

Conceptual Model of Fintech Information System Services Adoption for Impact and Transformation Workers in Vocational Context

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ABSTRACT

This study develops and tests a conceptual model of fintech information systems services adoption for impact and transformation workers in vocational context in Indonesia. Through a mixed-method approach with 618 respondents, the study identified complex interactions between individual characteristics, organizational factors, and barriers to adoption, as well as their effects on system quality and adoption impacts. The results showed that individual characteristics were the strongest determinants ($\beta = 0.684$) of fintech adoption, followed by organizational factors ($\beta = 0.572$) and barriers to adoption ($\beta = -0.428$). System quality ($\beta = 0.745$) acts as the main mediator, influencing the level of use that impacts four dimensions: individual ($\beta = 0.682$), organizational ($\beta = 0.624$), process ($\beta = 0.594$), and technological ($\beta = 0.568$). This model offers a comprehensive framework for understanding and managing fintech adoption in a vocational environment, with significant implications for practitioners, organizations, and policymakers.

KEYWORDS

digital transformation, fintech, information system quality, technology adoption, vocational workers



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INTRODUCTION

The industrial revolution 4.0 has driven significant digital transformation across various sectors, especially the financial industry. Globally, the fintech industry has experienced exponential growth, with the total transaction value reaching USD 9.5 trillion in 2023, representing a 23.4% increase from the previous year (Statista, 2024). This growth is not only confined to developed economies but has also penetrated emerging markets at remarkable speed (Rachmad, 2025; Ze & Loang, 2025). According to the World Bank (2023), digital financial services have expanded financial inclusion to over 1.2 billion previously unbanked adults worldwide, demonstrating the transformative potential of fintech in reshaping the global financial landscape (Del Sarto & Ozili, 2025; Udohaya, 2025).

In Indonesia, the growth of the fintech sector shows an exponential trend, with total transactions reaching IDR 1,900 trillion in 2023, an increase of 41.2% from the previous year (OJK, 2023). Indonesia ranks third in ASEAN in terms of fintech adoption, with a penetration rate of 67% among the adult population, trailing only Singapore (82%) and Malaysia (71%) (ASEAN FinTech Report, 2023). The Digital Readiness Index compiled by Cisco (2023) positions Indonesia at 56.3 out of 100, indicating moderate digital preparedness with significant

room for improvement, particularly in the vocational and SME sectors where digital literacy remains a critical challenge (Ibrahim & Aduah, 2025; Kumar & Sharma, 2025).

The Indonesian government has recognized fintech as a strategic priority for economic development, evidenced by the issuance of various regulatory frameworks, including OJK Regulation No. 77/2016 on Information Technology-Based Lending and Borrowing Services, and Bank Indonesia Regulation No. 19/12/PBI/2017 on Implementation of Financial Technology (OJK, 2023). These regulatory initiatives aim to balance innovation promotion with consumer protection and financial system stability (Bank Indonesia, 2023). Furthermore, the National Digital Literacy Movement launched by the Ministry of Communication and Informatics in 2021 has set ambitious targets to achieve 80% digital literacy among the workforce by 2024, recognizing human capital development as crucial for successful digital transformation (Ministry of Communication and Informatics, 2023).

Digital transformation in education and vocational work presents unique complexities. Bank Indonesia (2023) reports that 65% of Indonesia's 135 million workers come from vocational education backgrounds, with 47% facing challenges in adapting to digital technology (Lu, 2025; Singh & Swarup, 2025). The digital competency gap is a particular concern; the Ministry of Manpower (2023) noted that only 35% of workers possess digital skills aligned with industry needs. This gap manifests in multiple dimensions. Research by the Indonesian Vocational Education Association (2023) reveals that vocational graduates face significant challenges adapting to digital workplace environments, with 58% reporting difficulty using digital financial tools, 62% lacking confidence in cybersecurity practices, and 71% requiring additional training to meet industry digital standards. These challenges are especially acute in traditional sectors such as manufacturing, agriculture, and retail, where digital transformation has been slower compared to service-oriented industries (OECD, 2023).

