

MODERATING ROLE OF DIGITAL GOVERNMENT FOR FOSTERING FINTECH DEVELOPMENT: A CASE STUDY OF THE EMERGING ECONOMY IN VIETNAM

O PAPEL MODERADOR DO GOVERNO DIGITAL NO FOMENTO DO DESENVOLVIMENTO DE FINTECHS: UM ESTUDO DE CASO DA ECONOMIA EMERGENTE DO VIETNÃ

Article received on: 8/15/2025

Article accepted on: 11/14/2025

Huy Duc Pham*

*Faculty of Finance and Banking, University of Finance - Marketing (UFM), Ho Chi Minh City, Vietnam

Orcid: <https://orcid.org/0000-0002-5707-4137>

huypham@ufm.edu.vn

Phan Thanh Tam**

**Faculty of Postgraduate Studies, Lac Hong University (LHU), Dong Nai Province, Vietnam

Orcid: <https://orcid.org/0000-0003-2387-7756>

tampt@lhu.edu.vn

The authors declare that there is no conflict of interest

Abstract

The rapid expansion of financial technology (Fintech) has significantly transformed financial systems in emerging economies, yet the determinants of fintech development remain insufficiently explored in transitional contexts such as Vietnam. This study investigates the policy-related and institutional factors contributing to fintech development in Vietnam, with particular emphasis on the moderating role of digital government. Using a mixed-methods approach, qualitative insights were first obtained through in-depth discussions with 35 finance and banking experts in Ho Chi Minh City to refine the research constructs and questionnaire design. Subsequently, quantitative data were collected via an online survey of 577 banking professionals working in fintech-related roles across five major Vietnamese cities. The proposed research model was empirically tested using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4.0. The findings reveal that technological infrastructure, legal framework, innovation culture, customer behavior, finance and economic conditions, and digital government all exert positive and significant effects on fintech development. Among these factors, customer behavior emerges as the most influential determinant. Significantly, digital government not only directly enhances fintech development but also positively moderates the relationship between technological infrastructure and fintech

Resumo

A rápida expansão da tecnologia financeira (Fintech) transformou significativamente os sistemas financeiros em economias emergentes, mas os determinantes do desenvolvimento da fintech ainda são pouco explorados em contextos de transição como o Vietnã. Este estudo investiga os fatores institucionais e relacionados a políticas públicas que contribuem para o desenvolvimento da fintech no Vietnã, com ênfase particular no papel moderador do governo digital. Utilizando uma abordagem de métodos mistos, insights qualitativos foram inicialmente obtidos por meio de discussões aprofundadas com 35 especialistas em finanças e bancos na cidade de Ho Chi Minh para refinar os construtos da pesquisa e o desenho do questionário. Posteriormente, dados quantitativos foram coletados por meio de uma pesquisa online com 577 profissionais bancários que atuam em funções relacionadas à fintech em cinco grandes cidades vietnamitas. O modelo de pesquisa proposto foi testado empiricamente utilizando a Modelagem de Equações Estruturais por Mínimos Quadrados Parciais (PLS-SEM) com o SmartPLS 4.0. Os resultados revelam que a infraestrutura tecnológica, o arcabouço legal, a cultura de inovação, o comportamento do consumidor, as condições financeiras e econômicas e o governo digital exercem efeitos positivos e significativos sobre o desenvolvimento da fintech. Dentre esses



development, strengthening the effectiveness of digital infrastructure investments. This study contributes to fintech literature by integrating digital government as both a direct driver and a moderating mechanism within an emerging economy context. The results offer valuable policy implications for governments seeking to foster sustainable fintech ecosystems through coordinated digital governance and regulatory strategies.

Keywords: Legal Framework. Fintech Development. Digital Government. Technological Infrastructure. Emerging Economy.

fatores, o comportamento do consumidor emerge como o determinante mais influente. Significativamente, o governo digital não apenas aprimora diretamente o desenvolvimento de fintechs, mas também modera positivamente a relação entre infraestrutura tecnológica e desenvolvimento de fintechs, fortalecendo a eficácia dos investimentos em infraestrutura digital. Este estudo contribui para a literatura sobre fintechs ao integrar o governo digital como um fator impulsionador direto e um mecanismo moderador em um contexto de economia emergente. Os resultados oferecem implicações políticas valiosas para governos que buscam fomentar ecossistemas de fintechs sustentáveis por meio de estratégias coordenadas de governança digital e regulamentação.

Palavras-chave: Marco Legal. Desenvolvimento de Fintechs. Governo Digital. Infraestrutura Tecnológica. Economia Emergente.

1 INTRODUCTION

The rapid advancement of financial technology (Fintech) has profoundly reshaped the global financial landscape by enhancing efficiency, expanding financial inclusion, and fostering innovation within financial services. Fintech solutions such as digital payments, peer-to-peer lending, mobile banking, and blockchain-based applications have become key drivers of transformation, particularly in emerging economies where traditional financial systems often face structural limitations (Li *et al.*, 2025; Parmankulova *et al.*, 2022). In this context, understanding the determinants that facilitate fintech development has become a critical issue for both policymakers and financial institutions.

Existing studies on fintech development predominantly emphasize technological readiness, market demand, or firm-level innovation capabilities (Al-Majali *et al.*, 2025; Faizulayev *et al.*, 2021). While these factors are undeniably important, fintech growth is increasingly shaped by broader institutional and policy environments, including regulatory frameworks, government digitalization, and macroeconomic conditions (Hua & Huang, 2021; Khan *et al.*, 2023). In emerging economies, where institutional settings are evolving and regulatory structures are often fragmented, the interaction among technology, policy, and governance is decisive in shaping fintech ecosystems. However,

empirical evidence that systematically integrates these dimensions remains limited, particularly in Southeast Asian countries (Tian *et al.*, 2024).

