Fintech and Digital Accounting Review

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FinTech knowledge, attitude and entrepreneurial intentions among students

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Received 2 September 2025
Revised 25 October 2025
14 February 2026
Accepted 13 March 2026

Abstract

Purpose – This study explores how students' engagement with financial technologies influences their entrepreneurial intentions, focussing on the mediating role of attitude toward FinTech entrepreneurship. It integrates cognitive and affective dimensions to explain the psychological drivers of technology-based entrepreneurship and offers insights for strengthening FinTech education and fostering innovation-driven entrepreneurship. Drawing on the stimulus organism response framework, alongside the theory of planned behaviour and the technology acceptance model.

Design/methodology/approach – The study surveys 184 polytechnic students in Northeast Nigeria and analyzed the data using PLS-SEM to examine how FinTech knowledge and technologies influence attitudes and intentions toward FinTech entrepreneurship.

Findings – The findings reveal that students' FinTech knowledge and positive attitudes toward FinTech applications significantly mediated their entrepreneurial intentions, indicating that integrating FinTech literacy and practical training into polytechnic education could enhance students' readiness for FinTech entrepreneurship within Nigeria's digital economy.

Research limitations/implications – The study uses a cross-sectional design, focused on polytechnic students in Northeast Nigeria and relies on self-reported data, which may affect causal interpretation and generalizability. Future research should adopt longitudinal designs and broader samples for wider applicability.

Practical implications – Embedding experiential FinTech education, supportive regulatory policies, industry collaboration and improved digital infrastructure is essential to foster positive entrepreneurial attitudes and enable scalable, youth-driven FinTech ventures.

Originality/value – This study uniquely examines how FinTech knowledge influences entrepreneurial intention among polytechnic students in Nigeria, an understudied and vocationally focused group. It introduces a theoretically grounded mediator to explain this relationship and offers insights for enhancing entrepreneurship education and FinTech literacy in emerging economies.

Keywords FinTech knowledge, FinTech entrepreneurship, Blockchain, Crowdfunding, Mobile payment

Paper type Research article

Fintech and Digital Accounting Review
Vol. 2 No. 1, 2026
pp. 105-127
Emerald Publishing Limited
2977-7631
DOI 10.1108/FDAR-09-2025-0029

1. Introduction

The rapid evolution of financial technology (FinTech) is transforming the global economic landscape by introducing digital innovations that enhance efficiency, accessibility, and creativity in financial services (Nadia *et al.*, 2025). As an integration of finance and technology, FinTech has redefined the financial ecosystem through a wide range of services delivered via digital platforms, including blockchain, mobile payment systems, peer-to-peer lending, and automated financial advisory solutions (Javaid, Haleem, Singh, Suman, & Khan, 2022; Lee & Shin, 2018). Through these technological configurations, financial intermediation has become increasingly decentralized, data-driven, and innovation-oriented, thereby expanding the scope for new market entrants and entrepreneurial business models.

This expansion has generated substantial opportunities for entrepreneurial ventures, particularly among individuals possessing strong digital competencies and innovation-oriented mindsets (Mogaji & Nguyen, 2024). However, the realization of such opportunities is significantly conditioned by national regulatory and governance frameworks that shape innovation incentives, market participation, and institutional legitimacy. In Nigeria, FinTech development is governed primarily by the Central Bank of Nigeria (CBN), whose regulatory oversight seeks to balance financial innovation with systemic stability, consumer protection, and risk management. Through evolving instruments such as licencing requirements, payment system regulations, regulatory sandboxes, and digital banking guidelines, the CBN plays a pivotal role in structuring the national FinTech ecosystem.

Although these governance mechanisms provide legitimacy and institutional support for FinTech operations, their frequent revisions and implementation uncertainties may simultaneously generate compliance burdens that influence entrepreneurial risk perceptions and strategic decision-making, particularly among early-stage and student-led ventures. Consequently, FinTech entrepreneurship in Nigeria unfolds within an institutional environment where regulatory clarity, adaptability, and infrastructural readiness significantly affect innovation outcomes. Within this environment, higher education institutions assume a critical role in developing entrepreneurial capacity by equipping students not only with technical FinTech knowledge but also with an understanding of regulatory compliance and governance dynamics (Mogaji & Nguyen, 2024).

Scholarly attention has increasingly examined how FinTech knowledge shapes students' entrepreneurial intention, especially in regulated financial environments (Festa, Elbahri, Cuomo, Ossorio, & Rossi, 2023). Entrepreneurial intention conceptualized as a cognitive state preceding entrepreneurial behaviour remains a reliable predictor of entrepreneurial action (Mia, Abdur, Mohammad Ahmed, Iqbal, & Khan, 2026). Empirical evidence indicates that exposure to FinTech knowledge enhances students' confidence, creativity, and motivation to pursue financial entrepreneurship (Osman, Ing, Awg Razli, & Fu Rick, 2020; Yahaya & Nadarajah, 2023). Nevertheless, in regulated contexts such as Nigeria, this relationship is further influenced by individuals' perceptions of regulatory support, governance legitimacy, and institutional trust.

Existing studies have predominantly focused on the direct relationship between FinTech knowledge and entrepreneurial intention, often overlooking the psychological and attitudinal mechanisms through which regulatory environments exert influence. Although FinTech competencies provide a cognitive foundation for entrepreneurial behaviour, their translation into concrete entrepreneurial intentions frequently depends on individuals' attitudes toward FinTech entrepreneurship within a governed financial system. Drawing on the Theory of Planned Behaviour (Ajzen, 1991), attitude functions as a central determinant of behavioural intention, serving as a motivational bridge between knowledge, institutional context, and action. Similarly, the Technology Acceptance Model emphasizes that cognitive evaluations influence behavioural outcomes primarily through attitudinal pathways.

In regulated FinTech ecosystems, attitudes toward entrepreneurship are shaped not only by technological awareness but also by perceptions of regulatory fairness, flexibility, and support. Although digital financial technologies have lowered entry barriers and expanded

entrepreneurial opportunities (Kurniasari *et al.*, 2025), a persistent gap remains between students' FinTech knowledge and their entrepreneurial intentions, particularly in emerging economies characterized by evolving regulatory regimes (Festa *et al.*, 2023; Yahaya & Nadarajah, 2025) The continued hesitancy of many graduates to engage in FinTech ventures, despite the expansion of FinTech-focused curricula, suggests that regulatory complexity and uncertainty may dampen entrepreneurial motivation.

In addition to regulatory and cognitive determinants, structural and socio-demographic factors further shape FinTech entrepreneurial intention. Prior studies reveal that the gender gap in FinTech entrepreneurial intention is driven less by ability than by structural and societal barriers (Ahmed, Ullah, Sobia, & Waqas, 2025). Women frequently face limited access to finance, digital tools, and mentorship, and are often constrained by lower digital literacy, reduced entrepreneurial confidence, and restrictive social norms. In contrast, men's comparatively greater access to resources, higher self-efficacy, and stronger risk-taking orientation tend to foster stronger entrepreneurial intentions, thereby producing observable disparities.

Institutional context within higher education also introduces important variation. Entrepreneurship ecosystems in Nigerian polytechnics and universities differ in orientation, curriculum integration, and institutional support, with significant implications for FinTech knowledge acquisition, attitudinal formation, and entrepreneurial intention (Stouraitis & Tsanis, 2025). Polytechnics are largely practice-oriented, emphasizing applied skills and hands-on enterprise training, whereas universities tend to adopt more theory-driven approaches, often constrained by limited industry linkages and innovation resources (Ajose, 2021). These structural differences shape how students acquire and operationalize FinTech competencies. Practice-based training tends to enhance students' operational skills and perceived capability to initiate FinTech ventures (Yahaya, Bizi, & Ahmadu, 2025a), while theory-based instruction strengthens conceptual understanding and cognitive attitudes toward digital financial innovation. However, insufficient ecosystem support including incubation, mentorship, funding access, and industry collaboration may weaken the translation of knowledge into entrepreneurial intention (Owen, Vedanthachari, & Hussain, 2024). Strengthening industry partnerships and integrating experiential FinTech learning across both institutional types is therefore essential to cultivating positive attitudes and reinforcing entrepreneurial intentions.

While Nigeria's evolving FinTech regulatory environment is widely recognized as a key determinant of entrepreneurial activity, its effects are simultaneously enabling and constraining, as regulatory initiatives such as structured licencing frameworks and innovation sandboxes reduce operational uncertainty yet episodes of policy volatility underscore persistent risks of unpredictability (Malami SarkinTudu, Abd Wahab, & H Ibrahim, 2022; Usman, Griffiths, & Alam, 2025). Although compliance can enhance market legitimacy and signal credibility to investors and customers, the complexity and cost of adherence may disproportionately burden smaller start-ups, potentially limiting inclusive participation in the sector.

Therefore, despite growing scholarly attention to FinTech knowledge and entrepreneurial intention, limited empirical evidence explains how attitudes toward FinTech entrepreneurship mediate the relationship between FinTech competencies and students' entrepreneurial intentions within Nigeria's regulated and institutionally differentiated higher education environment.