Indonesia's vocational education system, serving approximately 5.2 million students annually across 14,000 institutions (Ministry of Education, Culture, Research and Technology, 2023), has historically focused on developing technical and practical skills specific to trades or professions. However, rapid digitalization has created a mismatch between competencies developed through vocational education and the skills demanded by modern workplaces. A survey by the Indonesian Employers Association (2023) found that 73% of employers consider digital literacy and technological adaptability critical competencies, yet only 31% of vocational graduates are assessed as adequately prepared in these areas upon entering the workforce.

Moreover, challenges extend beyond initial education to continuous professional development needs of incumbent workers. Approximately 43 million vocational workers in Indonesia are over 35 years of age and completed their vocational education before the digital transformation era (Central Bureau of Statistics, 2023). This cohort faces particular difficulties in adapting to fintech and other digital innovations, with studies indicating that 64% lack basic digital financial literacy and 78% have never used digital financial services beyond basic mobile banking (Financial Services Authority, 2023). The generational digital divide compounds the educational gap, creating a complex challenge for workforce development and organizational technology adoption (Fu, Liu, Sindakis, & Biginas, 2025).

The difficulty vocational workers face in accepting fintech stems from multiple interconnected factors. First, the cognitive load associated with learning new digital systems

conflicts with established work routines and practices. Research by Sharma et al. (2024) demonstrates that workers in vocational contexts often operate within highly routinized frameworks where procedural knowledge dominates, making integration of new technological paradigms cognitively demanding. Second, trust barriers pose significant challenges, particularly regarding data security, financial safety, and transaction reliability. A study by Zhao et al. (2024) in developing Asian markets found that 67% of potential fintech users express concerns about data privacy and fraud risks, with these concerns especially pronounced among vocational workers with limited digital experience.

Third, infrastructural constraints in many vocational work environments hinder fintech adoption. Research by Nalluri and Chen (2024) identifies inadequate internet connectivity, limited access to smart devices, and insufficient technical support as major barriers in emerging economies. In the Indonesian context, these infrastructure challenges are particularly acute in rural and semi-urban areas, where approximately 42% of vocational workers are employed (Ministry of Manpower, 2023). Fourth, organizational factors—including management support, training provision, and change management practices—significantly influence worker adoption behaviors, yet many SMEs and traditional industries lack structured approaches to digital transformation (Yáñez-Valdés & Guerrero, 2023).

Previous studies on fintech technology adoption have shown fragmentation in research approaches. The Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT) have not fully accommodated the unique characteristics of workers and the complexity of technology adoption in the vocational context. Recent systematic reviews of fintech adoption research reveal several critical gaps. Liu et al. (2024) conducted a comprehensive bibliometric analysis of 1,847 fintech studies and identified that research has predominantly focused on consumer adoption in retail banking, with only 7.3% examining organizational or workplace adoption. Furthermore, Li and Xu (2021) note that existing models derive largely from general information systems research and do not account for specific learning processes, competency frameworks, and organizational structures characteristic of vocational environments.

Rizvi et al. (2024) argue that current theoretical frameworks inadequately address synergistic relationships between individual digital competencies, organizational readiness, and system characteristics in driving fintech adoption outcomes. Their meta-analysis of 156 studies reveals most research examines these factors in isolation rather than as integrated components of a comprehensive adoption ecosystem (Cavalcanti, Oliveira, & de Oliveira Santini, 2022; Small, Paavola, & Owen, 2025). Similarly, Abis et al. (2025) demonstrate through systematic review that the role of system quality as a mediating mechanism between adoption determinants and outcomes remains undertheorized, particularly in organizational and vocational settings.

