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DIGITAL TECHNOLOGY ENTREPRENEURIAL INTENTION IN THE DIGITAL ECONOMY CONTEXT: THE ROLE OF TECHNOLOGY ACCEPTANCE, ENTREPRENEURIAL KNOWLEDGE, DIGITAL COMPETENCE, AND DIGITAL EXPERIENCE

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ABSTRACT

The rapid growth of the digital economy has created new entrepreneurial opportunities while increasing the importance of technological and entrepreneurial capabilities. This study examines the determinants of digital entrepreneurial intention (DEI) by integrating the Theory of Planned Behavior (TPB), the Technology Acceptance Model (TAM), and Social Cognitive Theory (SCT). Data were collected from 315 graduates in Ho Chi Minh City and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The findings highlight four key results. First, perceived usefulness, perceived ease of use, entrepreneurial knowledge, digital competence, and digital experience positively influence digital entrepreneurial self-efficacy (DSE). Second, entrepreneurial knowledge is identified as the strongest predictor of DSE. Third, DSE significantly enhances digital entrepreneurial intention and mediates the relationships between technological and individual capability factors and DEI. Fourth, family business background strengthens the relationship between DSE and entrepreneurial intention. The study contributes to the digital entrepreneurship literature by proposing an integrated framework that combines technological, individual, and contextual factors. The findings also provide practical implications for universities and policymakers in fostering digital entrepreneurship through entrepreneurial education and digital skill development.

Keywords: Digital technology, entrepreneurial intention, technology acceptance, entrepreneurial knowledge, digital competence, digital experience.

1. INTRODUCTION

The ongoing expansion of the digital economy, fueled by advanced technologies such as artificial intelligence (AI), big data, blockchain, and digital platforms, has significantly reshaped how business activities are initiated and managed. As a result, digital entrepreneurship has become not only a key source of innovation but also an important catalyst for economic development and national digital transformation [1], [2]. In this context, examining DEI is of particular importance, as intention represents the most immediate antecedent of actual entrepreneurial behavior [3].

Previous research suggests that entrepreneurial intention is shaped by a variety of determinants, particularly those related to individual cognition, capabilities, and technological conditions. Within digital environments, constructs derived from the TAM, namely perceived usefulness (PU) and perceived ease of use (PEU), have been widely recognized as significant predictors of individuals' behavioral intention and engagement in

technology-driven activities [4], [5]. In addition, entrepreneurial knowledge equips individuals with the ability to identify opportunities, make informed decisions, and develop confidence in pursuing entrepreneurial ventures [6].

Furthermore, the increasing complexity of the digital economy requires individuals to possess not only digital competence but also practical experience with digital technologies. Prior studies indicate that digital competence contributes both directly and indirectly—through psychological mechanisms—to entrepreneurial intention [7], [8]. In particular, DSE has been highlighted as a central construct that connects technological factors and individual capabilities with entrepreneurial intention [9], [10]. Accumulating evidence suggests that DSE is among the most powerful predictors of digital entrepreneurial intention across diverse contexts.

Despite the growing body of literature, several research gaps remain. First, existing studies tend to examine technological factors, digital competence, or entrepreneurial education in isolation, with limited attention to integrated models that simultaneously incorporate these dimensions. Second, the mediating role of DSE and the underlying indirect mechanisms have not been sufficiently explored, especially in digitally transforming economies. Third, contextual influences, such as family business background (FBB), have received relatively little attention, particularly regarding their moderating effects in digital entrepreneurship research.

To overcome these research limitations, this study explores the key drivers of digital entrepreneurial intention, with particular attention to technology acceptance, entrepreneurial knowledge, digital competence, and digital experience. Furthermore, it analyzes the mediating function of DSE as well as the moderating influence of family business background (FBB) in shaping entrepreneurial intention.

To achieve these objectives, an integrated research model is developed and empirically tested using PLS-SEM. The findings are expected to contribute to both theoretical development and practical applications, particularly in enhancing entrepreneurship education and digital skill development, thereby supporting the growth of the digital entrepreneurship ecosystem.

