated/en/099032125103030263/pdf/P179761-430153ad-672c-4418-89c5-ef3740c65113.pdf>
- Yan, C., Siddik, A. B., Yong, L., Dong, Q., Zheng, G. W., & Rahman, M. N. (2022). A two- staged SEM-artificial neural network approach to analyze the impact of FinTech adoption on the sustainability performance of banking firms: the mediating effect of green finance and innovation. *Systems*, 10(5), 148.
- Zheng, G. W., Siddik, A. B., Masukujjaman, M., & Fatema, N. (2021). Factors affecting the sustainability performance of financial institutions in Bangladesh: The role of green finance. *Sustainability*, 13(18), 10165.
- Zhou, G., Zhu, J., & Luo, S. (2022). The impact of fintech innovation on green growth in China: Mediating effect of green finance. *Ecological Economics*, 193, 107308.