In the specific context of vocational education and workforce development, the research gap is even more pronounced. Molnar et al. (2020) reviewed fintech curriculum initiatives across European and Asian universities and found pedagogical frameworks for developing fintech competencies in vocational contexts remain underdeveloped, with most programs focusing on technical skills rather than holistic digital transformation capabilities. Verma et al. (2023) further note that research on fintech adoption in SMEs—where the majority of

vocational workers are employed—is scarce, with existing studies providing limited insights into specific challenges and enablers relevant to this segment.

This research identifies critical theoretical gaps in understanding fintech adoption among vocational workers, particularly concerning the integration of vocational competency with digital literacy, mediation mechanisms between organizational support and individual outcomes, development of a context-specific model for Indonesia, and unique adoption barriers within vocational environments. The urgency of addressing these gaps is amplified by converging trends: the COVID-19 pandemic's acceleration of digital necessity, new Indonesian fintech regulations requiring compliance, competitive pressures from ASEAN economic integration, and the imperative of financial inclusion, which cannot be achieved without overcoming adoption challenges faced by this significant workforce segment.

The novelty of this study lies in its distinctive contributions, including an integrated theoretical framework tailored to vocational contexts and the introduction of a previously unexamined dual mediation mechanism. It further develops and validates specialized measurement instruments, employs a robust mixed-methods approach for greater validity, and assesses multidimensional impacts beyond mere usage. This study aims to develop a comprehensive fintech information system adoption model for Indonesian workers, focusing on: (1) analyzing the development of fintech information system adoption research in a vocational context; (2) understanding how the fintech adoption process transforms worker capabilities and behaviors through the interaction of individual and organizational factors; and (3) developing a fintech adoption model that integrates system performance, usage, organizational impact, and user resistance.

The significance of this research is extensive and multifaceted. For academia, it provides a novel integrated framework, validated instruments, and new theoretical pathways. For vocational institutions and policymakers, it delivers evidence-based insights for curriculum development and digital transformation policies. For employers and SMEs, it offers practical frameworks for managing fintech implementation, while for fintech providers, it illuminates specific needs of vocational users to guide product design. Ultimately, for vocational workers themselves, this research aims to facilitate economic empowerment and successful integration into the digital economy by enhancing digital capabilities and access to financial services.

RESEARCH METHOD

The research adopts a mixed-method approach with a sequential explanatory design based on the philosophy of pragmatism. The research took place through three phases: conceptual development (systematic literature review following the PRISMA guidelines, covering 127 studies from 2018-2024); quantitative investigation (cross-sectional survey of 618 respondents); and qualitative elaboration (12 focus group discussions with 86 participants).

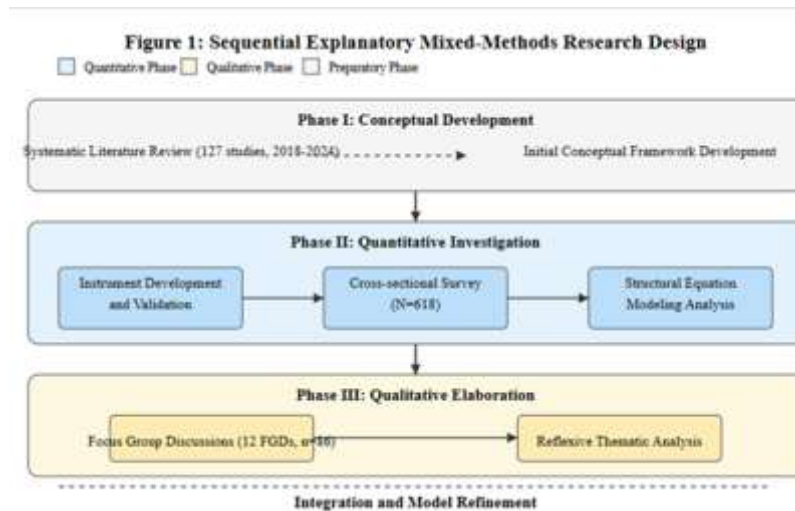


Figure 1. Research Design Framework

The theoretical framework of the research integrates three perspectives: the theory of technology adoption, the vocational learning framework, and the paradigm of information system success. The conceptual model synthesizes the Technology Acceptance Model, the Unified Theory of Acceptance and Use of Technology, the theory of innovation resistance, and the Information System Success Model, which are contextualized through the characteristics of vocational learning.