Vietnam represents a compelling case for examining fintech development in an emerging economy. Over the past decade, Vietnam has experienced rapid digital transformation, driven by strong economic growth, a young, tech-savvy population, and increasing internet and smartphone penetration. At the same time, the Vietnamese government has actively promoted digitalization through national digital transformation strategies and e-government initiatives. Despite these favorable conditions, fintech development in Vietnam continues to face challenges related to regulatory uncertainty, uneven technological infrastructure, and varying levels of digital literacy and consumer trust.

Against this backdrop, digital government emerges as a potentially critical yet underexplored factor in fintech development. Digital government initiatives, including online public services, digital identity systems, and data integration platforms, can reduce transaction costs, enhance transparency, and strengthen institutional trust. More importantly, digital government can amplify the effectiveness of technological infrastructure by creating an enabling environment for fintech innovation to flourish. Nevertheless, the moderating role of digital government in the relationship between technological infrastructure and fintech development has received little empirical attention in the existing literature.

This study aims to address these gaps by developing and empirically testing a comprehensive model of fintech development in Vietnam. Specifically, the study examines the direct effects of technological infrastructure, legal framework, innovation culture, customer behavior, finance and economic conditions, and digital government on fintech development. In addition, it investigates whether digital government moderates the relationship between technological infrastructure and fintech development. By employing a mixed-methods approach and using PLS-SEM on data collected from banking professionals across major Vietnamese cities, this research offers robust empirical insights.

The study contributes to the literature by extending fintech development theory through the integration of digital government as both a direct determinant and a moderating mechanism. Furthermore, the findings provide practical policy implications

for emerging economies seeking to foster sustainable fintech ecosystems through coordinated regulatory and digital governance strategies.

2 THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

Fintech development is a multifaceted phenomenon shaped by technological, institutional, behavioral, and macroeconomic forces. Drawing on institutional theory, technology adoption theory, and innovation systems theory, fintech development can be understood as the outcome of interactions between digital infrastructure, regulatory environments, market participants, and public governance mechanisms (Kanapiyanova *et al.*, 2022). Institutional theory emphasizes the role of formal rules, regulations, and governance structures in reducing uncertainty and legitimizing new financial innovations (Meskovic *et al.*, 2024). Technology adoption theory highlights the importance of technological readiness and user acceptance, while innovation systems theory underscores the interdependence among government, industry, and society in fostering innovation (Mashoene *et al.*, 2025; Kanapiyanova *et al.*, 2022).

In emerging economies, fintech development is susceptible to institutional quality and government intervention. Weak regulatory clarity, uneven infrastructure, and low trust in formal financial systems may hinder fintech adoption despite technological advancements. Therefore, a comprehensive framework that integrates policy-related and market-driven factors is necessary to explain fintech development in transitional contexts such as Vietnam.

3 TECHNOLOGICAL INFRASTRUCTURE AND FINTECH DEVELOPMENT

Technological infrastructure provides the foundational backbone for fintech services, including digital payment platforms, data processing systems, cybersecurity frameworks, and internet connectivity (Bai *et al.*, 2024; Akhtar *et al.*, 2024). From the perspective of technology adoption theory, robust technological infrastructure enhances system reliability, reduces operational costs, and facilitates scalability, thereby encouraging fintech innovation and diffusion. In emerging economies, inadequate infrastructure often constitutes a significant barrier to fintech development. Conversely, improvements in broadband penetration, cloud computing, and digital payment networks

enable financial institutions and fintech firms to deploy innovative services more effectively (Kayani *et al.*, 2025). In Vietnam, ongoing investments in information and communication technology have created favorable conditions for fintech growth, although disparities remain across regions. Therefore, it is expected that stronger technological infrastructure positively influences fintech development.

H1: Technological infrastructure (TI) positively influences fintech development (FD) in Vietnam.

4 LEGAL FRAMEWORK AND FINTECH DEVELOPMENT

The legal framework plays a critical role in shaping fintech ecosystems by defining the rules governing market entry, consumer protection, data privacy, and risk management (Dar & Ahmed, 2021). Institutional theory suggests that regulatory clarity and legal certainty reduce uncertainty and foster legitimacy for innovative financial services. In contrast, ambiguous or restrictive regulations may discourage investment and stifle innovation (Ding & Sun, 2025). In emerging markets, fintech regulations often lag behind technological innovation, creating regulatory gaps and compliance challenges. Vietnam's fintech sector operates in a rapidly evolving legal environment, where policies on digital payments, data protection, and financial supervision are still under development. A supportive and adaptive legal framework can promote fintech development by balancing innovation incentives with systemic stability.

H2: Legal framework (LF) has a positive and significant impact on fintech development (FD) in Vietnam.

5 INNOVATION CULTURE AND FINTECH DEVELOPMENT

Innovation culture reflects the extent to which organizations and institutions encourage creativity, experimentation, and openness to new technologies (Kayani *et al.*, 2025). Innovation systems theory posits that a strong innovation culture facilitates knowledge sharing and collaboration among stakeholders, thereby accelerating technological advancement (Elgadi & Ghardallou, 2022; Liu *et al.*, 2022). Within financial institutions, an innovation-oriented culture supports the adoption of fintech solutions and collaboration with fintech startups (Shaw *et al.*, 2023). In emerging

economies, however, traditional risk-averse organizational cultures may limit experimentation. In Vietnam, the gradual shift toward innovation-driven strategies within banks and financial institutions is expected to boost fintech development.

H3: Innovation culture (IC) positively affects fintech development (FD) in Vietnam.