2. Literature review and hypothesis development

2.1 Theoretical framework

The Theory of Planned Behaviour (TPB) (Ajzen, 1991) provides a strong foundation for explaining how FinTech knowledge influences entrepreneurial intention through three determinants attitude, subjective norms, and perceived behavioural control. FinTech knowledge enhances attitudes by increasing awareness of digital opportunities and reducing

perceived risks (Ali, Raza, Khamis, Puah, & Amin, 2021), strengthens subjective norms by emphasizing the social value of FinTech entrepreneurship, and improves perceived behavioural control by equipping students with relevant technological and managerial skills (Berman, Cano-Kollmann, & Mudambi, 2022). However, because FinTech entrepreneurship relies heavily on technology adoption, the Technology Acceptance Model (TAM) (Davis, 1989) complements the TPB by clarifying how perceived usefulness and perceived ease of use shape individuals' attitudes toward FinTech adoption. Integrating TAM with TPB provides a more comprehensive understanding of how cognitive, attitudinal, and technological factors interact to shape entrepreneurial intention.

Furthermore, the Stimulus Organism Response (S-O-R) theory (Mehrabian & Russell, 1974) adds a behavioural psychology dimension by explaining how external stimuli (e.g. FinTech tools such as mobile payment, crowdfunding, and blockchain) influence internal psychological states (organism), such as attitudes and perceptions, which in turn drive behavioural responses (entrepreneurial intentions). Within this context, FinTech applications act as stimuli that trigger students' cognitive and emotional evaluations (organism), ultimately leading to entrepreneurial behavioural responses. Integrating TPB, TAM, and S-O-R, this study develops a holistic framework that captures the interplay of behavioural intentions (TPB), technological perceptions (TAM), and stimulus response mechanisms (S-O-R). In this integrated model, FinTech knowledge and experience with FinTech tools serve as stimuli that influence attitudes (organism), which subsequently determine entrepreneurial intentions (response). This synergy enhances the explanatory power of the framework by linking technological engagement with psychological and behavioural processes underlying FinTech entrepreneurship among students.

2.2 Hypotheses development

2.2.1 FinTech knowledge and attitude toward using FinTech entrepreneurship. FinTech knowledge encompasses individuals' understanding of financial technologies, their applications, and their implications for business and innovation. Drawing on the Theory of Planned Behaviour (Ajzen, 1991) and the Technology Acceptance Model (Davis, 1989), knowledge enhances individuals' cognitive evaluations of usefulness and ease of use, which subsequently shape positive attitudes toward technology-based entrepreneurship. Individuals with higher FinTech knowledge are likely to develop favourable attitudes toward adopting FinTech entrepreneurship due to their ability to assess opportunities, mitigate risks, and leverage technological innovations effectively (Ismail & Rashidi, 2025). Similarly, FinTech knowledge represents a multifaceted construct encompassing individuals' awareness, comprehension, and proficiency in financial technology concepts, tools, and applications. Possessing such knowledge enables individuals to effectively navigate the complexities of the digital financial ecosystem, recognize emerging opportunities for innovation, and design practical solutions to address real-world financial and technological challenges (Tran, Pham, Le, Dinh, & Pham, 2024).

H1. FinTech knowledge has a positive and significant effect on attitude toward using FinTech entrepreneurship.

2.2.2 Mobile payment and attitude toward using FinTech entrepreneurship. Mobile payment technologies exemplify accessible and efficient FinTech solutions that facilitate seamless financial transactions. According to the TAM, perceived ease of use and perceived usefulness of mobile payment systems can enhance individuals' positive attitudes toward FinTech entrepreneurship (Venkatesh & Davis, 2000). Exposure to mobile payment solutions increases awareness of technological feasibility, thereby fostering a more optimistic perception of FinTech entrepreneurship as an innovative and viable business model (Chen *et al.*, 2020). Furthermore, mobile payment systems reduce transaction barriers, promote financial inclusion, and create new avenues for innovative business models (Alalwan,

Baabdullah, Rana, Tamilmani, & Dwivedi, 2018). Consequently, a favourable attitude toward mobile payment adoption not only encourages individual usage but also stimulates entrepreneurial engagement in the FinTech sector (Serino, Nuccio, Borin, & Papa, 2026).

H2. Mobile payment usage has a positive and significant influence on students' attitudes toward using FinTech for entrepreneurial activities.

2.2.3 Blockchain and attitude toward using FinTech entrepreneurship. Blockchain technology represents a transformative force in FinTech, offering transparency, decentralization, and security. From a TAM perspective, blockchain's perceived usefulness in enhancing transaction efficiency and reducing fraud risk strengthens individuals' attitudes toward FinTech entrepreneurship (Nguyen *et al.*, 2024). Familiarity with blockchain applications empowers potential entrepreneurs to view FinTech ventures as trustworthy and future-oriented, thereby promoting positive attitudes (Geidam *et al.*, 2025). Empirical studies have shown that awareness and understanding of blockchain's potential foster favourable attitudes toward utilizing it for innovative financial solutions and business creation (Yahaya *et al.*, 2025a, b). Moreover, blockchain's role in promoting transparency and reducing reliance on intermediaries aligns with entrepreneurial values of autonomy and innovation (Spigarelli, Compagnucci, & Lepore, 2025). Consequently, a positive attitude toward blockchain adoption can serve as a critical driver of FinTech entrepreneurial intention, encouraging individuals to leverage decentralized technologies to develop efficient, secure, and inclusive financial services (Alassaf, Daim, Dabić, & Alzahrani, 2024).

H3. Blockchain has a positive and significant effect on attitude toward using FinTech entrepreneurship.

2.2.4 Crowdfunding and attitude toward using FinTech entrepreneurship. Crowdfunding platforms democratize access to finance and enable entrepreneurs to mobilize resources through digital channels. This aligns with the TAM proposition that perceptions of usefulness shape positive attitudes toward technology-driven innovations (Davis & Venkatesh, 1996). As entrepreneurs gain knowledge and experience with crowdfunding, they recognize its potential to overcome financing barriers and promote inclusion, fostering more favourable attitudes toward engaging in FinTech entrepreneurship. Additionally, positive attitude toward crowdfunding not only encourages adoption but also stimulates entrepreneurial motivation to explore FinTech-based ventures (Santos-Rojo, Gallego-Nicholls, & Rey-Martí, 2025). Moreover, the social and collaborative nature of crowdfunding reinforces trust and community engagement, further strengthening entrepreneurs' intention to utilize such platforms for business innovation (Arishi, Rashed, & Elmeslemani, 2025).

H4. Crowdfunding has a positive and significant effect on attitude toward using FinTech entrepreneurship.

2.2.5 Attitude toward using FinTech entrepreneurship and FinTech entrepreneurial intention. The Theory of Planned Behaviour, emphasized that attitude is a critical predictor of behavioural intention. Individuals who hold positive attitudes toward FinTech entrepreneurship are more likely to form strong intentions to establish FinTech ventures (Krueger, Reilly, & Carsrud, 2000). A favourable attitude reflects confidence in the feasibility, profitability, and social value of FinTech-based entrepreneurship, which increases the likelihood of entrepreneurial engagement (Kurucz, Vinkóczi, Tamás, & Idziak, 2025). In addition, attitude represents an individual's evaluative disposition toward performing a behaviour and serves as a key antecedent of behavioural intention. In the context of FinTech entrepreneurship, a positive attitude reflects a favourable perception of FinTech as an avenue for innovation, efficiency, and economic opportunity (Vamvaka, Stoforos, Palaskas, & Botsaris, 2020).

H5. Attitude toward using FinTech entrepreneurship has a positive and significant effect on FinTech entrepreneurial intention.

2.2.6 Mediating role of attitude toward using FinTech entrepreneurship. While FinTech knowledge and specific FinTech applications (mobile payment, blockchain, and crowdfunding) provide cognitive and technological stimuli, the decision to pursue FinTech entrepreneurship is primarily determined by individuals' attitudes. Grounded in the Stimulus Organism Response (SOR) framework, FinTech knowledge and technology exposure (stimuli) influence internal evaluations and attitudes (organism), which subsequently drive behavioural intentions (response) (Mehrabian & Russell, 1974). Empirical studies have confirmed that a positive attitude mediates the relationship between technological perceptions and entrepreneurial behaviour by transforming cognitive appraisals into motivational readiness for action (Nguyen *et al.*, 2024). This mediating role highlights the importance of attitude as a psychological bridge that converts external FinTech stimuli into entrepreneurial engagement. Consequently, understanding attitude as a mediator within the S–O–R framework provides a holistic explanation of how cognitive, emotional, and contextual factors jointly influence FinTech entrepreneurial intention and behaviour (Behera & Dadra, 2024) Thus, attitude is posited to mediate the relationships between FinTech-related variables and entrepreneurial intention (Geidam *et al.*, 2025).