The model identifies three groups of variables: (1) exogenous variables (individual characteristics, organizational factors, barriers to adoption); (2) mediation variables (system quality, usage & impact); and (3) endogenous variables (individual, organizational, process, and technological impacts).

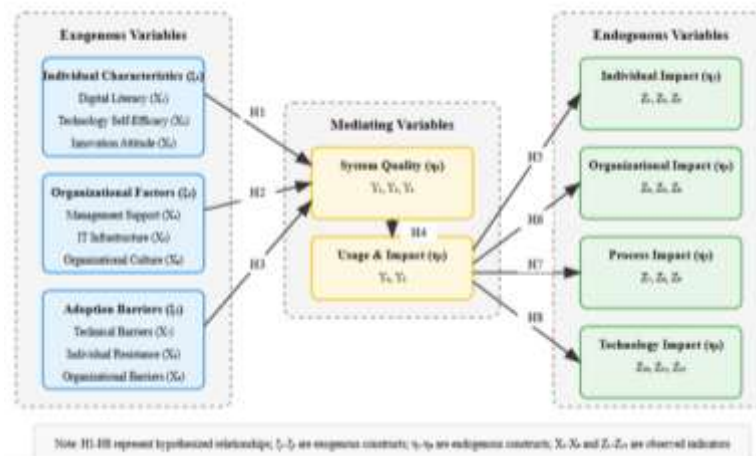


Figure 2. Conceptual Framework of Fintech Adoption in Vocational Context

Eight hypotheses were developed: individual characteristics (H1), organizational factors (H2) have a positive effect on the quality of the system; barriers to adoption have a negative effect on system quality (H3); system quality has a positive effect on usage and impact (H4); use and impact have a positive effect on individual (H5), organizational (H6), process (H7), and technological (H8) impacts.



Figure 3. Research Hypotheses and Expected Relationships

The target population is Indonesian workers who use fintech information systems. Stratified random sampling in three stages was applied: (1) geographical stratification (Jakarta, Surabaya, Bandung, Medan, Makassar); (2) stratification of the industrial sector; (3) stratification of organizational positions. A priori power analysis showed a minimum need of 482 participants. Of the 650 target respondents, 618 valid respondents (95.1%) were obtained.

The instruments were developed through a multi-stage process: initial item creation (78 items), cross-cultural adaptation, content validation (panel of 8 experts), cognitive interviews (12 workers), initial testing (50 participants), and confirmatory validation. The final instrument (39 items) showed good psychometric properties, with convergent validity (factor loading > 0.70 ; AVE 0.62-0.84), discriminant validity, internal consistency (Cronbach's alpha 0.82-0.94), and measurement invariance.

Data collection takes place January-March 2025 with a three-phase protocol: pre-collection (information sheets, informed consent), main phase (online survey with validation mechanism), and post-collection (quality verification). Qualitative data were obtained through 12 FGDs (86 participants), analyzed using a reflective thematic analysis approach.