6 CUSTOMER BEHAVIOR AND FINTECH DEVELOPMENT

Customer behavior is a critical demand-side factor influencing fintech development. Technology acceptance models emphasize that perceived usefulness, ease of use, and trust shape individuals' adoption of digital financial services (Hasan *et al.*, 2024; Faizulayev *et al.*, 2021). In fintech contexts, customer readiness, digital literacy, and risk perceptions significantly affect usage decisions (Liu *et al.*, 2021; Tiwari & Suresha, 2021). Vietnam's population is characterized by high smartphone adoption and increasing familiarity with digital services. However, concerns regarding security and trust remain salient. As fintech development ultimately depends on widespread user adoption, positive customer behavior is expected to drive strong fintech growth.

H4: Customer behavior (CB) positively affects fintech development (FD) in Vietnam.

7 FINANCE AND ECONOMIC CONDITIONS AND FINTECH DEVELOPMENT

Macroeconomic stability and financial conditions provide an enabling environment for fintech development (Ovenc & Nabiyeu, 2025). Stable economic growth, access to capital, and a well-functioning financial system support investment in fintech innovation. From an institutional economics perspective, favorable economic conditions reduce uncertainty and encourage entrepreneurial activity (Bartolacci *et al.*, 2022; Xu *et al.*, 2024). In Vietnam, sustained economic growth and increasing financial inclusion create opportunities for fintech expansion. Nevertheless, economic volatility or limited access to financing may constrain fintech firms' growth. Therefore, financial and economic conditions are expected to influence fintech development positively.

H5: Finance and economic conditions (FE) have a positive and significant impact on fintech development (FD) in Vietnam.

8 DIGITAL GOVERNMENT AND FINTECH DEVELOPMENT

Digital government refers to the use of digital technologies by public institutions to deliver services, manage data, and interact with citizens and businesses (Xu *et al.*, 2024; Al-Majali *et al.*, 2025; Thottoli *et al.*, 2024). Digital government initiatives enhance transparency, efficiency, and institutional trust, which are essential for fintech development. From an innovation systems perspective, government digitalization strengthens linkages among public and private actors (Ioannou *et al.*, 2024; Parmankulova *et al.*, 2022). In Vietnam, e-government platforms, digital identity systems, and online public services facilitate fintech operations by reducing administrative burdens and improving data accessibility. Consequently, digital government is expected to promote fintech development directly.

H6: Digital government (DG) has a positive and significant direct impact on fintech development (FD) in Vietnam.

9 MODERATING ROLE OF DIGITAL GOVERNMENT

Beyond its direct effect, digital government may also moderate the relationship between technological infrastructure and fintech development. While technological infrastructure provides the technical capacity for fintech services, its effectiveness depends on the institutional environment in which it operates (Al-Majali *et al.*, 2025). Digital government can enhance the utilization of infrastructure by standardizing processes, ensuring interoperability, and fostering trust. In contexts with high levels of digital government, investments in technological infrastructure are more likely to translate into fintech growth (Bai *et al.*, 2024; Liberti *et al.*, 2022; Juma *et al.*, 2025). Conversely, weak digital governance may limit the benefits of infrastructure development. Therefore, digital government is expected to strengthen the positive impact of technological infrastructure on fintech development.

H7: Digital government (DG) positively moderates the relationship between technological infrastructure (TI) and fintech development (FD), such that the relationship is stronger when digital government is high.

Figure 1

A research model for critical factors influencing fintech development

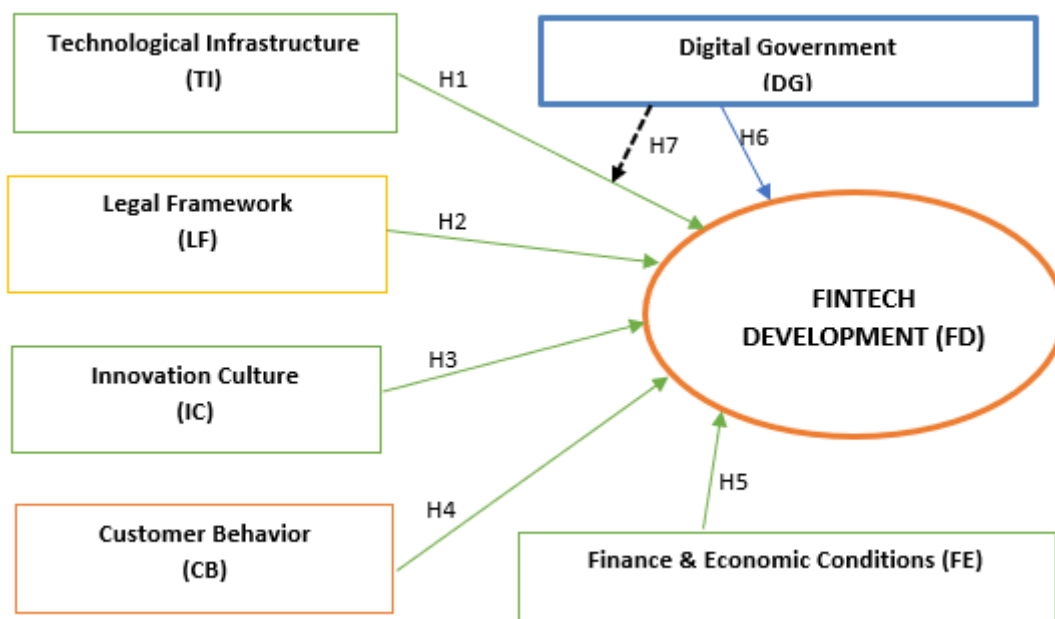


Figure 1 presents the conceptual research framework examining the determinants of fintech development in Vietnam. The model integrates key technological, institutional, behavioral, and macroeconomic factors, including technological infrastructure, legal framework, innovation culture, customer behavior, finance and economic conditions, and digital government. Fintech development is positioned as the central dependent construct, reflecting the outcome of interactions among these multidimensional drivers. Notably, digital government is conceptualized not only as a direct determinant of fintech development but also as a moderating variable influencing the relationship between technological infrastructure and fintech development. This framework provides a comprehensive foundation for empirically analyzing fintech development in an emerging economy.