H6. Attitude toward using FinTech entrepreneurship mediates the relationship between FinTech knowledge and FinTech entrepreneurial intention.

H7. Attitude toward using FinTech entrepreneurship mediates the relationship between mobile payment and FinTech entrepreneurial intention.

H8. Attitude toward using FinTech entrepreneurship mediates the relationship between blockchain and FinTech entrepreneurial intention.

H9. Attitude toward using FinTech entrepreneurship mediates the relationship between crowdfunding and FinTech entrepreneurial intention.

Thus, the study offers this conceptual model as illustrated in Figure 1.

3. Methodology

3.1 Sampling and data collection

Students are widely regarded as a key demographic for future entrepreneurship due to their flexibility and capacity to make critical career decisions during their academic years.

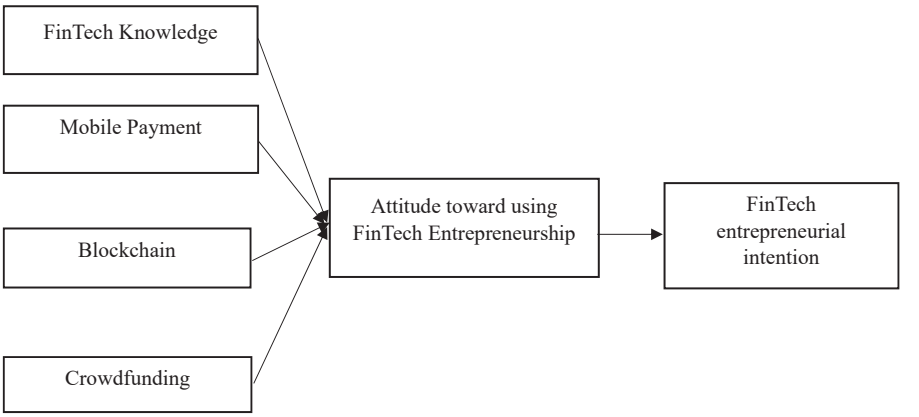

Figure 1. Conceptual framework

They often demonstrate a propensity for innovation, risk-taking, and business creation (Gati & Kulcsár, 2021). Building on this premise, the present study focuses on polytechnic students, whose technical and practical expertise provides a valuable context for examining the intersection of FinTech innovation and entrepreneurship (Ab Halim, Nazri, & Bahari, 2024). The study specifically investigates their attitudes, intentions, and behaviours toward FinTech-driven entrepreneurial activities.

Data collection occurred between March and June 2025 through a structured questionnaire assessing FinTech knowledge, entrepreneurial attitudes, and intentions, using validated items rated on a 5-point Likert scale. The instrument was pilot-tested with 30 students from Yobe State Polytechnic to confirm reliability and clarity. Ethical approval was obtained from the Ministry of Education (Approval ID: MOE/REC/25/04/103), and official clearance was granted to the participating institutions before data collection. Participation was voluntary, with informed consent secured from all respondents, and strict measures were taken to maintain anonymity, confidentiality, and research integrity.

Final-year students were selected because they are at an advanced stage of their academic training, having acquired substantial disciplinary knowledge, technical competencies, and exposure to entrepreneurship and ICT-related courses. Importantly, they are at a critical transition point as they prepare to enter the labour market in a context characterized by high graduate unemployment and limited formal employment opportunities in Nigeria. This situation makes entrepreneurship, particularly technology-driven entrepreneurship, a viable and increasingly necessary career pathway. Consequently, final-year students are more likely to engage seriously with issues related to FinTech, innovation, and self-employment, and are therefore better positioned to provide informed and realistic insights into entrepreneurial attitudes, intentions, and behaviours.

The three polytechnics Mai Idris Alooma Polytechnic (Geidam), Federal Polytechnic (Damaturu), and Ramat Polytechnic (Maiduguri) were selected due to their strong institutional mandate in technical and vocational education, as well as their active integration of entrepreneurship and ICT curricula across multiple programmes. These institutions also represent major public polytechnics in North East Nigeria, serving diverse student populations across Business Management, Architecture, Information Technology, and Engineering disciplines. Despite their strategic importance in skills development, polytechnics in this region remain underrepresented in empirical research, with relatively low research output compared to universities. This gap in the literature further justifies their selection, as it allows the study to generate context-specific empirical evidence from a neglected educational setting. Their inclusion therefore provides a contextually appropriate and policy-relevant setting for examining FinTech-driven entrepreneurship among students who are about to transition into a highly competitive and uncertain labour market. A power analysis determined a minimum sample size of 180 ($f^2 = 0.15$, $\alpha = 0.05$, power = 0.80). Out of the 200 questionnaires administered, 10 were not retrieved and 6 were excluded due to response errors. Thus, 184 valid questionnaires were retained for data analysis, yielding a response rate of 92%, as presented in Table 1.

The demographic profile reveals that male respondent constituting 70% of the sample, while females account for 30%. Although no gender-based analysis was conducted, this distribution reflects broader patterns in Nigeria's FinTech and digital entrepreneurship ecosystem, where male participation remains dominant due to disparities in access to digital skills, financial resources, and technology-oriented education. Socio-cultural norms and unequal exposure to entrepreneurial networks further constrain female engagement in FinTech-related ventures.

3.2 Questionnaire development and measurement

The questionnaire employed in this study is designed to assess three primary constructs: FinTech knowledge, attitudes toward FinTech entrepreneurship, and entrepreneurial

Table 1. Demography of respondents

Demographic items	Freq. (n = 184)	Percentage %
Gender		
Male	129	70
Female	55	30
Age		
18–24	36	19
25–29	86	47
30–34	28	15
35–45	20	11
Over 45	14	8
Programme of Study		
Business Management	52	28
Architecture	34	18
Information Technology	52	28
Engineering	46	25
Institution		
Mai Idris Alooma Polytechnic, Geidam	62	34
Federal Polytechnic, Damaturu	70	38
Ramat Polytechnic, Maiduguri	52	28
Entrepreneurship/ICT Course Exposure		
Taken at least one course	184	100
Not taken any course	0	0

Source(s): Field Survey (2025)

intentions. The FinTech knowledge items will evaluate students' familiarity with key concepts, including mobile payments and blockchain, to gauge their understanding of the underlying technologies. The attitudes section will assess students' perceptions of the desirability and feasibility of engaging in FinTech entrepreneurship, providing insight into their motivational drivers. The entrepreneurial intention items measured students' determination and willingness to pursue entrepreneurial ventures in the FinTech field, capturing their level of commitment to entrepreneurial action. To ensure consistency and facilitate analysis, all items were rated on a 5-point Likert scale. The questionnaire comprises of multiple sections, including demographic information, construct-specific questions, and contextual factors such as prior exposure to FinTech.

To ensure the clarity, reliability, and validity of the questionnaire, a pilot test was conducted with a small sample of students. Cronbach's alpha was used to assess the internal consistency reliability of the instrument. Feedback from the pilot test and input from academic experts provide refinements to the questionnaire, ensuring that it accurately captures the relationships between FinTech knowledge, attitudes, and entrepreneurial intentions. This iterative process helped in optimizing the questionnaire's effectiveness in measuring the constructs of interest. Therefore, table shows the descriptive characteristics of the measurement items. Detailed in Table 2.

The pilot study was conducted prior to the main data collection to assess the clarity, relevance, and reliability of the measurement instruments. Based on feedback from the pilot respondents, minor wording adjustments were made to improve item clarity and contextual suitability; however, no items were removed, as all constructs met acceptable reliability thresholds. The pilot reliability analysis yielded Cronbach's alpha values ranging from 0.71 to 0.83, while the post-survey reliability values improved, ranging from 0.78 to 0.89, indicating satisfactory internal consistency.