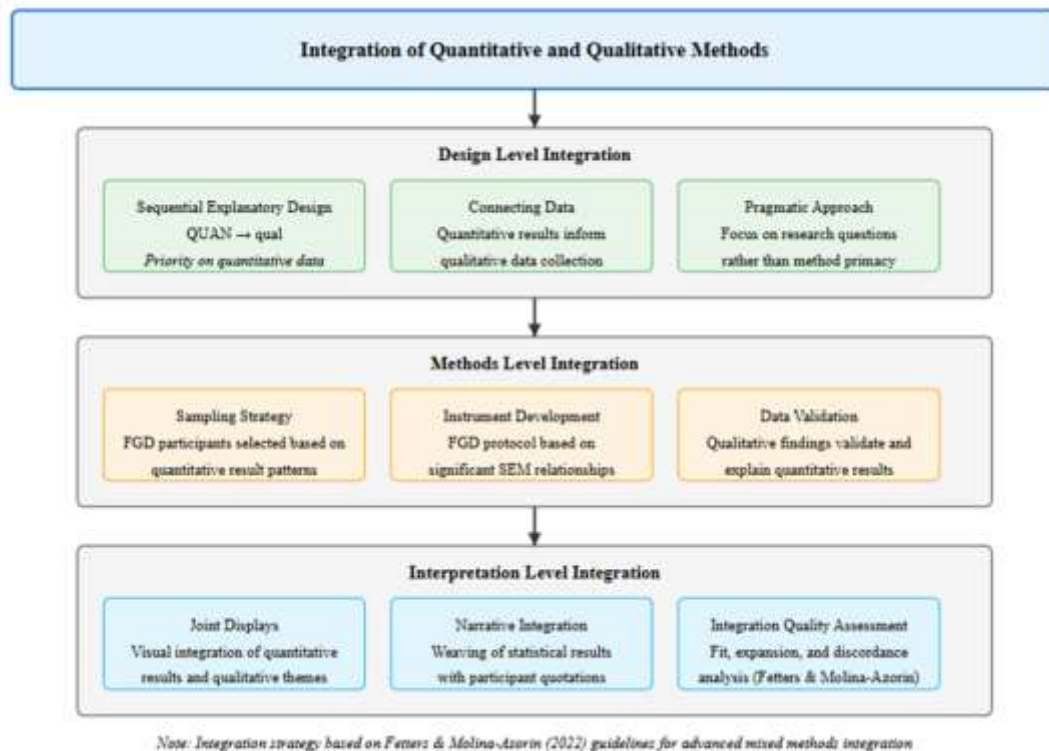


Figure 4. Data Collection Procedure

Quantitative analysis includes descriptive statistics, assumption testing, measurement model validation (CFA), structural model analysis (SEM with AMOS 26.0), mediation analysis (bootstrapping, 5,000 samples), and multi-group analysis. Qualitative analysis uses reflective thematic analysis, with the integration of quantitative and qualitative findings at the design, method, and interpretation levels.

RESULT AND DISCUSSION

Respondent Characteristics

Of the 618 respondents, 57.9% were male and 42.1% were female; 39.6% are under 30 years old, 36.2% are 31-40 years old; 53.79% are undergraduate graduates, 18.66% are postgraduates; 39.6% have 1-5 years of work experience; 50.5% occupy staff positions; 32.0% work in the financial services sector.

Table 1. Respondent Characteristics

Characteristics	Category	Frequency	Percentage
Gender	Male	358	57.9%
	Female	260	42.1%
Age	<30 years	245	39.6%
	31-40 years	224	36.2%
	>40 years*	149	24.2%
Education	Undergraduate	332	53.79%
	Postgraduate	115	18.66%
	Others*	171	27.55%
Work Experience	1-5 years	245	39.6%

	<1 year*	-	-
	>5 years*	373	60.4%
Position	Staff	312	50.5%
	Management*	306	49.5%
Industry Sector	Financial Services	198	32.0%
	Non-Financial*	420	68.0%

Structural Model Analysis Results

The results showed good model compatibility: Chi-square/df=2.842, GFI=0.924, AGFI=0.912, RMSEA=0.054, CFI=0.962. Individual characteristics had the strongest influence ($\beta=0.684$), followed by organizational factors ($\beta=0.572$) and barriers to adoption ($\beta=-0.428$). The quality of the system plays a strong role as a mediator ($\beta=0.745$). The largest impact occurred at the individual level ($\beta=0.682$), followed by organizational impact ($\beta=0.624$), process ($\beta=0.594$), and technology ($\beta=0.568$).