2. THEORETICAL BACKGROUND AND HYPOTHESIS DEVELOPMENT

2.1. Theoretical background

This study adopts a synthesized theoretical approach by drawing on three established frameworks, namely the TPB, TAM, and SCT. The combination of these perspectives enables a more holistic understanding of digital entrepreneurial intention within the digital economy.

According to TPB, behavioral intention serves as the closest predictor of actual behavior and is shaped by key factors such as attitudes, subjective norms, and perceived behavioral control [3]. In the setting of digital entrepreneurship, DEI represents the degree to which individuals are ready and inclined to participate in entrepreneurial activities utilizing digital technologies.

Meanwhile, TAM focuses on how individuals form intentions toward technology adoption through cognitive evaluations, particularly perceived usefulness (PU) and perceived ease of use (PEU) [4]. These constructs have been widely validated as key drivers of technology-related behaviors and decision-making processes, especially in environments characterized by rapid technological change [5].

In addition, SCT emphasizes the dynamic interaction between personal factors, behavior, and environmental influences, with self-efficacy being a central component

shaping individual actions [11]. Within this study, self-efficacy is conceptualized as DSE, representing individuals' belief in their capability to successfully initiate and manage digital entrepreneurial activities.

By combining these theoretical perspectives, this study develops a holistic framework that captures the interplay between technological perceptions, individual capabilities, and psychological mechanisms. This integrated approach enables a more comprehensive explanation of digital entrepreneurial intention in contemporary digital environments.

2.2. Hypothesis development

2.2.1. Technology acceptance and digital entrepreneurial self-efficacy

From the perspective of the TAM, individuals' evaluations of a technology—particularly in terms of its usefulness and ease of use—play a critical role in shaping their confidence in applying that technology [4]. When users perceive digital tools as beneficial and uncomplicated to operate, they are more likely to develop a stronger sense of capability in utilizing them.

Recent evidence indicates that perceived usefulness and perceived ease of use contribute not only to behavioral outcomes but also to psychological mechanisms, especially by strengthening self-efficacy within digital contexts [12]. In the domain of digital entrepreneurship, perceived usefulness (PU) allows individuals to better appreciate the potential of technology in creating and managing new ventures, whereas perceived ease of use (PEU) helps minimize perceived complexity and technical obstacles. As a result, both factors are expected to reinforce digital entrepreneurial self-efficacy.

Based on this reasoning, the following hypotheses are proposed:

H1: Perceived usefulness (PU) positively influences digital entrepreneurial self-efficacy (DSE).

H2: Perceived ease of use (PEU) positively influences digital entrepreneurial self-efficacy (DSE).

2.2.2. Entrepreneurial knowledge and digital entrepreneurial self-efficacy

Entrepreneurial knowledge (EK) refers to the extent to which individuals comprehend entrepreneurial activities, including processes, opportunity recognition, and the skills required for venture creation. From the perspective of human capital theory, knowledge represents a critical resource that enhances individuals' ability to make informed decisions and increases their confidence in taking entrepreneurial actions [13].

Prior empirical research suggests that entrepreneurial knowledge does not only exert a direct influence but also operates indirectly by shaping psychological factors, particularly self-efficacy and attitudes toward entrepreneurship [6]. Within digital environments, EK plays an important role in enabling individuals to recognize and exploit business opportunities through digital platforms, thereby strengthening DSE.

Based on this argument, the following hypothesis is proposed:

H3: Entrepreneurial knowledge (EK) positively influences digital entrepreneurial self-efficacy (DSE).

2.2.3. Digital competence, digital experience, and digital entrepreneurial self-efficacy

Digital competence (DC) refers to an individual's ability to use technology, process information, and adapt to digital environments. Meanwhile, digital experience (DE) reflects the extent of an individual's practical exposure to digital technologies. According to SCT, competence and experience are key determinants of self-efficacy. Recent studies indicate that

digital competence significantly influences DSE, while practical experience further reinforces this belief [7], [8]. Therefore:

H4: Digital competence (DC) has a positive effect on DSE.