Table 2. Descriptive and factor analysis of constructs and measurement items

Construct	Measurement items	Mean	(SD)	Skewness	Kurtosis	Factor loading
FEI (FinTech Entrepreneurial Intention)	FEI FinTech Entrepreneurial Intention	4.25	1.1	0.45	−0.25	0.82
	FEI1 I am prepared to take any necessary steps to become a FinTech entrepreneur	4.1	1.12	0.56	−0.2	0.88
	FEI2 My primary career objective is to establish myself as a FinTech entrepreneur	4.35	1.05	0.43	−0.3	0.91
	FEI3 I am committed to putting in all necessary efforts to start and operate my own FinTech company	4.2	1.08	0.5	−0.15	0.85
	FEI4 I am resolute in my decision to establish a FinTech business in the future	4.05	1.14	0.4	−0.22	0.8
ATF (Attitude Toward Using FinTech)	ATF Attitude Toward Using FinTech	3.95	1.15	0.33	−0.1	0.78
	ATF1 I believe that being a FinTech entrepreneur offers more benefits than drawbacks	4	1.11	0.5	−0.2	0.82
	ATF2 Pursuing a career as a FinTech entrepreneur is appealing to me	4.1	1.08	0.45	−0.25	0.85
	ATF3 If I had the necessary resources and opportunities, I would want to establish a FinTech business	4.05	1.1	0.42	−0.18	0.8
	ATF4 Becoming a FinTech entrepreneur would bring me a high level of personal satisfaction	4.2	1.07	0.38	−0.15	0.87
CFD (Crowdfunding)	CFD Crowdfunding	3.85	1.13	0.58	−0.12	0.79
	CFD1 Crowdfunding plays a significant role in promoting and marketing entrepreneurial ventures	3.9	1.12	0.6	−0.15	0.82
	CFD2 Crowdfunding enhances the efficiency of funding processes for entrepreneurs	3.95	1.11	0.55	−0.18	0.84
	CFD3 Crowdfunding facilitates streamlined and efficient payment systems	4	1.09	0.45	−0.2	0.86
	CFD4 Crowdfunding platforms are reliable and trustworthy for users	3.8	1.14	0.62	−0.25	0.81
MPT (Mobile Payment)	MPT Mobile Payment	4.25	1.08	0.4	−0.05	0.85
	MPT1 Using mobile payment systems is straightforward and user-friendly	4.3	1.05	0.38	−0.1	0.87
	MPT2 Mobile payment provides me with the latest and most accurate information	4.15	1.12	0.45	−0.12	0.84
	MPT3 Individuals whose opinions matter to me encourage the use of mobile payment services	4	1.15	0.5	−0.18	0.8
	MPT4 Mobile payment is convenient because it is accessible at any time	4.1	1.1	0.42	−0.2	0.83

(*continued*)

Table 2. Continued

Construct	Measurement items	Mean	(SD)	Skewness	Kurtosis	Factor loading
BCN (Blockchain)	BCN Blockchain Technology	3.75	1.2	0.3	−0.08	0.77
	BCN1 Blockchain technology fosters greater trust in financial processes	3.85	1.18	0.32	−0.12	0.8
	BCN2 Blockchain technology enables quick and secure payment processes	4	1.14	0.35	−0.1	0.82
	BCN3 Blockchain technology lowers the costs associated with transactions	3.9	1.16	0.37	−0.15	0.79
	BCN4 Blockchain technology helps minimize risks in transactions	3.95	1.15	0.4	−0.12	0.81
FKN (FinTech Knowledge)	FKN FinTech Knowledge	4.05	1.09	0.41	−0.11	0.81
	FKN1 I possess adequate knowledge to effectively use mobile FinTech services	4.1	1.08	0.44	−0.1	0.84
	FKN2 I am knowledgeable enough to resolve issues that may occur while using mobile FinTech services	4	1.1	0.42	−0.15	0.82
	FKN3 I have sufficient understanding to successfully complete mobile FinTech transactions	4.05	1.12	0.4	−0.13	0.85
	FKN4 I am well informed about how to manage challenges that may arise from using mobile FinTech services	4	1.11	0.39	−0.14	0.83

With respect to subgroup differences, exploratory analyses were conducted to examine potential variations across gender and among the three participating polytechnics. Although some descriptive differences were observed, these variations were not statistically significant and therefore were not reported in the main analysis to maintain analytical focus and parsimony. Future studies with larger and more balanced samples may further investigate gender- and institution-based differences using multi-group or moderation analysis.

4. Results

4.1 Common method bias

Given that data were collected via a self-administered survey, several procedural and statistical measures were employed to minimize common method bias (CMB) (Podsakoff, Podsakoff, Williams, Huang, & Yang, 2024). Procedurally, the study ensured respondent anonymity, randomized item ordering, mixed scale formats, and introduced proximal separation by placing predictor and criterion constructs in different sections of the questionnaire. Statistically, Harman's single-factor test indicated that no single factor accounted for the majority of variance (<50%), while a marker variable technique and a latent method factor test revealed negligible changes in structural path coefficients, confirming that CMB did not materially affect the results.

4.2 Robustness checks and multi-group analysis

To enhance the robustness of the findings, several additional analyses were conducted. Alternative model specifications were tested by re-estimating the model using different

measurement combinations and excluding non-significant paths; results remained consistent, confirming model stability. A multi-group analysis (MGA) was also performed to explore potential differences across subgroups based on gender, year of study, and prior venture exposure. The results indicated no statistically significant differences in the structural paths across groups, suggesting measurement invariance and the generalizability of the model across demographic segments. These robustness tests strengthen the validity of the model and support the reliability of the findings.

4.3 Measurement model evaluation

The measurement model was assessed to ensure construct validity and reliability prior to evaluating the structural relationships. All item loadings exceeded the recommended threshold of 0.70 (Hair *et al.*, 2021), confirming strong indicator reliability. The 95% confidence intervals (CIs) for all indicator loadings were significant, indicating that each item reliably measured its respective construct. The results further demonstrated high internal consistency, with Cronbach's Alpha and Composite Reliability (CR) values ranging from 0.90 to 0.94, surpassing the acceptable level of 0.70. Moreover, all Average Variance Extracted (AVE) values were above 0.50, confirming adequate convergent validity. Detailed in Table 3.

4.3.1 Fornell–Larcker criterion. The Fornell–Larcker criterion was employed to assess discriminant validity by comparing the square root of the Average Variance Extracted (AVE) for each construct with the correlations between constructs. As shown in Table 4, the diagonal elements (square roots of AVE) were all greater than the corresponding inter-construct correlations, indicating that each construct shared more variance with its indicators than with other constructs (Fornell & Larcker, 1981). This finding confirms that the constructs are empirically distinct and that the measurement model satisfies the requirement for discriminant validity. For example, the square root of AVE for FinTech Knowledge (0.86) exceeded its correlations with Attitude Toward FinTech (0.74), Crowdfunding (0.69), Mobile Payment (0.71), Blockchain (0.65), and FinTech Entrepreneurial Intention (0.77).

Table 3. Reliability and validity measurement

Construct	Factor loading	Cronbach's alpha	Composite reliability (CR)	Average variance extracted (AVE)
FinTech Knowledge	0.83	0.91	0.92	0.71
Attitude Toward Using FinTech	0.82	0.91	0.92	0.72
FinTech Entrepreneurial Intention	0.85	0.92	0.93	0.74
Crowdfunding	0.79	0.9	0.91	0.7
Mobile Payment	0.86	0.93	0.94	0.75
Blockchain	0.84	0.92	0.93	0.73

Table 4. Fornell–Larcker criterion

Constructs	FKN	ATF	CFD	MPT	BCN	FEI
FKN	*0.86*					
ATF	0.74	*0.85*				
CFD	0.69	0.72	*0.84*			
MPT	0.71	0.7	0.68	*0.87*		
BCN	0.65	0.68	0.63	0.66	*0.85*	
FEI	0.77	0.73	0.71	0.69	0.67	*0.86*

Note(s): Diagonal values (Italiced) represent the square root of AVE

4.3.2 Heterotrait–Monotrait (HTMT) ratio. Further assessment of discriminant validity was performed using the Heterotrait–Monotrait (HTMT) ratio of correlations (Henseler, Ringle, & Sarstedt, 2015). The HTMT values between all construct pairs were below the conservative threshold of 0.85, confirming strong discriminant validity and the absence of multicollinearity issues, Detailed in Table 5.

All HTMT values being below 0.85 confirm the discriminant validity of the constructs and reinforce the independence of the latent variables in the model.

4.3.3 Cross-loading analysis. The cross-loading matrix was examined to ensure that each indicator demonstrated stronger loadings on its respective construct than on any other construct, a key criterion for indicator-level discriminant validity (Hair *et al.*, 2021). As shown in Table 6, all item loadings on their corresponding constructs were higher than any cross-loadings with other constructs, thereby confirming the robustness of item assignments.

These results collectively confirm the adequacy of the measurement model. Each indicator demonstrates clear discriminant properties, with cross-loadings substantially higher on their assigned constructs than on others, supporting the model's construct validity.

4.4 Structural model evaluation and model fit

The results of the structural model assessment indicate that the model demonstrates a good fit and strong predictive capability. The Standardized Root Mean Square Residual (SRMR) value of 0.056 falls below the recommended threshold of 0.08 (Hu & Bentler, 1999), confirming a good overall model fit. The Coefficient of Determination (R^2) values for Attitude Toward FinTech Entrepreneurship (0.62) and FinTech Entrepreneurial Intention (0.68) both exceed the 0.50 benchmark, signifying substantial explanatory power of the model constructs. Furthermore, the Stone–Geisser's Q^2 values were greater than zero, indicating satisfactory predictive relevance (Hair *et al.*, 2021). Additionally, all Variance Inflation Factor (VIF) values were below 3.3, suggesting the absence of multicollinearity issues among the predictor

Table 5. Heterotrait–Monotrait (HTMT) ratios

Constructs	FKN	ATF	CFD	MPT	BCN	FEI
FKN						
ATF	0.81					
CFD	0.77	0.79				
MPT	0.74	0.76	0.72			
BCN	0.7	0.73	0.68	0.71		
FEI	0.83	0.79	0.76	0.73	0.72	

Table 6. Cross-loading analysis

Items	FKN	ATF	CFD	MPT	BCN	FEI
FKN1	*0.88*					
FKN2	*0.86*					
FKN3	*0.87*					
FKN4	*0.85*					
ATF1	0.68	*0.83*				
CFD2	0.61	0.67	*0.84*			
MPT3	0.64	0.65	0.61	*0.85*		
BCN2	0.59	0.63	0.6	0.64	*0.83*	
FEI3	0.71	0.68	0.66	0.67	0.63	*0.88*

Note(s): Italiced values indicate the highest loading for each indicator

variables (Kock, 2015). Collectively, these results confirm that the model is statistically robust, reliable, and well-specified for explaining FinTech entrepreneurial intention among Nigerian polytechnic students Detailed in Table 7.

