RESEARCH ARTICLE

A TAM-based Human-Machine Synergy Model for Automation and Industry 4.0 Adoption

Daniel Dasig Jr[1,6], **Chester Bryan Torres**[2,6,*], **Fernando Talion**[3], **Carolina Ditan**[4] and **Antonius Siahan**[5]

[1] Research and Development Office, Philippine Women's University, Manila 1008, Philippines
[2] School of Engineering, Computing, and Architecture, National University – Dasmariñas, Cavite 4114, Philippines
[3] Conrado Benitez Institute for Business Education, Philippine Women's University, Manila 1008, Philippines
[4] Graduate School, De La Salle Araneta University, Malabon 1475, Philippines
[5] Faculty of Business, Sampoerna University, Jakarta 12780, Indonesia
[6] College of Professional and Graduate Studies, De La Salle University–Dasmariñas, Cavite, Philippines

Abstract

The acceleration of Industry 4.0 has compelled enterprises to integrate automation, cyber-physical systems, and analytics into everyday operations. Despite rapid digitalization, the effectiveness of these initiatives depends largely on the human capacity to accept and collaborate with machines. This study applies the Technology Acceptance Model (TAM) to examine behavioral and organizational factors influencing automation adoption among 900 professionals across manufacturing, logistics, and service sectors. Using descriptive-correlational design and partial least squares structural equation modeling (PLS-SEM), the study investigates how perceived usefulness (PU) and perceived ease of use (PEOU) shape attitude (ATT) and behavioral intention (BI). Findings reveal that PU strongly predicts ATT and BI, while PEOU enhances PU and positive attitude toward technology. The proposed Human–Machine Synergy Framework situates these constructs within a socio-technical context, showing that automation readiness in enterprises arises when human competence and institutional scaffolding evolve together. The study enriches local Industry 4.0 scholarship and provides actionable guidance for managers, policymakers, and educators promoting inclusive digital transformation.

Keywords: technology acceptance model, automation adoption, industry 4.0, human–machine synergy.

1 Introduction

The Fourth Industrial Revolution—often called Industry 4.0—has redefined how enterprises create, deliver, and sustain value in a digitally networked world. Its foundations rest on automation, artificial intelligence (AI), the Internet of Things (IoT), cyber-physical systems, big-data analytics, and cloud computing [1, 2]. In the Philippines, automation

Submitted: 11 January 2026
Accepted: 10 February 2026
Published: 08 April 2026

Vol. 1, **No.** 2, 2026.
10.62762/JRIT.2026.810897

***Corresponding author:**
Chester Bryan Torres
chesterbryan0212@gmail.com

Citation
Dasig Jr, D., Torres, C. B., Talion, F., Ditan, C., & Siahan, A. (2026). A TAM-based Human-Machine Synergy Model for Automation and Industry 4.0 Adoption. *PWU Journal of Research, Innovation, and Transformation*, 1(2), 65–72.

© 2026 by the Authors. Published by Institute of Central Computation and Knowledge. This is an open access article under the CC BY license (https://creativecommons.org/licenses/by/4.0/).

and digitalization are central pillars of the Inclusive Innovation Industrial Strategy, encouraging firms to integrate robotics, predictive analytics, and smart-manufacturing tools to enhance productivity and resilience [3, 4]. Yet, despite these national aspirations, organizational outcomes remain uneven. Many local enterprises continue to struggle not with the technology itself, but with human acceptance and readiness to interact productively with machines.

The success of automation initiatives depends on people's willingness to adopt and effectively use emerging technologies. This human dimension—commonly labeled human–machine synergy—emphasizes complementarity rather than substitution [5]. When workers trust automated systems and perceive them as enhancing their competence, synergy flourishes; when they view them as complex or threatening, adoption falters [6, 7]. Thus, understanding the psychological, behavioral, and contextual factors that shape acceptance has become an essential priority for both researchers and practitioners.