Table 2. Structural Model Analysis Results

Fit Index	Value	Interpretation
Chi-square/df	2.842	Good fit
GFI	0.924	Good fit
AGFI	0.912	Good fit
RMSEA	0.054	Good fit
CFI	0.962	Good fit

Mediation Analysis

System quality and usage & impact act as effective dual mediators. VAF analysis showed that most of the influence of exogenous variables on adoption impact was mediated by system quality and usage & impact (VAF 58.5%-77.9%).

Table 3. Mediation Analysis Result

Relationship	Direct Effect	Indirect Effect	95% CI	Total Effect	VAF	Mediation Type
IC → SQ → UI → II	0.135*	0.348***	[0.296, 0.412]	0.483***	72.0%	Partial
IC → SQ → UI → OI	0.112*	0.318***	[0.267, 0.386]	0.430***	73.9%	Partial
IC → SQ → UI → PI	0.094	0.303***	[0.246, 0.374]	0.397***	76.3%	Full
IC → SQ → UI → TI	0.082	0.289***	[0.234, 0.358]	0.371***	77.9%	Full
OF → SQ → UI → II	0.108*	0.291***	[0.243, 0.354]	0.399***	72.9%	Partial
OF → SQ → UI → OI	0.156**	0.266***	[0.218, 0.328]	0.422***	63.0%	Partial
AB → SQ → UI → II	-0.087	-0.217***	[-0.278, -0.174]	-0.304***	71.4%	Full
AB → SQ → UI → OI	-0.102*	-0.199***	[-0.256, -0.158]	-0.301***	66.1%	Partial

AB → SQ → UI → PI	-0.134*	-0.189***	[-0.245, -0.149]	-0.323***	58.5%	Partial
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Note : IC = Individual Characteristics, OF = Organizational Factors, AB = Adoption Barriers, SQ = System Quality, UI = Usage & Impact, II = Individual Impact, OI = Organizational Impact, PI = Process Impact, TI = Technology Impact, *p<0.05; **p<0.01; ***p<0.001

Multi-Group Analysis

The influence of individual characteristics was stronger in the younger age group (≤ 30 years), while the influence of organizational factors was stronger in the older age group. The effect of barriers to adoption was stronger on female respondents. The influence of usage & impact on individual and organizational impacts is stronger on the financial sector.

Model validation included predictive relevance assessment using Q^2 Stone-Geisser through a blindfolding procedure (all values >0.35), cross-validation via k-fold technique ($k=10$) to assess generalizability, and bootstrap analysis (5,000 resamples) to establish parameter stability. The results of the multi-group analysis are presented in Table 4.

Tabel 4. Significant Multi-Group Analysis Results

Path	Grouping Variable	Group 1	Group 2	Path Difference	p-value
IC → SQ	Age	≤ 30 years (0.752)	> 30 years (0.615)	0.137	0.012*
OF → SQ	Age	≤ 30 years (0.512)	> 30 years (0.634)	-0.122	0.027*
AB → SQ	Gender	Male (-0.386)	Female (-0.473)	0.087	0.048*
UI → II	Industry	Financial (0.736)	Non-financial (0.645)	0.091	0.038*
UI → OI	Industry	Financial (0.687)	Non-financial (0.594)	0.093	0.036*
SQ → UI	Experience	≤ 5 years (0.714)	> 5 years (0.782)	-0.068	0.042*
UI → PI	Position	Staff (0.568)	Management (0.642)	-0.074	0.039*

Note: IC = Individual Characteristics; OF = Organizational Factors; AB = Adoption Barriers; SQ = System Quality; UI = Usage & Impact; II = Individual Impact; OI = Organizational Impact; PI = Process Impact. *p<0.05

Interpretation of Research Results

The results of the study reveal the complex dynamics in the adoption of fintech information systems among Indonesian vocational workers. The developed model successfully identifies and validates the interactions between the three groups of variables that make up the technology adoption process.