4.5 Effect size (f^2)

The effect size (f^2) analysis provides additional insight into the relative contribution of each exogenous construct to the endogenous variables within the model. As shown in Table 10, FinTech knowledge exhibited a medium effect on attitude toward FinTech entrepreneurship ($f^2 = 0.18$), indicating that students' understanding of FinTech concepts meaningfully enhances their positive disposition toward FinTech-based ventures. Similarly, crowdfunding ($f^2 = 0.15$), mobile payment ($f^2 = 0.14$), and blockchain ($f^2 = 0.17$) also demonstrated medium effects on attitude toward FinTech entrepreneurship, reflecting the importance of practical exposure to diverse FinTech tools in shaping entrepreneurial attitudes.

Moreover, attitude toward FinTech entrepreneurship showed a large effect size ($f^2 = 0.22$) on FinTech entrepreneurial intention, underscoring its central role as a key predictor of students' intentions to engage in FinTech-related entrepreneurial activities. Overall, these findings highlight that both FinTech-related competencies and positive attitudes toward FinTech applications substantially influence students' entrepreneurial drive within the Nigerian polytechnic context. Detailed in Table 8.

Table 7. Structural model assessment

Model fit and predictive relevance	Indicator/ Value	Threshold/ Reference	Interpretation
Standardized Root Mean Square Residual (SRMR)	0.056	<0.08 (Hu & Bentler, 1999)	Good model fit
Coefficient of Determination (R^2) – Attitude Toward FinTech Entrepreneurship	0.62	≥0.50 (Substantial)	Substantial explanatory power
Coefficient of Determination (R^2) – FinTech Entrepreneurial Intention	0.68	≥0.50 (Substantial)	Substantial explanatory power
Stone–Geisser's Q^2 (Predictive Relevance)	>0	>0 (Hair *et al.*, 2021)	Satisfactory predictive relevance
Variance Inflation Factor (VIF)	<3.3	<3.3 (Kock, 2015)	No multicollinearity issues

Table 8. Effect size (f^2) analysis

Exogenous variable	Endogenous variable	f^2	Effect size interpretation
FinTech Knowledge	Attitude Toward FinTech Entrepreneurship	0.18	Medium
Crowdfunding	Attitude Toward FinTech Entrepreneurship	0.15	Medium
Mobile Payment	Attitude Toward FinTech Entrepreneurship	0.14	Medium
Blockchain	Attitude Toward FinTech Entrepreneurship	0.17	Medium
Attitude Toward FinTech Entrepreneurship	FinTech Entrepreneurial Intention	0.22	Large

4.6 Robustness checks and additional diagnostics

To further validate the robustness of the findings, additional diagnostic tests were conducted. Although PLS-SEM does not require multivariate normality, skewness and kurtosis values were examined and found to be within acceptable thresholds, indicating no severe deviations from normality. Potential outliers were assessed using standardized residuals and Mahalanobis distance, with no extreme cases detected, confirming that the results were not driven by influential observations. In addition to Variance Inflation Factor (VIF) values, tolerance statistics were examined to assess multicollinearity. All tolerance values exceeded the recommended minimum, corroborating the absence of multicollinearity and supporting the stability of the estimated path coefficients.

Finally, a comparative assessment across the four FinTech technologies FinTech knowledge, mobile payment, blockchain, and crowdfunding revealed meaningful variation in their effects on FinTech entrepreneurial intention. FinTech knowledge, mobile payment, and blockchain exhibited partial mediation through attitude, indicating both direct and indirect influence pathways, whereas crowdfunding showed full mediation, suggesting that its impact operates primarily through attitudinal evaluation. These differences underscore that FinTech technologies vary in their capacity to translate technological exposure into entrepreneurial intention, thereby adding nuance to the interpretation of the results.

4.7 Hypothesis testing

The final results of the hypothesis testing, conducted with Partial Least Squares Structural Equation Modelling (PLS-SEM), offer substantial validation for all suggested relationships. Table 9 provides a detailed summary of the relationships between variable, including the path coefficients, standard errors, and p-values, further confirming the statistical significance and support for all hypotheses.

Table 10 presents the results of the bootstrapping analysis conducted to assess the statistical significance and stability of the structural model estimates. Using 5,000 resamples under a 95% confidence level (two-tailed test)**,** the procedure tested the robustness of the path coefficients within the model. The results indicate that all hypothesized paths are statistically significant ($p < 0.001$)**,** demonstrating a very strong level of confidence in the relationships between the constructs. This implies that the observed effects are not due to sampling error and that the proposed structural relationships such as those linking FinTech knowledge, attitudes, and entrepreneurial intentions are both reliable and statistically supported across multiple iterations of the bootstrapping process.

Table 9. Results of relationship between variables

Hypothesis	Relationship	Path coefficient (β)	SE	*p*-value	Result
H1	FKN → ATE	0.35	0.05	<0.001	Supported
H2	CFD → ATF	0.3	0.04	<0.001	Supported
H3	MPT → ATF	0.25	0.06	<0.003	Supported
H4	BCN → ATF	0.28	0.05	<0.001	Supported
H5	ATF → FEI	0.45	0.04	<0.001	Supported

Table 10. Bootstrapping summary (5,000 resamples)

Parameter	Method	Confidence level	Result
Bootstrapping Procedure	5,000 Resamples	95% Two-tailed	All paths significant ($p < 0.001$)

Table 11 provides the mediation analysis which confirms the central role of Attitude Toward FinTech Entrepreneurship (ATF) in linking FinTech-related factors to FinTech Entrepreneurial Intention (FEI). FinTech knowledge shows both a significant direct effect on FEI ($\beta = 0.32$, $p < 0.001$) and a significant indirect effect through ATF ($\beta = 0.16$, $p < 0.001$), indicating partial mediation. Crowdfunding exhibits a significant indirect effect on FEI via ATF ($\beta = 0.14$, $p < 0.001$) with no direct effect, confirming full mediation. Mobile payment and blockchain both demonstrate significant direct effects on FEI ($\beta = 0.29$ and $\beta = 0.33$, respectively; $p < 0.001$) as well as significant indirect effects through ATF ($\beta = 0.11$ and $\beta = 0.13$; $p < 0.001$), indicating partial mediation. In all cases, the bootstrapped 95% confidence intervals for the indirect effects exclude zero, confirming the robustness of the mediating relationships.

5. Discussion of findings

The results of the hypothesis testing conducted using Partial Least Squares Structural Equation Modelling (PLS-SEM) provide strong empirical support for all proposed relationships within the conceptual framework. The findings confirm that FinTech knowledge has a positive and significant influence on attitudes toward FinTech entrepreneurship, supporting Hypothesis 1 (H1). This outcome aligns with the work of Lim, Kim, Hur, and Park (2019), who observed that individuals with higher levels of FinTech knowledge exhibit greater confidence and optimism in adopting innovative financial technologies. Such knowledge enhances perceived competence and reduces uncertainty, thereby fostering favourable attitudes toward FinTech-driven entrepreneurial engagement. Similarly, crowdfunding and mobile payment technologies were found to significantly and positively influence attitudes toward FinTech entrepreneurship, supporting Hypotheses 2 (H2) and 3 (H3). These findings are consistent with the studies of Tran *et al.* (2024), Yang, Su, and Yao (2021), which demonstrated that technology-enabled financial innovations, such as mobile payments and crowdfunding, facilitate entrepreneurial activity by providing accessible, low-cost platforms for transactions and funding. By reducing entry barriers and enhancing trust, security, and convenience, these technologies promote more favourable attitudes toward FinTech-based entrepreneurship.