10 RESEARCH METHODS

This study adopts a mixed-methods research design, integrating qualitative and quantitative approaches to examine the factors influencing fintech development in Vietnam comprehensively. The qualitative phase was used to refine research constructs and develop measurement items, while the quantitative phase aimed to test the proposed

hypotheses using structural equation modeling empirically. This sequential exploratory design enhances the validity and contextual relevance of the research model in an emerging economy setting.

Qualitative Phase: In-depth discussions were conducted with 35 finance and banking experts based in Ho Chi Minh City. The participants included senior bank managers, fintech specialists, policymakers, and academics with extensive experience in financial technology and digital transformation (Hair *et al.*, 2019). Semi-structured discussions focused on identifying key policy, technological, and behavioral factors affecting fintech development in Vietnam. Insights obtained from this phase were used to adapt and refine measurement items from prior studies, ensuring content validity and contextual appropriateness. The qualitative findings informed the final questionnaire design used in the subsequent quantitative survey.

Quantitative phase: An online survey was conducted across five major cities in Vietnam, including Ho Chi Minh City, Hanoi, Da Nang, Can Tho, and Hai Phong. The target respondents were professionals working in banks and financial institutions with direct involvement in fintech-related activities. A total of 650 questionnaires were distributed, of which 577 valid responses were returned and used for data analysis, yielding a high response rate and a sufficient sample size for PLS-SEM analysis.

The questionnaire employed a structured format, with measurement items rated on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). The constructs measured included technological infrastructure, legal framework, innovation culture, customer behavior, finance and economic conditions, digital government, and fintech development. Partial Least Squares Structural Equation Modeling (PLS-SEM) was employed to analyze the data using SmartPLS 4.0. PLS-SEM was chosen for its suitability for exploratory research, complex models with multiple constructs, and non-normal data distributions, which are common in emerging-economy contexts. The analysis followed a two-step approach, involving assessment of the measurement model and evaluation of the structural model.

Measurement model assessment focused on internal consistency reliability, convergent validity, and construct reliability using Cronbach's alpha, composite reliability, and average variance extracted (AVE). The evaluation of the research model was conducted in accordance with established PLS-SEM criteria. The measurement model was assessed using Cronbach's alpha and composite reliability (thresholds above

0.70) and average variance extracted (AVE) exceeding 0.50 to ensure convergent validity. Discriminant validity was examined using the Fornell–Larcker criterion and the HTMT ratio ($HTMT < 0.85$). The structural model was evaluated based on path coefficients (β), t-statistics (≥ 1.96 , $p < 0.05$), R^2 values, and the significance of the moderating effect through the interaction term.

11 RESULTS

11.1 Demographic information of the study sample based on 577 respondents

The demographic profile of the study sample is based on 577 valid responses collected from banking professionals involved in fintech-related activities. In terms of gender distribution, female respondents account for 58.2% of the sample, while male respondents represent 41.8%, indicating a relatively balanced gender composition with a slight predominance of females. Regarding marital status, the majority of respondents are married (62.0%), while 38.0% are single, suggesting a sample composed mainly of individuals with stable personal and professional backgrounds. Regarding age, the largest proportion of respondents falls in the 35-45 age group, accounting for 51.8% of the sample. This is followed by respondents aged 25 to under 35 years (23.9%), those aged 45 years and above (15.8%), and the youngest group aged 22 to under 25 years (8.5%).

Table 1

Testing of Cronbach's alpha and composite reliability

Factors	Code	Items	Mean	Std. Deviation	Cronbach's alpha	Composite reliability	Average variance extracted
1. Technological Infrastructure	TI	4	3.225	0.945	0.916	0.947	0.856
2. Legal Framework	LF	4	3.326	0.921	0.852	0.893	0.680
3. Innovation Culture	IC	4	3.171	0.923	0.816	0.890	0.729
4. Customer Behavior	CB	3	3.250	0.933	0.925	0.944	0.808
5. Finance & Economic Conditions	FE	4	3.137	0.913	0.844	0.883	0.658
6. Digital Government	DG	4	3.311	0.935	0.934	0.953	0.834
7. Fintech Development	FD	3	3.145	0.929	0.915	0.940	0.797

Table 1 presents the results of reliability and convergent validity testing for all research constructs. The Cronbach's alpha values range from 0.816 to 0.934, exceeding

the recommended threshold of 0.70, indicating strong internal consistency. Composite reliability values range from 0.883 to 0.953, further confirming construct reliability. In addition, all average variance extracted (AVE) values exceed 0.50, ranging from 0.658 to 0.856, indicating satisfactory convergent validity. Overall, these results confirm that the measurement scales used in this study are reliable and valid, providing a robust foundation for subsequent structural model analysis.