To examine these behavioral mechanisms, this study employs the Technology Acceptance Model (TAM) developed by Davis (1989). It posits that two cognitive beliefs—perceived usefulness (PU) and perceived ease of use (PEOU)—determine an individual's attitude toward using technology, which subsequently shapes behavioral intention (BI) and actual usage [8]. Over the past three decades, TAM has evolved through numerous extensions (TAM2, TAM3, and UTAUT) but remains one of the most parsimonious frameworks for explaining user adoption across contexts [9, 10]. In automation research, TAM captures how employees interpret the value and simplicity of digital systems, bridging technical design with human cognition. In the context of Industry 4.0, where interaction with machines is continuous and dynamic, TAM provides a useful baseline to test how perceptions influence willingness to engage with automation tools [11, 12].

Given that enterprises increasingly deploy robots, sensors, and AI-driven platforms, it is crucial to identify what drives or hinders employee acceptance. Addressing this knowledge gap will not only enhance implementation success but also inform the broader discourse on inclusive digital transformation, ensuring that human capital evolves alongside machine intelligence.

This study aims to determine the relationship between perceived usefulness and employees' attitudes toward automation, to examine the influence of perceived ease of use on both perceived usefulness and attitude, to assess the effect of attitude on behavioral intention to adopt automation, and to propose a Human–Machine Synergy Framework grounded in TAM for enhancing Industry 4.0 readiness among Philippine enterprises.

At the 0.05 level of significance, this study hypothesizes that:

H_1: Perceived usefulness (PUSE) positively influences employees' attitudes toward automation (ATT).

H_2: Perceived ease of use positively influences perceived usefulness and attitudes.

H_3: Attitude positively affects behavioral intention.

2 Related Work

2.1 Industry 4.0 and the Transformation of Business Enterprises

The Fourth Industrial Revolution, coined Industry 4.0, integrates cyber-physical systems, IoT, robotics, and analytics to create smart and adaptive production environments [13]. For enterprises, this transition represents not only a technological leap but also a strategic transformation encompassing processes, talent, and governance [14]. Accordingly, firms that embed data connectivity and autonomous decision-making achieve up to 30 percent gains in operational efficiency [15].

Moreover, the automation adoption has accelerated through public-private programs- initiatives target advanced manufacturing and logistics modernization while nurturing digital skills [16]. However, readiness assessment revealed that only 42 percent of surveyed firms possess the infrastructure and workforce capability to operate smart-factory solutions [17]. Consequently, Industry 4.0 remains a partial transformation where human capital must evolve concurrently with machine intelligence [18].

2.2 Automation and Business Technology Adoption

Automation is widely perceived as a productivity catalyst and innovation driver. Studies across Asia report that robotic process automation and AI-based decision engines reduce repetitive workload and improve customer responsiveness [19]. Logistics companies have automated warehousing and fleet management, while service industries employ chatbots and analytics for customer support [20]. Despite these advantages, barriers persist. Cost constraints, digital-skill gaps, and

resistance to change are the primary inhibitors, thus employees fear technological redundancy or perceive automation as threatening job security [21]. This underscores that technological diffusion is not purely infrastructural but socio-technical. Successful adoption therefore requires inclusive strategies emphasizing retraining, participatory design, and transparent communication [22].

The paradigm of human–machine synergy reframes automation from a replacement narrative toward collaboration and augmentation [23]. Synergy emerges when algorithmic systems complement human judgment, creating trust loops that enhance performance. Adaptive human-robot collaboration improves both safety and job satisfaction when users perceive autonomy and control.

2.3 Determinants of Technology Acceptance in Automation

In automation, Perceived Usefulness (PU) captures whether systems are viewed as tools that augment competence or bureaucratic impositions [24]. Studies in Southeast Asia demonstrate that PU remains the strongest determinant of behavioral intention toward AI-driven tools [25]. Secondly, Perceived Ease of Use (PEOU) denotes the perceived effort required to learn and operate a system. High PEOU correlates with lower resistance and improved satisfaction [26]. In countries where SMEs digital literacy varies, intuitive interface design and localized training significantly enhance ease perceptions [27]. Further, the Attitude and Behavioral Intention, thereby attitude mediates cognitive evaluations and behavioral outcomes. Positive attitudes emerge when technology aligns with values of efficiency and empowerment [28]. Behavioral intention then serves as a reliable proxy for actual usage [29]. Collectively, these constructs form the psychological core of human–machine synergy.