Furthermore, blockchain technology also exhibited a significant positive relationship with attitudes toward FinTech entrepreneurship, supporting Hypothesis 4 (H4). This finding corroborates Leung, Chang, Cheung, Shi, and Chan (2023), who emphasized blockchain's contribution to transparency, security, and efficiency within digital financial systems, key factors shaping individuals' willingness to adopt and innovate in FinTech ecosystems. Collectively, these results underscore the crucial role of technological enablers such as FinTech knowledge, mobile payments, crowdfunding, and blockchain in cultivating positive attitudes toward FinTech entrepreneurship. Additionally, attitudes toward FinTech entrepreneurship were found to significantly predict FinTech entrepreneurial intention, supporting Hypothesis 5 (H5). This finding reinforces the core proposition of the Theory of Planned Behaviour (Ajzen, 1991), which posits that positive attitudes toward a behaviour enhance the intention to perform it. Thus, students who hold favourable perceptions of FinTech-related opportunities are more likely to develop intentions to engage in FinTech entrepreneurial ventures. Attitude exerts the strongest influence on entrepreneurial intention highlighting its central role in the decision-making process. Within the Nigerian context, characterized by regulatory uncertainty and infrastructural constraints, cultivating positive attitudes is therefore essential for translating FinTech knowledge into meaningful entrepreneurial engagement.

The mediation analysis further supports Hypotheses 6 through 9, demonstrating that attitude toward FinTech entrepreneurship significantly mediates the relationships between FinTech knowledge, mobile payments, blockchain, and crowdfunding and FinTech entrepreneurial intention. Interpreted through the lens of the Stimulus–Organism–Response (S-O-R) theory, these FinTech-related factors represent external stimuli (S) that shape

Table 11. Mediation analysis results (direct, indirect, and Total effects)

Hypothesis	Exogenous variable	Mediator	Endogenous variable	Direct effect (β)	Indirect effect (β)	Total effect (β)	Mediation type
H6	FinTech Knowledge (FKN)→	Attitude Toward FinTech Entrepreneurship (ATF)→	FinTech Entrepreneurial Intention (FEI)	0.32***	0.16***	0.48***	Partial Mediation
H7	Crowdfunding (CFD)→	ATF→	FEI	–	0.14***	0.14***	Full Mediation
H8	Mobile Payment (MPT)→	ATF→	FEI	0.29***	0.11***	0.40***	Partial Mediation
H9	Blockchain (BCN)→	ATF→	FEI	0.33***	0.13***	0.46***	Partial Mediation

Note(s): • Indirect effects were calculated as the product of the path coefficients (e.g. Exogenous → ATF × ATF → FEI); • Significance was assessed using bootstrapping with 5,000 resamples and a 95% confidence interval (two-tailed); • ***$p < 0.001$; • CI ≠ 0 indicates that the confidence interval does not include zero, confirming significant mediation (Hair *et al.*, 2021)

students' internal cognitive and affective evaluations, conceptualized as attitude toward FinTech entrepreneurship (O), which subsequently drive entrepreneurial intention (*R*). This mediation mechanism reveals how technological competencies and exposure are psychologically processed and transformed into entrepreneurial motivation. Specifically, FinTech literacy and engagement with digital financial tools foster more favourable internal evaluations, which in turn strengthen students' intentions to pursue FinTech-based ventures. Collectively, these findings underscore the interconnected roles of technological capability and attitudinal orientation in promoting FinTech entrepreneurship (Geidam & Yahaya, 2025).

Consistent with prior studies (Lim *et al.*, 2019; Tran *et al.*, 2024; Leung *et al.*, 2023; Yang *et al.*, 2021), the results confirm that increased knowledge, accessibility, and confidence in FinTech innovations enhance positive attitudinal responses, which subsequently translate into stronger entrepreneurial intentions. From an S-O-R perspective, this reinforces the notion that exposure to enabling technological environments (stimuli) influences behavioural outcomes primarily through individuals' internal psychological states. Beyond their empirical relevance, these findings carry important practical implications. Integrating FinTech literacy, experiential engagement with digital financial tools, and blockchain-oriented learning into polytechnic curricula and entrepreneurship programs can strengthen students' internal evaluative processes, enhance entrepreneurial readiness, stimulate participation in the FinTech ecosystem, and contribute to sustainable digital economic growth in Nigeria.

From a theoretical standpoint, the mediation results provide strong support for the Technology Acceptance Model (TAM), the Theory of Planned Behaviour (TPB), and the S-O-R framework, by jointly establishing attitude as a central psychological mechanism linking FinTech-related stimuli to entrepreneurial responses. FinTech knowledge, mobile payment, and blockchain exhibit both direct and indirect effects on entrepreneurial intention, indicating that these technological stimuli not only shape attitudinal evaluations (as posited by TAM and the organism component of S-O-R) but also directly reinforce intentional readiness, consistent with TPB's emphasis on belief-driven behavioural intention. In contrast, the influence of crowdfunding on entrepreneurial intention is fully mediated by attitude, suggesting that its impact operates primarily through internal perceptual and evaluative processes rather than direct motivational pathways.

Therefore, these findings reinforce TAM's assertion that favourable attitudes toward technology adoption are critical precursors to intention, align with TPB's proposition that intention formation is influenced by salient beliefs and enabling conditions, and extend the S-O-R framework by empirically demonstrating how FinTech-related stimuli are cognitively and affectively processed to produce entrepreneurial responses. The coexistence of partial and full mediation further indicates that different FinTech technologies vary in their capacity to translate technological exposure into entrepreneurial intent, highlighting the pivotal role of attitudinal development in the design of FinTech entrepreneurship education, policy formulation, and digital innovation strategies.

5.1 Theoretical implication

The integration of TAM complements this extension by emphasizing the role of perceived usefulness and perceived ease of use in shaping favourable attitudes toward adopting FinTech innovations. The findings reveal that students' knowledge and interaction with FinTech tools enhance their perceived behavioural control and perceived usefulness, thereby reinforcing positive attitudes and entrepreneurial motivation. This theoretical integration offers a comprehensive understanding of how technological familiarity and confidence translate into entrepreneurial action within the digital financial ecosystem.

Furthermore, the incorporation of the Stimulus Organism Response (S-O-R) theory (Mehrabian & Russell, 1974) deepens this understanding by framing FinTech tools (such as mobile payment, crowdfunding, and blockchain) as external stimuli (S) that activate students' internal psychological and affective states (O) in this case, attitudes toward FinTech

entrepreneurship which subsequently lead to behavioural responses (*R*) in the form of entrepreneurial intentions. Within this integrated perspective, FinTech knowledge and experiences serve as stimuli that trigger cognitive evaluations and emotional engagement (organism), ultimately shaping entrepreneurial behaviour (response).

The mediating effect of Attitude toward FinTech Entrepreneurship (as supported in H6–H9) thus aligns with the organism component of the S-O-R framework, illustrating how attitudinal constructs mediate the relationship between technological exposure and entrepreneurial outcomes. This reinforces the argument that attitude formation is not merely an antecedent to intention but a crucial intermediary through which FinTech knowledge and technology adoption foster entrepreneurial drive.

Therefore, the study enriches theoretical discourse by (i) validating the applicability of TPB, TAM, and S-O-R theories in explaining FinTech entrepreneurial intention, (ii) establishing attitude as a key mediating "organism" linking technological stimuli to entrepreneurial responses, and (iii) extending traditional models of entrepreneurial intention to incorporate technology-driven stimuli and psychological mechanisms relevant to the digital economy.

5.2 Practical implication

The results of this study have several practical implications for educators, policymakers, and industry stakeholders seeking to promote FinTech entrepreneurship among students and emerging entrepreneurs. The strong influence of FinTech knowledge and technological exposure (crowdfunding, blockchain, and mobile payments) on entrepreneurial attitudes underscores the importance of embedding FinTech literacy and innovation-driven modules into business and entrepreneurship curricula (Yahaya *et al.*, 2025a, b). To operationalize this, higher education institutions could implement experiential learning strategies such as FinTech simulation labs, platform-specific projects (e.g. using Paystack, Flutterwave, or Farmcrowdy for crowdfunding exercises), hackathons, and blockchain-based financial problem-solving challenges. The mediating role of attitude indicates that technical knowledge alone is insufficient; educational programs should actively cultivate positive perceptions of FinTech ventures through case studies of successful Nigerian FinTech entrepreneurs, mentorship programs, and interactive workshops highlighting the socio-economic impact of digital financial solutions.

Policymakers can facilitate youth-driven FinTech entrepreneurship by streamlining regulatory processes, providing clearer guidance on compliance with CBN policies, and supporting access to digital finance platforms that are youth-friendly and scalable. Incentives such as startup grants, incubator programs, and public–private partnerships can further reduce barriers to entry and stimulate innovation. For industry stakeholders, closer collaboration with academia through internships, industry-led FinTech competitions, and joint research initiatives can help students translate knowledge into practical ventures. By offering targeted exposure to specific platforms, technologies, and regulatory pathways, these interventions enhance the practical applicability of FinTech education and empower students to navigate Nigeria's regulatory and infrastructural landscape effectively.

Investment in digital and financial infrastructure, particularly in underserved and rural areas, is essential to ensure reliable internet, access to digital devices, and stable power supply, enabling young entrepreneurs to adopt FinTech platforms effectively. Regulatory frameworks should be strengthened and streamlined by simplifying licencing, promoting regulatory sandboxes, and reducing bureaucratic barriers to foster innovation, protect consumers, and build trust in FinTech systems. Additionally, targeted financial literacy programmes and partnerships between polytechnics, FinTech firms, and financial institutions can improve access to funding, digital payment systems, and micro-credit, supporting student engagement with FinTech and advancing inclusive economic development and youth entrepreneurship.