Individual characteristics emerged as the strongest determinant factors influencing system quality ($\gamma_{11} = 0.684$). This indicates that the foundation of digital competence is an important prerequisite for fintech adoption. Digital literacy ($\beta = 0.845$), technological self-efficacy ($\beta = 0.828$), and attitude towards technology ($\beta = 0.792$) contributed significantly to

shaping individual readiness to adopt new technologies. These findings confirm that the development of workers' digital capabilities is a critical component in technology adoption strategies.

Organizational factors ($\gamma_{12} = 0.572$) demonstrated a substantial influence, with management support ($\beta = 0.834$), IT infrastructure ($\beta = 0.812$), and organizational culture ($\beta = 0.785$) as key components. These findings show that the success of fintech adoption cannot be separated from the organizational context. The creation of a supportive ecosystem, from the provision of infrastructure to the formation of a culture of innovation, is an important prerequisite for effective digital transformation.

Barriers to adoption ($\gamma_{13} = -0.428$) exhibit significant negative influences, with technical barriers ($\beta = -0.712$), individual resistance ($\beta = -0.685$), and organizational barriers ($\beta = -0.645$) as the main components. These findings underscore the complexity of managing resistance to change and the importance of a comprehensive change management strategy.

The strong mediating role of system quality ($\beta_{21} = 0.745$) suggests that successful adoption depends not only on technological sophistication, but also on how the system is implemented and integrated in the context of vocational work. These findings highlight the importance of ensuring the system not only meets technical standards, but is also aligned with the needs and characteristics of vocational work.

The cascading impact patterns revealed in the model indicate a comprehensive transformation, starting from the individual level ($\beta_{31} = 0.682$) which suggests that fintech adoption is transforming worker capabilities and effectiveness. Substantial organizational impact ($\beta_{32} = 0.624$) indicates the potential of fintech to catalyze overall organizational transformation. Impacts on processes ($\beta_{33} = 0.594$) and technology ($\beta_{34} = 0.568$) showed significant ripple effects in the organizational ecosystem.

Comparison with Previous Research

Compared to the Technology Acceptance Model (TAM) proposed by Davis (1989), this study shows that in the context of vocational workers, the factors of digital competence ($\beta = 0.845$) and technological efficacy ($\beta = 0.828$) have a more significant role than perceived usefulness and perceived ease of use which are the focus of traditional TAM.

In comparison with UTAUT (Venkatesh et al., 2003), this study found that system quality factors (η_1) and organizational impact (η_4) play a more significant role than performance expectancy which is the main focus of UTAUT. These findings corroborate the research of Wong et al. (2023) on the importance of organizational factors in technology adoption, but with a deeper understanding of mediation mechanisms.

This research also expands on the concept of adoption resistance put forward by Ram and Sheth (1989), by revealing a new dimension in the context of vocational. Technical, individual, and organizational barriers have different influences in the context of Indonesian vocational workers. These findings corroborate the research of Zhang and Kim (2023) on resistance patterns in Southeast Asia, but with a more specific perspective on the vocational context in Indonesia.

Compared to the DeLone & McLean (2016) model, this study shows that in vocational contexts, system impacts need to be seen in a broader spectrum, including impacts at the

individual, organizational, process, and technological levels. These findings are in line with the research of Petter et al. (2023), but add a vocational dimension that had not previously been considered.

Theoretical Contributions

This research makes a substantial theoretical contribution to the development of understanding of technology adoption in vocational contexts. First, the developed model integrates vocational perspectives into technology adoption theory, expanding existing understanding by identifying complex interactions between individual characteristics, organizational factors, and barriers to adoption in vocational contexts.

Second, the research reveals adoption mechanisms that are specific to vocational contexts, including unique adoption pathways for workers, the role of system quality mediation, and patterns of interaction between vocational competence and technology adoption. Third, the model introduces a more comprehensive dimension of evaluation for vocational contexts, including more structured individual impact evaluations, more holistic organizational impact measurements, and more integrative process and technology assessment frameworks.