Table 2

Testing the SEM model for factors influencing the Fintech development

Factors	Original sample	Sample mean	Standard deviation	T statistics	P values
CB → FD	0.297	0.296	0.040	7.359	0.000
DG → FD	0.130	0.138	0.039	3.335	0.001
DG x TI → FD	0.102	0.097	0.038	2.705	0.007
FE → FD	0.086	0.090	0.031	2.736	0.006
IC → FD	0.106	0.112	0.035	3.067	0.002
LF → FD	0.163	0.163	0.035	4.679	0.000
TI → FD	0.232	0.234	0.039	5.986	0.000

Table 2 reports the results of the structural equation model estimating the factors influencing fintech development. The findings indicate that all hypothesized relationships are positive and statistically significant. Customer behavior exerts the most potent effect on fintech development ($\beta = 0.297$, $p < 0.001$), followed by technological infrastructure ($\beta = 0.232$, $p < 0.001$) and legal framework ($\beta = 0.163$, $p < 0.001$). Innovation culture, finance and economic conditions, and digital government also demonstrate significant positive impacts. Notably, the interaction term between digital government and technological infrastructure is significant ($\beta = 0.102$, $p = 0.007$), confirming that digital government moderates the relationship between technological infrastructure and fintech development.

Figure 2

Testing the SEM for factors influencing the Fintech development

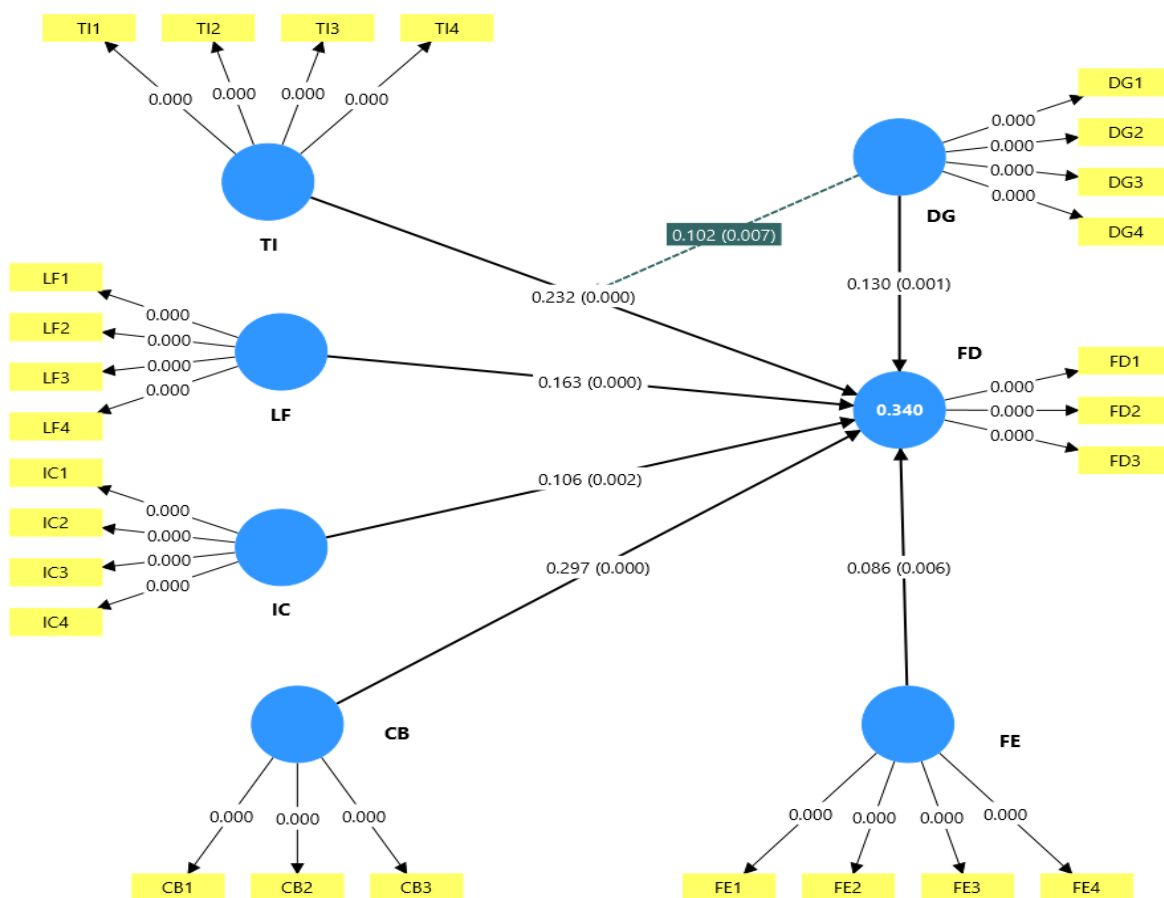


Figure 2 illustrates the results of the structural equation model estimated using PLS-SEM. The model demonstrates satisfactory explanatory power, with fintech development exhibiting an R^2 value of 0.340, indicating that the proposed antecedents jointly explain a moderate proportion of variance. All direct paths from technological infrastructure, legal framework, innovation culture, customer behavior, finance and economic conditions, and digital government to fintech development are positive and statistically significant. Customer behavior has the greatest effect, followed by technological infrastructure. Importantly, the interaction effect between digital government and technological infrastructure is significant, confirming the moderating role of digital government in strengthening fintech development outcomes.

12 DISCUSSION OF FINDINGS

The findings of this study provide robust empirical evidence on the key drivers of fintech development in Vietnam, an emerging economy undergoing rapid digital transformation. Consistent with prior fintech and technology adoption literature, technological infrastructure is found to significantly enhance fintech development, confirming that reliable digital connectivity, data systems, and payment platforms are fundamental enablers of fintech innovation (Elmahdy *et al.*, 2025; Siagian, 2023). This result aligns with studies emphasizing the importance of ICT readiness in fostering financial digitalization.

Customer behavior emerges as the strongest determinant of fintech development, highlighting the critical role of user acceptance, trust, and digital literacy in shaping fintech adoption (Serkbayeva *et al.*, 2024; Kayani *et al.*, 2025). This finding reinforces demand-side perspectives, suggesting that fintech growth is ultimately driven by customers' willingness to engage with digital financial services, particularly in markets where cash usage has traditionally been dominant.