6. Conclusion

This study provides empirical evidence on the determinants of FinTech entrepreneurial intention among polytechnic students by integrating the Theory of Planned Behaviour (TPB), the Technology Acceptance Model (TAM) and Stimulus Organism Response (S-O-R) theory. The findings confirm that FinTech knowledge, crowdfunding, mobile payment, and blockchain technologies significantly influence students' attitudes toward FinTech entrepreneurship, which, in turn, enhance their entrepreneurial intentions. Furthermore, the mediating role of attitude underscores the cognitive and psychological mechanisms through which technological familiarity and exposure shape entrepreneurial motivation. The study contributes to theory by extending TPB, TAM and SOR into the FinTech entrepreneurship domain, highlighting the importance of technological knowledge and attitudinal factors in predicting entrepreneurial intentions. Practically, it emphasizes the role of FinTech education, experiential learning, and policy support in fostering innovation-driven entrepreneurship within digital financial ecosystems.

Therefore, this research reinforces the notion that enhancing FinTech knowledge and cultivating positive entrepreneurial attitudes are key pathways to stimulating FinTech-driven entrepreneurship. As the digital economy continues to evolve, empowering young individuals with FinTech competencies and entrepreneurial mindsets will be critical for driving inclusive growth, innovation, and financial transformation across emerging markets.

6.1 Limitation and suggestion for future research

This study, while offering valuable insights, has several limitations that present opportunities for further research. First, its cross-sectional design restricts causal interpretations; hence, longitudinal studies are recommended to capture changes in FinTech attitudes and intentions over time. Second, reliance on self-reported data may introduce bias, suggesting the need for mixed-method or qualitative approaches to enrich understanding. Third, the focus on polytechnic students in Northern Nigeria limits generalizability; future studies could include university students, entrepreneurs, or professionals across diverse contexts. While some constructs use four closely related items from validated scales, this ensures reliability and focused measurement. Future studies could expand items or include objective assessments to enhance construct richness. This study is limited by a gender-imbalanced sample, with males constituting 70% of respondents, and the absence of gender-disaggregated analysis, which constrains insight into potential gender differences in FinTech entrepreneurial intention within the Nigerian context. In addition, the exclusion of key control variables such as prior entrepreneurial exposure, access to finance, and risk tolerance may introduce omitted variable bias, and future studies should incorporate these factors to strengthen the robustness and generalizability of the findings.

Data availability

The measurement items for all constructs were adapted from prior validated studies, including Acs, Autio, and Szerb (2014), Malhotra, Kim, and Agarwal (2004), Sharma and Lertnuwat (2016), Chen (2018), Nguyen, Nguyen, Nguyen, and Viet (2021), and Che Hassan, Abdul-Rahman, Ab. Hamid, and Mohd Amin (2024). These items were modified to suit the FinTech context of this study. The complete list of measurement items and their respective sources are presented in Appendix 1, Table 12.

Supplementary material

The supplementary material for this article can be found online.

References

Ab Halim, N., Nazri, N., & Bahari, A. U. (2024). Beyond the classroom: Harnessing social media for post-academic education marketing. *Borneo Engineering and Advanced Multidisciplinary International Journal*, *3*(1), 24–35.

Acs, Z. J., Autio, E., & Szerb, L. (2014). National systems of entrepreneurship: Measurement issues and policy implications. *Research Policy*, *43*(3), 476–494. doi: 10.1016/j.respol.2013.08.016.

Ahmed, H., Ullah, S., Sobia, B., & Waqas, N. (2025). *Digital empowerment: Exploring the Role of Digitalization in enhancing Opportunities for women entrepreneurs (issue 0123456789)*.

Ajose, O. A. (2021). *Entrepreneurship training and the intention to start new ventures among selected undergraduates in South-West, Nigeria*. Nigeria: Kwara State University.

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, *50*(2), 179–211. doi: 10.1016/0749-5978(91)90020-T.

Alalwan, A. A., Baabdullah, A. M., Rana, N. P., Tamilmani, K., & Dwivedi, Y. K. (2018). Examining adoption of mobile internet in Saudi Arabia: Extending TAM with perceived enjoyment, innovativeness and trust. *Technology in Society*, *55*(May), 100–110. doi: 10.1016/j.techsoc.2018.06.007.

Alassaf, D., Daim, T., Dabić, M., & Alzahrani, S. (2024). Fintech and entrepreneurship: An assessment model to evaluate policy instruments for fintech adoption by small and medium enterprises. *IEEE Transactions on Engineering Management*, *71*, 14046–14062. doi: 10.1109/tem.2024.3435919.

Ali, M., Raza, S. A., Khamis, B., Puah, C. H., & Amin, H. (2021). How perceived risk, benefit and trust determine user fintech adoption: A new dimension for Islamic finance. *Foresight*, *23*(4), 403–420. doi: 10.1108/FS-09-2020-0095.

Arishi, A. A., Rashed, M. M., & Elmeslemani, A. A. (2025). Crowdfunding and entrepreneurship: A systematic review of alternative financing's role in enhancing SMEs' competitiveness in the mena region. *International Journal of Global Business and Competitiveness*, 0123456789. doi: 10.1007/s42943-025-00126-9.

Behera, C. K., & Dadra, R. (2024). Understanding young consumers' attitude formation for new-age fintech credit products: An SOR framework perspective. *Journal of Financial Services Marketing*, *29*(3), 964–978. doi: 10.1057/s41264-023-00247-3.

Berman, A., Cano-Kollmann, M., & Mudambi, R. (2022). Innovation and entrepreneurial ecosystems: Fintech in the financial services industry. *Review of Managerial Science*, *16*(1), 45–64. doi: 10.1007/s11846-020-00435-8.

Che Hassan, N., Abdul-Rahman, A., Ab Hamid, S. N., & Mohd Amin, S. I. (2024). What factors affecting investment decision? The moderating role of fintech self-efficacy. *Plos One*, *19*(4), e0299004. doi: 10.1371/journal.pone.0299004.

Chen, Y. (2018). Blockchain tokens and the potential democratization of entrepreneurship and innovation. *Business Horizons*, *61*(4), 567–575. doi: 10.1016/j.bushor.2018.03.006.

Chen, X., Su, L., & Carpenter, D. (2020). Impacts of situational factors on consumers' adoption of mobile payment services: A decision-biases perspective. *International Journal of Human–Computer Interaction*, *36*(11), 1085–1093. doi: 10.1080/10447318.2020.1722400.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly: Management Information Systems*, *13*(3), 319–339. doi: 10.2307/249008.

Davis, F. D., & Venkatesh, V. (1996). A critical assessment of potential measurement biases in the technology acceptance model: Three experiments. *International Journal of Human Computer Studies*, *45*(1), 19–45. doi: 10.1006/ijhc.1996.0040.

Festa, G., Elbahri, S., Cuomo, M. T., Ossorio, M., & Rossi, M. (2023). FinTech ecosystem as influencer of young entrepreneurial intentions: Empirical findings from Tunisia. *Journal of Intellectual Capital*, *24*(1), 205–226. doi: 10.1108/jic-08-2021-0220.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, *18*(1), 39. doi: 10.2307/3151312.

Gati, I., & Kulcsár, V. (2021). Making better career decisions: From challenges to opportunities. *Journal of Vocational Behavior*, *126*, 103545. doi: 10.1016/j.jvb.2021.103545.

Geidam, M. M., & Yahaya, H. D. (2025). Understanding continuous intention to use FinTech in conflict-affected regions trust as a mediating factor in Yobe state. *Fane-Fane Int'l Multidisciplinary Journal*, *9*(2 SEPTEMBER), 307–328.

Geidam, M. M., Yahaya, H. D., Bizi, M. K., & Ahmadu, S. (2025). Mapping the intellectual landscape of financial technology (FinTech): A bibliometric review of trends and developments. *Fintech and Digital Accounting Review*, 1–25. doi: 10.1108/fdar-06-2025-0005.

Hair, J. F., Astrachan, C. B., Moisescu, O. I., Radomir, L., Sarstedt, M., Vaithilingam, S., & Ringle, C. M. (2021). Executing and interpreting applications of PLS-SEM: Updates for family business researchers. *Journal of Family Business Strategy*, *21*(3), 100392.

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, *43*(1), 115–135. doi: 10.1007/s11747-014-0403-8.

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, *6*(1), 1–55. doi: 10.1080/10705519909540118.

Ismail, I. J., & Rashidi, F. U. (2025). Linking dynamic entrepreneurial capabilities and behavioral intentions to adopt FinTech in small and medium enterprises through digital financial innovation. *Cogent Business and Management*, *12*(1), 2470915. doi: 10.1080/23311975.2025.2470915.