3 Methodology

The methodological framework ensures a rigorous, ethical, and replicable process for testing TAM relationships within Philippine Industry 4.0 enterprises. Findings will provide quantitative evidence for the Human–Machine Synergy Framework, advancing both theory and practice in automation acceptance research.

3.1 Research Design

This investigation employed a quantitative, descriptive-correlational design guided by the Technology Acceptance Model (TAM). Quantitative analysis enabled measurement of relationships among perceived usefulness (PU), perceived ease of use (PEOU), attitude (ATT), and behavioral intention (BI). Structural Equation Modeling (SEM) using SmartPLS 4 was adopted to validate both measurement and structural relationships simultaneously. SEM is appropriate for behavioral models with latent constructs and mediating effects, ensuring reliable assessment of complex pathways.

3.2 Research Locale and Context

The study covered the Philippines' principal industrial corridors hosting high concentrations of manufacturing, logistics, and service enterprises adopting automation and digital technologies. These regions exemplify the nation's Industry 4.0 transition where technological advancement coexists with varying levels of workforce readiness.

3.3 Population and Sampling

The population consisted of employees directly using automation tools—robots, IoT-enabled devices, analytics dashboards, or process-automation software—for at least six months. A total of 900 respondents were surveyed using stratified random sampling across three sectors: manufacturing (40 %), logistics (30 %), and service (30 %). The sample size exceeded the minimum requirement for SEM analysis with medium effect size and 95 % confidence, ensuring adequate statistical power and representation.

3.4 Research Instrument

The instrument was adapted from validated TAM scales and contextualized for automation [30]. A pilot test with 30 respondents refined item clarity; content validity was confirmed by three subject-matter experts. Reliability and construct validity were evaluated using Cronbach's α, composite reliability, and average variance extracted after final data analysis was completed and found acceptable.

3.5 Data Processing and Analysis

Data screening and descriptive statistics were conducted in IBM SPSS Statistics 27 to verify completeness and normality. SEM using SmartPLS 4 was used to estimate measurement loadings, reliability, and path coefficients. Bootstrapping (5000 resamples) to test significance levels ($p < 0.05$) was considered.

Table 1. Descriptive Analysis Summary (n = 900).

Construct	Mean	Std. Dev	Interpretation
Perceived Usefulness (PU)	4.73	0.56	Very High – employees perceive automation as highly beneficial
Perceived Ease of Use (PEOU)	4.5	0.71	High – systems are generally viewed as easy to use
Attitude toward Automation (ATT)	4.55	0.66	High – employees hold positive attitudes toward automation
Behavioral Intention (BI)	4.49	0.79	High – employees are willing to adopt automation

Table 2. Correlation Results (Pearson's r).

Relationship	Coefficient (r)	Interpretation
PEOU → PU	0.37	Moderate positive relationship – easier systems are perceived as more useful
PU → ATT	0.34	Moderate positive – perceived usefulness enhances positive attitude
PEOU → ATT	0.28	Positive – ease of use fosters favorable attitude
ATT → BI	0.18	Weak positive – attitudes slightly predict intention to adopt
PU → BI	0.4	Moderate – usefulness directly predicts behavioral intention

Table 3. Structural model summary.

Path	Std. β	p-value	Decision	Interpretation
PEOU → PU	0.37	0.001	Supported	Ease increases perceived usefulness.
PU → ATT	0.34	0.001	Supported	Usefulness strengthens positive attitude.
PEOU → ATT	0.28	0.001	Supported	Ease of use directly enhances attitude.
ATT → BI	0.18	0.05	Supported	Positive attitude raises adoption intention.
PU → BI	0.4	0.001	Supported	Usefulness strongly predicts intention.

4 Results and Discussion

Analysis was performed on 900 valid responses using SPSS for descriptive statistics and SmartPLS 4 for structural equation modeling (SEM). Reliability and validity tests confirmed all constructs met accepted thresholds (Cronbach's $\alpha > 0.90$; AVE > 0.50). The results address each of the five research objectives derived from the Technology Acceptance Model (TAM).

As shown in Table 1, the results indicate strong acceptance of automation among employees. Very high perceived usefulness underscores clear productivity and performance gains. High ease of use supports positive user experience, reinforcing favorable attitudes. Collectively, these perceptions translate into strong behavioral intentions, suggesting readiness for sustained automation adoption and organizational digital transformation.