H5: Digital experience (DE) has a positive effect on DSE.

2.2.4. Direct determinants of digital entrepreneurial intention

According to TPB and SCT, in addition to psychological factors, individual resources such as knowledge, competence, and experience can directly influence behavioral intention. Specifically, entrepreneurial knowledge enables individuals to recognize opportunities; digital competence facilitates the implementation of ideas; and digital experience reduces perceived risks in digital environments. Therefore:

H6: Entrepreneurial knowledge (EK) has a positive effect on DEI.

H7: Digital competence (DC) has a positive effect on DEI.

H8: Digital experience (DE) has a positive effect on DEI.

2.2.5. The role of digital entrepreneurial self-efficacy

According to SCT, self-efficacy is one of the most powerful predictors of behavior and behavioral intention [11]. In the context of digital entrepreneurship, DSE has been identified as a central factor influencing DEI, with strong effect sizes reported in empirical studies. Therefore:

H9: Digital entrepreneurial self-efficacy (DSE) has a positive effect on DEI.

2.2.6. The mediating role of Digital entrepreneurial self-efficacy (DSE)

Based on SCT, resources such as technology, knowledge, and competence do not directly lead to behavior but operate through psychological mechanisms such as self-efficacy. Recent literature also confirms that DSE plays a critical mediating role between factors such as digital competence, education, and entrepreneurial intention. Therefore, the following mediation hypotheses are proposed:

H10: DSE mediates the relationship between PU and DEI.

H11: DSE mediates the relationship between PEU and DEI.

H12: DSE mediates the relationship between EK and DEI.

H13: DSE mediates the relationship between DC and DEI.

H14: DSE mediates the relationship between DE and DEI.

2.2.7. The moderating role of family business background (FBB)

Family business background (FBB) represents a contextual condition that can shape individuals' entrepreneurial behavior. Individuals raised in families engaged in business activities are typically more exposed to entrepreneurial practices, which contributes to their ability to transform internal beliefs into concrete actions.

Within the digital entrepreneurship setting, FBB is expected to reinforce the relationship between DSE and DEI. This can be explained by the fact that individuals with such a background are better positioned to utilize available resources and recognize business opportunities more effectively. Therefore:

H15: Family business background (FBB) positively moderates the relationship between DSE and DEI.

2.3. Research model

Drawing on the theoretical foundations and the proposed hypotheses, this study constructs an integrated framework to examine DEI within the digital economy context. The proposed model encompasses three main categories of determinants, namely technological factors, individual capability factors, and contextual influences.

In particular, technology acceptance variables—perceived usefulness (PU) and perceived ease of use (PEU)—are hypothesized to enhance DSE. Meanwhile, individual capability factors, including entrepreneurial knowledge (EK), digital competence (DC), and digital experience (DE), are expected to exert both direct effects on DEI and indirect effects via DSE. This highlights the existence of multiple pathways through which individual resources contribute to the formation of entrepreneurial intention.

Moreover, DSE is conceptualized as a key construct within the model, functioning as a mediating mechanism that connects technological perceptions and individual capabilities with digital entrepreneurial intention. This conceptualization aligns with Social Cognitive Theory, which underscores the importance of self-efficacy in converting individual resources into behavioral intention [11].