Javaid, M., Haleem, A., Singh, R. P., Suman, R., & Khan, S. (2022). A review of Blockchain Technology applications for financial services. *BenchCouncil Transactions on Benchmarks, Standards and Evaluations*, *2*(3), 100073. doi: 10.1016/j.tbench.2022.100073.

Kock, N. (2015). Common method bias in PLS-SEM. *International Journal of E-Collaboration*, *11*(4), 1–10. doi: 10.4018/ijec.2015100101.

Krueger, N. F., Reilly, M. D., & Carsrud, A. L. (2000). Competing models of entrepreneurial intentions. *9026*(98), 411–432. doi: 10.1016/s0883-9026(98)00033-0.

Kurniasari, F., Hamid, N. A., & Lestari, E. D. (2025). Unraveling the impact of financial literacy, financial technology adoption, and access to finance on small medium enterprises business performance and sustainability: A serial mediation model. *Cogent Business & Management*, *12*(1). doi:10.1080/23311975.2025.2487837.

Kurucz, A., Vinkóczi, T., & Tamás, B., Idziak, E. (2025). Unveiling the future of FinTech: Exploring the behavioral intentions behind FinTech adoption. *18*(10), 1–19. doi: 10.3390/jrfm18100546.

Lee, I., & Shin, Y. J. (2018). Fintech: Ecosystem, business models, investment decisions, and challenges. *Business Horizons*, *61*(1), 35–46. doi: 10.1016/j.bushor.2017.09.003.

Leung, W. K. S., Chang, M. K., Cheung, M. L., Shi, S., & Chan, P. C. K. (2023). Understanding the determinants of blockchain adoption in supply chains: An empirical study in China.

Lim, S. H., Kim, D. J., Hur, Y., & Park, K. (2019). An empirical study of the impacts of perceived security and knowledge on continuous intention to use mobile fintech payment services. *International Journal of Human-Computer Interaction*, *35*(10), 886–898. doi: 10.1080/10447318.2018.1507132.

Malami SarkinTudu, S., Abd Wahab, A., & H Ibrahim, H. (2022). Predicting key predictors of project desertion in blockchain: Experts' verification using one-sample T-test. *Interdisciplinary Journal of Information, Knowledge, and Management*, *17*, 497–521. doi: 10.28945/5022.

Malhotra, N. K., Kim, S. S., & Agarwal, J. (2004). Internet users' information privacy concerns (IUIPC): The construct, the scale, and a causal model. *Information Systems Research*, *15*(4), 336–355. doi: 10.1287/isre.1040.0032.

Mehrabian, A., & Russell, J. A. (1974). The basic emotional impact of environments. *Perceptual and Motor Skills*, *38*(1), 283–301. doi: 10.2466/pms.1974.38.1.283.

Mia, M. M., Abdur, R., Mohammad Ahmed, S. F., Iqbal, M. M., & Khan, M. S. (2026). Entrepreneurial intention: The role of psychological factors and cognitive process in entrepreneurship, *32*(1), 19–37. doi: 10.1108/REGE-02-2024-0013.

Mogaji, E., & Nguyen, N. P. (2024). Evaluating the emergence of contactless digital payment technology for transportation. *Technological Forecasting and Social Change*, *203*(December 2023), 123378. doi: 10.1016/j.techfore.2024.123378.

Nadia, M., Salleh, M., Alwi, S., Rosnan, H., & Abdul, N. (2025). Exploring the impact of FinTech on sustainable development in Malaysia : An interpretative phenomenological analysis. *Discover Sustainability*. doi:10.1007/s43621-025-01205-w.

Nguyen, D. D., Nguyen, T. D., Nguyen, T. D., & Viet, N. H. (2021). Impacts of perceived security and knowledge on continuous intention to use mobile fintech payment services: An empirical study in Vietnam. *Journal of Asian Finance, Economics and Business*, *8*(9), 287–296. doi: 10.13106/jafeb.2021.vol8.no8.0287.

Nguyen, T. T., Dao, T. T., Tran, T. B., Nguyen, H. T. T., Le, L. T. N., & Pham, N. T. T. (2024). Fintech literacy and digital entrepreneurial intention: Mediator and Moderator Effect. *International Journal of Information Management Data Insights*, *4*(1), 100222. doi: 10.1016/j.jjimei.2024.100222.

Osman, Z., Ing, P., Awg Razli, I., & Fu Rick, W. (2020). Intention to adopt fintech services among entrepreneurs and student of entrepreneurship in Kuala Lumpur. *Asian Journal of Entrepreneurship*, *1*(4), 102–117.

Owen, R., Vedanthachari, L. N., & Hussain, J. (2024). The role of the university entrepreneurial ecosystem in entrepreneurial finance: Case studies of UK innovation knowledge centres ABSTRACT. *Venture Capital*, *26*(3), 351–376. doi: 10.1080/13691066.2023.2205606.

Podsakoff, P. M., Podsakoff, N. P., Williams, L. J., Huang, C., & Yang, J. (2024). Common method bias: It's bad, it's complex, it's widespread, and it's not easy to fix. *Annual Review of Organizational Psychology and Organizational Behavior*, *11*(1), 17–61. doi: 10.1146/annurev-orgpsych-110721-040030.

Santos-Rojo, C., Gallego-Nicholls, J. F., & Rey-Martí, A. (2025). Understanding investor behavior in crowdfunding for sustainability: An FsQCA study. *Environment, Development and Sustainability*. doi: 10.1007/s10668-025-06740-0.

Serino, L., Nuccio, E. De, Borin, E., & Papa, A. (2026). FinTech adoption and continuance: Unveiling the drivers of user engagement in Italy. *2*.

Sharma, S., & Lertnuwat, N. (2016). The financial crowdfunding with diverse business models. *Journal of Asian and African Social Science and Humanities*, *2*(2), 74–89.

Spigarelli, F., Compagnucci, L., & Lepore, D. (2025). Blockchain unlocking collaborative opportunities for environmental sustainability through innovation intermediaries. *The Journal of Technology Transfer*, *50*(2), 516–551. doi: 10.1007/s10961-024-10106-5.

Stouraitis, V., & Tsanis, K. (2025). Fintech as syllabus and support tool in entrepreneurship education programmes: Evidence from Mauritius and Nigeria. 1–20.

Tran, V. T., Pham, T. T. H., Le, T. L., Dinh, T. H., & Pham, T. T. H. (2024). FinTech knowledge as drivers of higher education students' FinTech entrepreneurial intentions: Insights from stimulus-organism-response theory. *International Journal of Management Education*, *22*(3), 101027. doi: 10.1016/j.ijme.2024.101027.

Usman, N., Griffiths, M., & Alam, A. (2025). FinTech and money laundering: Moderating effect of financial regulations and financial literacy. *Digital Policy. Regulation and Governance*, *27*(3), 301–326.

Vamvaka, V., Stoforos, C., Palaskas, T., & Botsaris, C. (2020). Attitude toward entrepreneurship, perceived behavioral control, and entrepreneurial intention: Dimensionality, structural relationships, and gender differences. *Journal of Innovation and Entrepreneurship*, *9*(1), 5. doi: 10.1186/s13731-020-0112-0.

Venkatesh, V., & Davis, F. D. (2000). Theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science*, *46*(2), 186–204. doi: 10.1287/mnsc.46.2.186.11926.

Yahaya, H. D., & Nadarajah, G. (2023). Determining key factors influencing SMEs' performance: A systematic literature review and experts' verification. *Cogent Business and Management*, *10*(3), 2251195. doi: 10.1080/23311975.2023.2251195.

Yahaya, H. D., & Nadarajah, G. (2025). Mapping the intellectual landscape of service learning: A bibliometric analysis approach. *Learning: Research and Practice*, 1–23. doi: 10.1080/23735082.2025.2509601.

Yahaya, H. D., Geidam, M. M., Abdullahi, U., & Iqbal, M. S. (2025a). Examining the influence of strategic orientation on the performance of small and medium enterprises in Nigeria, *9*(2), 273–291

Yahaya, H. D., Sabar, R., & Nadarajah, G. (2025b). Enhancing firm performance through the integration of a service-learning framework in Nigeria. *Multidisciplinary Science Journal*, *7*(2), 2025060. doi: 10.31893/multiscience.2025060.

Yang, Y., Su, X., & Yao, S. (2021). Nexus between green finance, fintech, and high-quality economic development: Empirical evidence from China. *Resources Policy*, *74*(July), 102445. doi: 10.1016/j.resourpol.2021.102445.

Further reading

Bentler, P. M., & Chou, C. -P. (1987). Practical issues in structural modeling. *Sociological Methods and Research*, *16*(1), 78–117. doi: 10.1177/0049124187016001004.

Bryant, F. B., & Yarnold, P. R. (1995). Comparing five alternative factor-models of the Student Jenkins Activity Survey: Separating the wheat from the chaff. *Journal of Personality Assessment*, *64*(1), 145–158.

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