The positive effects of legal framework and innovation culture underscore the importance of institutional support and organizational openness in facilitating fintech development (Elgadi & Ghardallou, 2022; Liu *et al.*, 2022). A clear and adaptive regulatory environment reduces uncertainty and encourages experimentation, while an innovation-oriented culture supports the integration of new technologies within financial institutions. Meanwhile, finance and economic conditions, although exerting a weaker influence, remain essential in providing a stable macroeconomic foundation for fintech expansion.

Notably, digital government plays a dual role in fintech development. Beyond its direct positive impact, digital government significantly moderates the relationship between technological infrastructure and fintech development (Ovenc & Nabiyeu, 2025; Bartolacci *et al.*, 2022). This suggests that investments in digital infrastructure yield greater fintech outcomes when complemented by effective digital governance, such as e-government platforms and digital public services. Overall, the findings highlight the need for coordinated technological and institutional strategies to promote sustainable fintech ecosystems in emerging economies such as Vietnam.

13 CONCLUSIONS AND POLICY RECOMMENDATIONS

13.1 Conclusions

This study examines the policy and institutional determinants of fintech development in Vietnam by integrating technological, regulatory, behavioral, and macroeconomic perspectives within a comprehensive analytical framework. Using a mixed-methods approach and PLS-SEM analysis based on data from 577 banking professionals, the study provides empirical evidence that fintech development in an emerging economy is driven by a combination of demand-side, supply-side, and governance-related factors. The findings reveal that technological infrastructure, legal framework, innovation culture, customer behavior, finance and economic conditions, and digital government all exert positive and significant effects on fintech development. Among these, customer behavior emerges as the most influential determinant, underscoring the critical role of user trust, digital readiness, and acceptance in fintech adoption. Notably, the study highlights the strategic role of digital government, which not only directly promotes fintech development but also strengthens the impact of technological infrastructure through a moderating mechanism. By emphasizing the complementary relationship between digital infrastructure and digital governance, this research extends the fintech development literature in emerging economy contexts. The results suggest that fintech growth cannot be achieved through isolated technological investments alone but requires coordinated institutional and policy support. Overall, this study contributes valuable insights for both academics and policymakers seeking to understand and foster sustainable fintech ecosystems in transitional economies such as Vietnam.

13.2 Policy recommendations

Based on the standardized path coefficients obtained from the PLS-SEM analysis, this study proposes prioritized policy recommendations to foster fintech development in Vietnam. The magnitude of the standardized beta coefficients provides empirical guidance for identifying the most influential policy levers, enabling policymakers to allocate resources more effectively.

(1) Enhancing customer behavior ($\beta = 0.297$) emerges as the most critical driver of fintech development, suggesting that demand-side policies should be prioritized. Policymakers should implement national programs to enhance digital financial literacy, improve consumer awareness of fintech benefits, and strengthen trust in digital financial services. Public campaigns focusing on cybersecurity awareness and consumer protection mechanisms are essential to reduce perceived risks and encourage widespread fintech adoption. In the Vietnamese context, where cash usage remains prevalent, policymakers should intensify national financial inclusion and digital literacy programs, particularly targeting SMEs, older users, and rural populations. Strengthening consumer protection regulations, dispute resolution mechanisms, and cybersecurity standards will enhance trust, thereby accelerating fintech adoption among Vietnamese consumers.

(2) Developing technological infrastructure ($\beta = 0.232$) represents the second most influential factor. Government investment should continue to focus on expanding high-speed internet coverage, particularly in underserved regions, while improving the reliability of digital payment systems and data-sharing platforms. Policies supporting cloud computing, cybersecurity infrastructure, and open banking standards would further strengthen the technological foundation of fintech ecosystems. Vietnam should continue prioritizing investments in nationwide digital infrastructure, including 5G networks, cloud computing, and interoperable payment systems. Special attention is needed to reduce regional digital disparities by improving connectivity in non-core urban areas, ensuring that fintech services can scale beyond major cities.

(3) Completing the legal framework ($\beta = 0.163$) plays a significant role in shaping fintech development. Regulatory authorities should prioritize establishing clear, adaptive, and innovation-friendly legal frameworks. Regulatory sandboxes, streamlined licensing procedures, and updated data protection regulations can reduce uncertainty for fintech firms while safeguarding financial stability and consumer interests. Given Vietnam's evolving fintech regulatory environment, policymakers should adopt flexible, adaptive regulatory approaches, such as expanding the State Bank of Vietnam's regulatory sandboxes. Clear guidelines on digital payments, data protection, and open banking will reduce regulatory uncertainty, encourage fintech innovation, and maintain financial stability.

(4) Improving digital government ($\beta = 0.130$) warrants strategic attention due to its dual role. Beyond directly supporting fintech development, digital government

enhances the effectiveness of technological infrastructure through a moderating effect ($\beta = 0.102$). Policymakers should accelerate e-government initiatives, digital identity systems, and interoperability between public and private digital platforms. Such efforts can reduce administrative burdens and facilitate fintech integration with public services. Vietnam's national digital transformation agenda should be further aligned with fintech development strategies. Expanding digital identity systems, integrating e-KYC, and enabling data-sharing between government agencies and financial institutions can significantly enhance fintech efficiency, reduce compliance costs, and improve service delivery across the public and private sectors.

(5) Developing an innovation culture ($\beta = 0.106$) should be fostered within financial institutions through policies that encourage experimentation and collaboration with fintech startups. Government-backed innovation hubs, tax incentives for fintech R&D, and public-private partnerships can help cultivate an innovation-oriented ecosystem. To strengthen innovation culture within Vietnamese financial institutions, policies should encourage collaboration between banks, fintech startups, and technology firms. Government-supported innovation hubs, fintech accelerators, and R&D tax incentives can foster experimentation and accelerate the commercialization of fintech solutions in Vietnam's banking sector.