4.1 Relationship between Perceived Usefulness and Employees' Attitudes toward Automation

In Table 2, moderate positive correlation ($r \approx 0.34$) was observed between PU and ATT, confirming that the more employees perceive automation as improving job efficiency and accuracy, the more favorable their

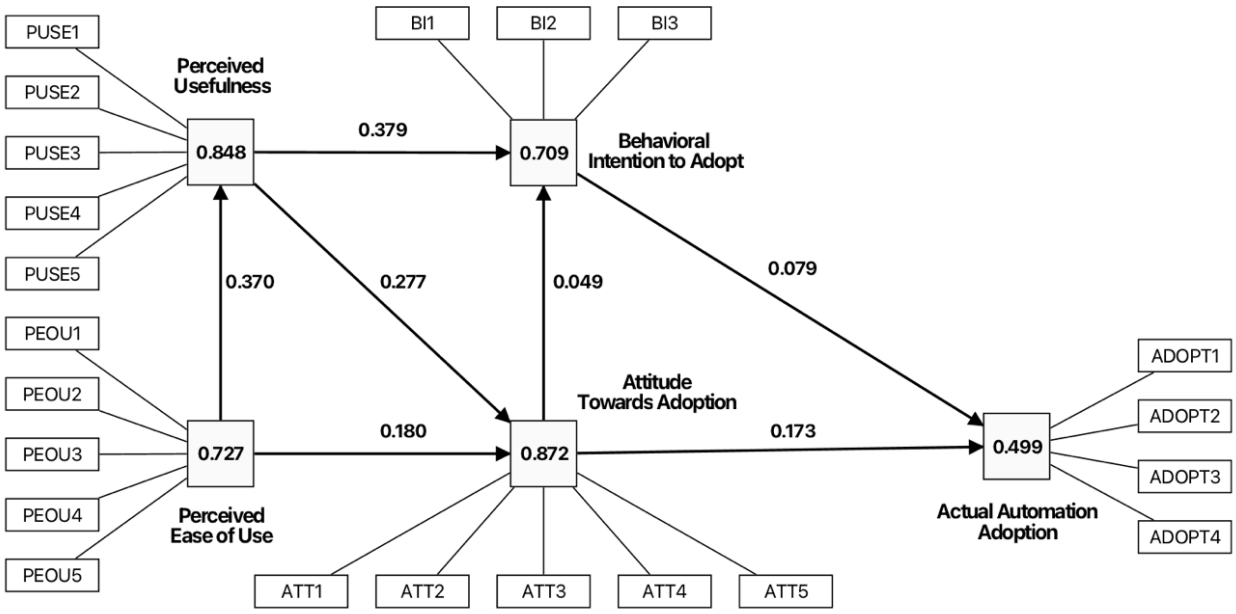

Figure 1. Human-Machine Synergy Framework (TAM-Based Model).

attitudes become.

This supports Davis's [30] original assertion that usefulness directly shapes attitude, who found PU to be the strongest behavioral predictor among engineers adopting robotics. For Philippine enterprises, communicating tangible performance benefits—speed, reliability, and error reduction—is critical to sustaining enthusiasm for automation. This implies that, as employees recognize automation's contribution to efficiency, accuracy, and job performance, their attitudes become more favorable. This empirical evidence supports H_1, confirming its acceptance at the 0.05 level of significance. The finding is consistent with Davis's Technology Acceptance Model and recent evidence highlighting usefulness as a key driver of positive automation attitudes.

4.2 Influence of Perceived Ease of Use on Perceived Usefulness and Attitude

Also, in Table 2, PEOU showed a significant positive effect on both PU ($r \approx 0.37$) and ATT ($r \approx 0.28$). Employees interpret user-friendly systems as both easier and more valuable- emphasizing that usability and intuitive interfaces lower cognitive barriers and encourage experimentation. In workplaces where digital literacy varies, localized user manuals and just-in-time training amplify perceived ease and reinforce confidence in technology. Further, employees tend to evaluate intuitive and user-friendly systems as more valuable and develop more favorable attitudes toward their adoption. These results support H_2, leading to its acceptance at the 0.05 level of significance. The findings underscore the importance of usability-driven design and targeted training in enhancing positive technology perceptions, particularly in contexts with diverse levels of digital literacy.