Fourth, the research expands the theoretical understanding of resistance in technology adoption, identifies patterns of resistance specific to vocational contexts and develops a resistance management framework that is integrated with the learning process. Fifth, the identified dual mediation model reveals a more complex role of mediation through the quality of the system as a primary mediator and its use and impact as a secondary mediator.

Practical Implications

The results of the study produce profound practical implications for the implementation of fintech information systems in the vocational environment. The research findings provide concrete guidance for organizations in managing the technology adoption process, from the planning stage to impact evaluation. The resulting implementation framework allows for a more structured and effective approach to adopting fintech technology.

The results of the study emphasized the importance of sustainable capability development in technology adoption. Organizations need to build a comprehensive competency development program, focusing on the technical aspects and pedagogical dimensions of vocational learning. Research also shows that successful adoption is highly dependent on an organization's ability to manage resistance and facilitate the transition of new technologies.

Multidimensional impact models provide a comprehensive evaluation framework for organizations to measure and optimize the value of technology investments. The framework allows for the identification of areas in need of continuous improvement and development, ensuring the long-term benefits of the adoption of fintech technologies.

Policy Implications

The results of the study have profound implications for the development of vocational education policies and digital transformation. The findings of the research encourage the need for a reformulation of vocational education policies that are more responsive to the demands

of the digital era. The vocational curriculum needs to be redesigned to systematically integrate digital competencies, not only as an additional component but as a fundamental element in vocational learning.

In the context of fintech regulation, the research highlights the importance of developing regulatory frameworks that are adaptive and support innovation. Regulators need to consider the unique characteristics of the vocational sector in developing fintech policies, including aspects of user protection, data security standards, and implementation frameworks that are appropriate to the context of vocational learning.

The findings on the importance of developing digital competencies encourage the need for comprehensive policies in the development of digital capabilities of the vocational workforce. This includes the development of digital competency standards, relevant certification frameworks, and ongoing professional development programs that align with industry needs.

Limitations and Future Research Directions

Although this research makes a significant contribution, there are some limitations that need to be considered. This study focused on five major cities in Indonesia, so generalizations to other geographical contexts, especially rural areas, require additional validation. The cross-sectional design used has limitations in capturing the evolution of technology adoption over time. The research also focuses on current fintech technologies, while the technology landscape continues to evolve rapidly.

Based on these limitations, several directions for future research can be identified. First, longitudinal studies are needed to understand the evolution of long-term technology adoption, changes in adoption patterns over time, and the accumulated impact of digital transformation. Second, the exploration of cultural and geographical contexts through comparative studies between regions and countries can provide a richer understanding of the influence of contextual factors on technology adoption in vocational settings.

Third, research on the integration of emerging technologies such as AI, blockchain, and IoT in vocational fintech adoption is needed to anticipate future technology trends. Fourth, a study on the sustainability of adoption is needed to identify the factors that affect the long-term success of fintech implementation in vocational contexts. Fifth, research on the regulatory and compliance dimensions is needed to understand how the changing regulatory landscape affects the implementation of fintech technology in vocational contexts.

CONCLUSION

This research developed and validated a comprehensive integrative model explaining fintech information system adoption among vocational workers in Indonesia, highlighting that individual characteristics, organizational factors, and adoption barriers interact—with individual traits being the most influential. The model identifies a dual mediation mechanism through system quality and utilization, which drives transformation across individual, organizational, process, and technological impact dimensions, illustrating how fintech adoption begins at the personal level and extends to broader organizational change. This work advances theoretical knowledge in vocational technology adoption, offers practical frameworks for

implementation, and informs vocational education policy and digital transformation strategies tailored to Indonesia's unique context. Future research could explore longitudinal impacts of fintech adoption over time and investigate tailored interventions to bridge digital competency gaps among different vocational sectors, further enhancing inclusion and sustainability in digital workforce transformation.

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