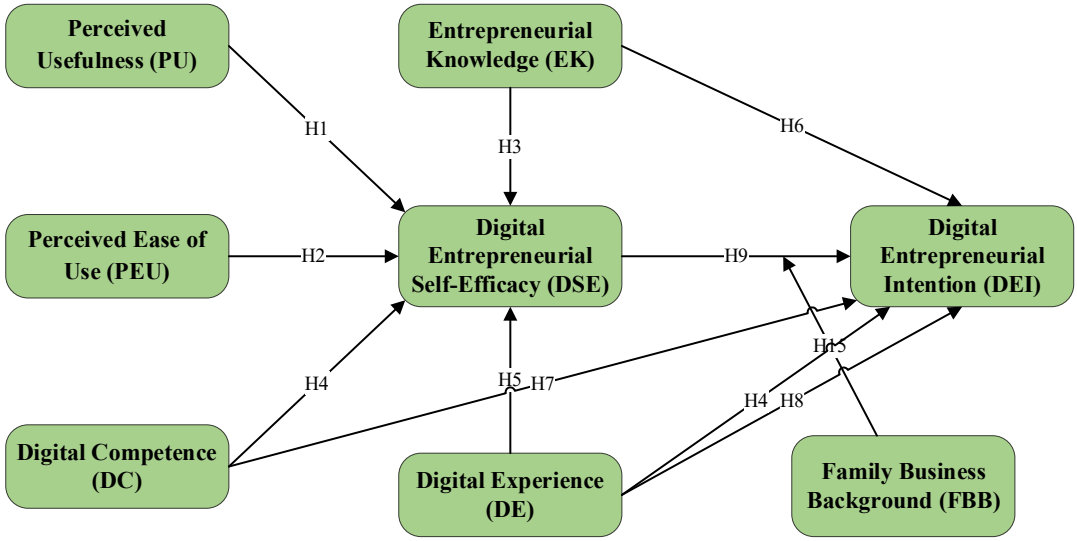

Figure 1. Proposed Research Model

In addition, family business background (FBB) is introduced as a moderating factor, expected to reinforce the linkage between DSE and DEI. This highlights the significance of contextual influences in strengthening the process through which self-efficacy is translated into entrepreneurial intention.

Overall, the proposed model integrates diverse theoretical perspectives into a coherent framework that provides a holistic explanation of digital entrepreneurial intention within the digital economy. The structure of the model is illustrated in Figure 1.

3. METHODOLOGY

3.1. Research design and data collection

This study adopts a quantitative research approach to examine the determinants of digital entrepreneurial intention in the context of the digital economy. The target population consists of individuals who graduated within the previous 1 to 10 years in Ho Chi Minh City, Vietnam. This group was selected because graduates at the early stage of their careers are more likely to

possess both educational exposure and practical experience relevant to digital technologies and entrepreneurial activities.

Data were collected using a structured questionnaire survey. Prior to the official survey, the questionnaire was reviewed by several academic experts in entrepreneurship and digital business to ensure content clarity and contextual appropriateness. A pilot test was subsequently conducted with a small group of respondents to refine wording and improve the reliability of the measurement items.

The study employed a convenience sampling technique combined with online distribution methods. The questionnaire was disseminated through social media platforms, alumni networks, and professional online communities to reach respondents with relevant backgrounds. Data collection was conducted over a two-month period from January to February 2026.

Regarding sample size determination, this study followed the recommendation of Hair et al. [14], which suggests that PLS-SEM requires an adequate sample size to ensure stable estimation for complex models involving multiple constructs and structural relationships. In addition, the "10-times rule" was considered, whereby the minimum sample size should be at least ten times the maximum number of structural paths directed at a latent construct. Since the most complex construct in the proposed model receives six structural paths, the minimum required sample size was 60 observations. Therefore, the final sample of 315 valid responses substantially exceeded the minimum requirement and was considered appropriate for PLS-SEM analysis.

Initially, 350 questionnaires were distributed. After eliminating incomplete and invalid responses during the data screening process, 315 valid observations were retained for subsequent analysis. This sample size is considered sufficient to achieve reliable statistical estimation and improve the robustness of the findings.

The measurement items were adapted from established studies and adjusted to fit the digital entrepreneurship context. All constructs were measured using a five-point Likert scale ranging from 1 ("strongly disagree") to 5 ("strongly agree") in order to consistently capture respondents' perceptions and evaluations.