4.3 Effect of Attitude on Behavioral Intention

As shown in Table 3, the path from ATT → BI ($\beta \approx 0.18$) demonstrates that positive emotional and evaluative orientations foster willingness to continue using automation. While the effect size is smaller than PU → BI, it confirms that affective readiness complements cognitive evaluation. Employees who enjoy automation and feel empowered by it become informal advocates, propagating adoption across teams.

Attitude toward automation demonstrates a significant positive effect on behavioral intention to continue using automation ($p < 0.05$), although with a smaller effect size compared to the PU → BI pathway. This indicates that affective readiness complements cognitive evaluations in shaping adoption decisions. Employees who feel empowered and derive satisfaction from automation are more inclined to sustain usage and advocate its adoption within teams. Accordingly, H_3 is accepted at the 0.05 level of significance, affirming the role of positive attitudes in reinforcing continued automation use.

4.4 Human–Machine Synergy Framework

Integrating all tested relationships produced the Human–Machine Synergy Framework, summarized in Figure 1. The validated Human–Machine Synergy Framework shows standardized paths among Perceived Ease of Use (PEOU), Perceived Usefulness (PU), Attitude (ATT), and Behavioral Intention (BI).

- Cognitive Dimension: Ease of Use and Usefulness together form the cognitive base of acceptance.
- Affective Dimension: Attitude mediates cognition and behavior, emphasizing emotional engagement.
- Organizational Dimension: Support converts positive mindset into consistent use.

The model demonstrates that automation acceptance in Philippine Industry 4.0 enterprises is a multi-level process where individual beliefs, organizational culture, and leadership systems interact to create sustainable human–machine collaboration.

The structural path results demonstrate a coherent Technology Acceptance Model explaining automation adoption in Industry 4.0 technology companies. Perceived ease of use significantly enhances perceived usefulness and directly shapes positive attitudes toward automation. Perceived usefulness emerges as the most influential driver, strongly predicting both attitudes and behavioral intention. While attitude has a comparatively smaller yet significant effect on intention, it plays a complementary motivational role. Overall, the findings confirm a robust human–machine synergy in which usability and performance value jointly foster employees' readiness and commitment to adopt automation technologies.

5 Conclusion

Automation adoption is both a technological and behavioral evolution. Perceived usefulness and ease of use drive acceptance, but without supportive structures, adoption may plateau. Human–machine synergy occurs when enterprises treat technology as a partner that amplifies human intelligence, not as a replacement for it. Human–machine synergy signifies a future where automation uplifts rather than displaces. Philippine enterprises poised for Industry 4.0 must invest equally in technology and people—embedding empathy, trust, and shared learning into their transformation strategies. By aligning technological ambition with human purpose, the nation can model an inclusive path toward digital prosperity.

Data Availability Statement

Data will be made available on request.

Funding

This work was supported without any funding.

Conflicts of Interest

The authors declare no conflicts of interest.

AI Use Statement

The authors declare that no generative AI was used in the preparation of this manuscript.

Ethical Approval and Consent to Participate

Not applicable.

References

[1] Rajamanickam, M., Royan, E. N. J. G., Ramaswamy, G., Rajendran, M., & Vadivelu, V. (2023). Fourth industrial revolution: industry 4.0. *Integration of Mechanical and Manufacturing Engineering with IoT: A Digital Transformation*, 41-84. [CrossRef]

[2] Martinelli, A., Mina, A., & Moggi, M. (2021). The enabling technologies of industry 4.0: examining the seeds of the fourth industrial revolution. *Industrial and Corporate Change, 30*(1), 161-188. [CrossRef]

[3] Aldaba, R. (2024). Philippine industrial policy journey: transforming the economy in the new digital age. *Philippine Review of Economics* (*Online ISSN 2984-8156*), *61*(1), 8-43.

[4] Dadios, E. P., Culaba, A. B., Albert, J. R. G., Paqueo, V. B., Orbeta, A. C., Serafica, R. B., ... & Bairan, J. C. A. C. (2018). *Preparing the Philippines for the fourth industrial revolution: A scoping study* (No. 2018-11). PIDS discussion paper series.