(6) Fostering finance and economic conditions ($\beta = 0.086$) exhibits the most negligible effect; maintaining macroeconomic stability remains essential. Policies that ensure financial stability, facilitate access to venture capital, and support fintech entrepreneurship will indirectly sustain fintech growth. Maintaining macroeconomic stability remains essential for fintech growth in Vietnam. Policymakers should improve access to financing for fintech startups by supporting venture capital, public-private investment funds, and credit guarantee schemes. A stable financial environment will sustain investor confidence and long-term fintech development.

Overall, these findings highlight that fintech development requires a hierarchically coordinated policy approach, with primary emphasis on consumer readiness and digital infrastructure, complemented by supportive regulation and digital governance.

Limitations and Future Research: Despite its contributions, this study has several limitations. First, the data were collected from banking professionals in major Vietnamese cities, which may limit the generalizability of the findings to rural areas or

other emerging economies. Second, the cross-sectional design restricts the ability to capture dynamic changes in fintech development over time. Future research could employ longitudinal data to examine causal relationships and fintech evolution. Additionally, comparative studies across different emerging economies, or the inclusion of firm- and consumer-level data, could provide deeper insights into contextual and behavioral variations in fintech development.

ACKNOWLEDGEMENT

This research is partly funded by University of Finance – Marketing and Lac Hong University.

REFERENCES

- Akhtar, S., Azmi, S. N., Khan, P. A., Jan, A. A., & Ansari, Z. (2024). Unveiling the financial landscape: analyzing profitability, productivity, and efficiency of banks in an emerging economy using the CAMELS framework and panel analysis. *Cogent Business & Management*, *11*(1), 1–30. <https://doi.org/10.1080/23311975.2024.2399747>
- Al-Majali, M., Aldalaien, B., AL-Khazaleh, S., & Al-Smadi, R. (2025). Exploring the nexus of fintech development, systematic risk, and market discipline on financial stability: Evidence from Jordan. *Economics - Innovative and Economics Research Journal*, *13*(2), 351–365. <https://doi.org/10.2478/eoik-2025-0044>
- Bai, C. A., Sarkis, J., & Xue, W. (2024). Improving operational efficiency and effectiveness through blockchain technology. *Production Planning & Control*, *35*(9), 857–865. <https://doi.org/10.1080/09537287.2024.2329182>
- Bartolacci, F., Cardoni, A., Łasak, P., & Sadkowski, W. (2022). An analytical framework for strategic alliance formation between a cooperative bank and a fintech start-up: An Italian case study. *Journal of Entrepreneurship, Management and Innovation*, *18*(4), 115–156. <https://doi.org/10.7341/20221844>
- Dar, A. B., & Ahmed, F. (2021). Financial inclusion determinants and impediments in India: Insights from the global financial inclusion index. *Journal of Financial Economic Policy*, *13*(3), 391–408. <https://doi.org/10.1108/JFEP-11-2019-0227>
- Ding, Y., & Sun, Y. (2025). Does fintech development matter for export technological sophistication? Evidence from Chinese enterprises. *Emerging Markets Finance and Trade*, *61*(14), 4579–4597. <https://doi.org/10.1080/1540496X.2025.2520885>
- Elgadi, E., & Ghardallou, W. (2022). Gender diversity, board of director's size and Islamic banks performance. *International Journal of Islamic and Middle Eastern Finance and Management*, *15*(3), 664–680. <https://doi.org/10.1108/IMEFM-09-2019-0397>

- Elmahdy, A. H. A. M., Abdelkader, M. T. K. M., & Shaker, M. A. M. (2025). Bridging the nexus between Fintech, operational efficiency and banks profitability: the moderating role of bank size. *Future Business Journal*, 11(62), 1–14. <https://doi.org/10.1186/s43093-025-00478-x>
- Faizulayev, A., Wada, I., Kyzdarbekova, A. S., & Parmankulova, I. (2021). What drives the banking competition in Islamic finance oriented countries? Islamic vs conventional banks. *Journal of Islamic Accounting and Business Research*, 12(4), 457–472. <https://doi.org/10.1108/JIABR-06-2020-0173>
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2–24. <https://doi.org/10.1108/EBR-11-2018-0203>
- Hasan, F., Al-Okaily, M., Choudhury, T., & Kayani, U. N. (2024). A comparative analysis between Fintech and traditional stock markets: using Russia and Ukraine WAR data. *Electronic Commerce Research*, 24(1), 629–654. <https://doi.org/10.1007/s10660-023-09734-0>
- Hua, X., & Huang, Y. (2021). Understanding China's Fintech sector: Development, impacts and risks. *The European Journal of Finance*, 27(4), 321–333. <https://doi.org/10.1080/1351847X.2020.1811131>
- Ioannou, S., Wójcik, D., & Urban, M. (2024). FinTech and financial instability. Is this time different? *Journal of Post Keynesian Economics*, 47(3), 542–565. <https://doi.org/10.1080/01603477.2024.2315055>
- Juma, A. O., Kulindwa, Y., & Mataba, L. (2025). Bank efficiency in the digital age: The role of financial technology in Tanzanian banks. *Modern Finance*, 3(1), 1–24. <https://doi.org/10.61351/mf.v3i1.218>
- Kanapiyanova, K., Faizulayev, A., Ruzanov, R., Ejdy, J., Kulumbetova, D., & Elbadri, M. (2022). Does social and governmental responsibility matter for financial stability and bank profitability? Evidence from commercial and Islamic banks. *Journal of Islamic Accounting and Business Research*, 14(3), 451–472. <https://doi.org/10.1108/JIABR-01-2022-0004>
- Kayani, U., Dsouza, S., Husain, Z., Nawaz, F., & Hasan, F. (2025). Does the performance of financial technology (fintech) firms matter: evidence from North American and European fintech firms. *Cogent Economics & Finance*, 13(1), 1–21. <https://doi.org/10.1080/23322039.2025.2451050>
- Khan, H. H., Khan, S., & Ghafoor, A. (2023). Fintech adoption, the regulatory environment and bank stability: An empirical investigation from gcc economies. *Borsa Istanbul Review*, 23(6), 1263–1281. <https://doi.org/10.1016/j.bir.2023.10.010>
- Li, Y., Stasinakis, C., Yeo, W. M., & Fernandes, F. D. S. (2025). Fintech, financial development and banking efficiency: evidence from Chinese commercial banks. *The European Journal of Finance*, 31(10), 1245–1295. <https://doi.org/10.1080/1351847X.2025.2468481>
- Liberti, J. M., Sturgess, J., & Sutherland, A. (2022). How voluntary information sharing systems form: Evidence from a US commercial credit bureau. *Journal of Financial*

- Economics*, 145(3), 827–849. <https://doi.org/10.1016/j.jfineco.2021.08.023>
- Liu, X., Tang, Z., & Zhao, Y. (2022). Determinants of financial performance: An evidence from Internet finance sector. *Managerial and Decision Economics*, 43(5), 1256–1265. <https://doi.org/10.1002/mde.3451>
- Liu, Y., Saleem, S., Shabbir, R., Shabbir, M. S., Irshad, A., & Khan, S. (2021). The relationship between corporate social responsibility and financial Performance: A moderate role of Fintech technology. *Environmental Science and Pollution Research International*, 28(16), 20174–20187. <https://doi.org/10.1007/s11356-020-11822-9>
- Mashoene, M., Tweneboah, G., & Schaling, E. (2025). FinTech and financial inclusion in emerging and developing economies: a system GMM model. *Cogent Social Sciences*, 11(1), 1–22. <https://doi.org/10.1080/23311886.2025.2491701>
- Meskovic, A., Kozarevic, E., & Avdukic, A. (2024). The influence of national and individual Islamic governance on Islamic banks' social performance. *Journal of Islamic Accounting and Business Research*, 15(6), 911–941. <https://doi.org/10.1108/JIABR-03-2022-0077>
- Ovenc, G., & Nabiyeu, A. B. (2025). Discover how fintech is transforming bank performance: insights from an emerging economy. *Cogent Economics & Finance*, 13(1), 1–13. <https://doi.org/10.1080/23322039.2025.2477676>
- Parmankulova, I., Issakhova, P., Zhanabayeva, Z., Faizulayev, A., & Orazymbetova, K. (2022). The drivers of financial vulnerability and profitability: Evidence from conventional and Islamic banks in Islamic finance-oriented countries. *Journal of Islamic Accounting and Business Research*, 13(6), 902–919. <https://doi.org/10.1108/JIABR-06-2021-0155>
- Serkbayeva, Z., Zhumabayeva, M., Kassenova, G., Karimbayeva, G., Faizulayev, A., & Kulumbetova, D. (2024). Examining the impact of fintech and other factors on banking practices: QISMUT + 3 countries. *Cogent Business & Management*, 11(1), 1–24. <https://doi.org/10.1080/23311975.2024.2385069>
- Shaw, B., Roy, S. K., Kesharwani, A., Doorn, V. S., & Japutra, A. (2023). The adoption of mobile payment services by millennials: The roles of smartphone addiction and situational variables. *Asia Pacific Journal of Marketing and Logistics*, 35(12), 2912–2931. <https://doi.org/10.1108/APJML-01-2023-0005>
- Siagian, P. (2023). Determinants of banking operational efficiency and the relationship between the factors to market price: evidence from Indonesia. *Economics - Innovative and Economics Research Journal*, 11(2), 153–168. <https://doi.org/10.2478/eoik-2023-0051>
- Thottoli, M. M., Islam, M. A., Ahsan, A., Yusof, M. F., Hassan, M. S., & Chowdhury, R. S. (2024). Exploring mediating and moderating factors of FinTech adoption for innovations in SMEs. *Cogent Economics & Finance*, 12(1), 1–19. <https://doi.org/10.1080/23322039.2024.2387443>
- Tian, M., Khoury, R. E., Nasrallah, N., & Alshater, V. (2024). Assessing systemic risk spillovers from FinTech to China's financial system. *The European Journal of Finance*, 30(8), 803–826. <https://doi.org/10.1080/1351847X.2023.2244008>

Tiwari, P., & Suresha, B. (2021). Moderating role of project innovativeness on project flexibility, project risk, project performance, and business success in financial services. *Global Journal of Flexible Systems Management*, 22(3), 179–196. <https://doi.org/10.1007/s40171-021-00270-0>

Xu, J., Li, T., Chen, F., & Quan, Y. (2024). Does fintech foster the development of green finance? *Emerging Markets Finance and Trade*, 61(6), 1771–1781. <https://doi.org/10.1080/1540496X.2024.2430500>

Authors' Contribution

All authors contributed equally to the development of this article.

Data availability

All datasets relevant to this study's findings are fully available within the article.

How to cite this article (APA)

Pham, H. D., & Tam, P. T. (2025). MODERATING ROLE OF DIGITAL GOVERNMENT FOR FOSTERING FINTECH DEVELOPMENT: A CASE STUDY OF THE EMERGING ECONOMY IN VIETNAM. *Veredas Do Direito*, 22(7), e224045. <https://doi.org/10.18623/rvd.v22.n7.4045>