[5] Segate, R. V., & Daly, A. (2024). Encoding the enforcement of safety standards into smart robots to harness their computing sophistication and collaborative potential: A legal risk assessment for European Union policymakers. *European Journal of Risk Regulation, 15*(3), 665-704. [CrossRef]

[6] Aivazidou, E., & Tsolakis, N. (2023). Transitioning towards human–robot synergy in agriculture: A systems thinking perspective. *Systems Research and Behavioral Science, 40*(3), 536-551. [CrossRef]

[7] Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view1. *MIS quarterly, 27*(3), 425-478. [CrossRef]

[8] Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). Technology acceptance model. *J Manag Sci, 35*(8), 982-1003. [CrossRef]

[9] Liang, N., & Wang, X. (2026). Determinants of Digital Museum Users' Continuance Intention—An Integrated Model Combining an Enhanced TAM3 and UTAUT. *Sustainability, 18*(1), 492. [CrossRef]

[10] Li, J., Che Me, R., Ahmad, F. A., & Zhu, Q. (2025). Development and validation of an ageing-oriented smart products design framework based on technology acceptance model (TAM). *Disability and Rehabilitation: Assistive Technology*, 1-27. [CrossRef]

[11] Bansal, P., Kumar, R., Kumar, A., & Dasig Jr, D. D. (Eds.). (2024). *Artificial intelligence and communication techniques in Industry 5.0*. CRC Press.

[12] Schwab, K. (2017). *The Fourth Industrial Revolution*. Crown Business.

[13] AL-Refaey, M. R., Tyagi, A. K., AL-Ghamdi, A. S. A. M., & Kukreja, S. (Eds.). (2024). *Topics in Artificial Intelligence Applied to Industry 4.0*. John Wiley & Sons.

[14] Oke, J. A., Karimzadeh, S., Oviroh, P. O., Ukoba, K., Imoisili, P. E., & Jen, T. C. (2025). *Smart Materials and Energy in the Fourth Industrial Revolution*. CRC Press. [CrossRef]

[15] Dhiman, M. T., Malik, M. A., Kumar, A., & Kamboj, M. G. (2025). *Artificial Intelligence Synergies: A Multidisciplinary Outlook*. Chyren Publication.

[16] Quimba, F. M. A., Serafica, R. B., Bayudan-Dacuycuy, C., Andrada, A. E., & Moreno, N. I. S. (2023). *Green and Digital: Managing the Twin Transition toward Sustainable Development* (No. 2023-21). PIDS Discussion Paper Series. [CrossRef]

[17] Kumar, L., & Sharma, R. K. (2025). Adapting to Industry 4.0: evaluating SMEs preparedness through a comprehensive digital readiness assessment maturity model by validating stakeholders' perceptions. *Business Process Management Journal*. [CrossRef]

[18] Adel, A. (2024). The convergence of intelligent tutoring, robotics, and IoT in smart education for the transition from industry 4.0 to 5.0. *Smart Cities, 7*(1), 325-369. [CrossRef]

[19] Balasubramanian, P. (2023). Automation in data science, software, and information services. In *Springer Handbook of Automation* (pp. 989-1014). Cham: Springer International Publishing. [CrossRef]

[20] McDonald, S. D. (2024). The Impact of Data Analytics, Automation, AI, and IoT on Vietnam's Logistics Industry. In *Transforming Logistics in a Developing Nation: Vietnam's Technology Imperative* (pp. 53-72). Singapore: Springer Nature Singapore. [CrossRef]

[21] Kalogiannis, D. (2025). *The Impact of Digital Skills Perceptions on Work-Related Anxiety and Motivation Among Late-Career Employees Within the Grey Digital Divide*.

[22] Brougham, D., & Haar, J. (2018). Smart technology, artificial intelligence, robotics, and algorithms (STARA): Employees' perceptions of our future workplace. *Journal of Management & Organization, 24*(2), 239-257. [CrossRef]

[23] Islam, M. T., Sepanloo, K., Woo, S., Woo, S. H., & Son, Y. J. (2025). A review of the industry 4.0 to 5.0 transition: exploring the intersection, challenges, and opportunities of technology and human–machine collaboration. *Machines, 13*(4), 267. [CrossRef]

[24] Scherer, R., Siddiq, F., & Tondeur, J. (2019). The technology acceptance model (TAM): A meta-analytic structural equation modeling approach to explaining teachers' adoption of digital technology in education. *Computers & Education, 128*, 13–35. [CrossRef]

[25] Low, M. P., Wut, T. M., & Pok, W. F. (2025). Artificial intelligence facilitators in higher education institutions: A student-centric exploration with comparative analysis in Asian countries. *Education and Information Technologies, 30*(13), 18485-18511. [CrossRef]

[26] Green, G. (2024). Analysis of the mediating effect of resistance to change, perceived ease of use, and behavioral intention to use technology-based learning among younger and older nursing students. *Journal of Professional Nursing, 50*, 66-72. [CrossRef]

[27] Ollerenshaw, A., Corbett, J., & Thompson, H. (2021). Increasing the digital literacy skills of regional SMEs through high-speed broadband access. *Small Enterprise Research, 28*(2), 115-133. [CrossRef]

[28] Li, X., Zhang, J., & Yang, J. (2024). The effect of computer self-efficacy on the behavioral intention to use translation technologies among college students: Mediating role of learning motivation and cognitive engagement. *Acta Psychologica, 246*, 104259. [CrossRef]

[29] Schuetz, S., Kuai, L., Lacity, M. C., & Steelman, Z. (2025). A qualitative systematic review of trust in technology. *Journal of Information Technology, 40*(1), 55-76. [CrossRef]

[30] Silva, P. (2015). Davis' technology acceptance model (TAM)(1989). *Information seeking behavior and technology adoption: Theories and trends*, 205-219. [CrossRef]

Prof. Dr. Daniel Dasig Jr, PCpE, CBE (Professor 3, Research Director & Quality Assurance Coordinator at Philippine Women's University) is a Professional Computer Engineer, currently, Alumni Regent of Samar State University Board of Regents. He holds PhD in Electrical and Computer Engineering, Doctor in Business Administration, and PhD in Educational Management, MSc Engineering-Computer Engineering, and BSc in Computer Engineering, and formal training in national and international security. He has more than 17 years of Project Management, Change Management, and digital transformation and service management experience. (Email: dddasig@pwu.edu.ph)

Chester Bryan Torres (Project Manager, DXC Technology) received his Bachelor of Science in Information Technology from De La Salle University–Dasmariñas Philippines, a candidate for master's degree in information technology at the same institution, and a part-time faculty member of the School of Engineering, Computing, and Architecture at National University–Dasmariñas. Philippines. (Email: chesterbryan0212@gmail.com)

Prof. Dr. Fernando Talion, CPA (Dean at Philippine Women's University) Professor 1 and Dean of Conrado Benitez Institute for Business Education at Philippine Women's University, with more than 30 years of executive and professional practice as Certified Public Accountant, with a degree of Doctor in Business Administration, Master in Business Administration (Cum Laude), and Bachelor in Accountancy (Cum Laude). (Email: fitalion@pwu.edu.ph)

Dr. Carolina Ditan (Graduate School, De La Salle Araneta University) a candidate for PhD in Human Resource Management. Dr. Ditan was the former Dean of the College of Business, Management and Accountancy of the De La Salle Araneta University and formerly the OIC- Dean of the College of San Benildo Rizal. Currently, is a professor at the Graduate School of DLSAU and Graduate School of JRU and CMU. Dr. Ditan was a former professor of the Graduate School of UMAK and PLMAR. (Email: Carolina.ditan@jru.edu)

Dr. Antonius Siahaan, SE, Ak, MM, CA, CFP, CRP, CPA(Aust) (Dean, Faculty of Business at Sampoerna University, Indonesia) received the Ph.D (Dr) in Finance, Master of Management, and Bachelor of Accounting from the Faculty of Economic University of Indonesia, with a long track record in curriculum development, accreditation (Unggul level), industry collaboration, research supervision, and academic leadership at national and international levels. Previously held multiple executive corporate roles including CFO, Director of Finance & Operations, Commissioner, and senior regulator liaison roles in securities, asset management, and insurance industries. (Email: antonius.siahaan@sampoernauniversity.ac.id)