3.2. Measurement scales

The study examines several key constructs, including perceived usefulness (PU), perceived ease of use (PEU), entrepreneurial knowledge (EK), digital competence (DC), digital experience (DE), digital entrepreneurial self-efficacy (DSE), digital entrepreneurial intention (DEI), and family business background (FBB).

The measurement indicators were adapted from prior validated research to ensure content validity. In particular, perceived usefulness (PU) and perceived ease of use (PEU) were derived from Davis [4], while entrepreneurial knowledge (EK) was adapted from Farani et al. [6]. Measures for digital competence (DC) and digital experience (DE) were developed based on recent studies in the digital entrepreneurship domain [7], [8]. Digital entrepreneurial self-efficacy (DSE) was conceptualized in line with Social Cognitive Theory [11], whereas digital entrepreneurial intention (DEI) was grounded in the Theory of Planned Behavior [3]. The construct of family business background (FBB) was adapted from Carr and Sequeira [15].

All constructs were modeled as reflective variables. The measurement model was evaluated by examining reliability and validity criteria, including Cronbach's Alpha, Composite Reliability (CR), Average Variance Extracted (AVE), and discriminant validity assessed through the Heterotrait–Monotrait (HTMT) ratio.

Table 1. Measurement scales of constructs

Construct	Code	Statement	Source
Perceived Usefulness (PU)	PU1	Using digital technology improves my entrepreneurial performance	[4, 10]
	PU2	Digital technology increases my productivity in business activities	[4]
	PU3	Digital technology enhances my effectiveness in starting a business	
	PU4	Digital technology is useful for digital entrepreneurship	
Perceived Ease of Use (PEU)	PEU1	Learning to use digital technology is easy for me	[4]
	PEU2	It is easy to become skillful at using digital technology	
	PEU3	Digital technology is easy to use	
	PEU4	Interacting with digital platforms is clear and understandable	
Entrepreneurial Knowledge (EK)	EK1	I understand how to identify business opportunities	[6]
	EK2	I have knowledge about starting a new business	
	EK3	I understand business planning and management	
	EK4	I know how to develop a digital business model	
Digital Competence (DC)	DC1	I can effectively use digital tools	[8]
	DC2	I am capable of solving problems using digital technologies	
	DC3	I can adapt to new digital technologies quickly	
	DC4	I have strong digital skills for business activities	
Digital Experience (DE)	DE1	I have experience using digital platforms	[8]
	DE2	I have participated in digital business activities	
	DE3	I frequently use digital tools in my daily life	
	DE4	I have experience working with digital technologies	
Digital Entrepreneurial Self-Efficacy (DSE)	DSE1	I am confident in starting a digital business	[11]
	DSE2	I can identify digital business opportunities	[11]
	DSE3	I can develop a digital business model	
	DSE4	I can manage digital business operations	
	DSE5	I can successfully launch a digital startup	
Digital Entrepreneurial Intention (DEI)	DEI1	I intend to start a digital business in the future	[3]
	DEI2	I am determined to create a digital startup	
	DEI3	I will make every effort to start a digital business	
	DEI4	My career goal is to become a digital entrepreneur	
Family Business Background (FBB)	FBB1	My family has a business background	[15]
	FBB2	I have been exposed to family business activities	
	FBB3	My family encourages entrepreneurial activities	

3.3. Data analysis method

The data were analyzed using PLS-SEM implemented in SmartPLS software. This analytical approach is particularly suitable for predictive research and for examining complex models that involve multiple constructs, as well as mediating and moderating relationships [14].

The analytical process was conducted in two distinct phases. The first phase focused on assessing the measurement model to ensure the reliability and validity of the constructs. This evaluation involved analyzing indicator loadings, internal consistency measures (Cronbach's Alpha and Composite Reliability), convergent validity through the Average Variance Extracted (AVE), and discriminant validity assessed using the Heterotrait–Monotrait (HTMT) ratio.

In the second stage, the structural model was assessed to test the proposed hypotheses and examine the relationships among constructs. This involved evaluating potential collinearity issues using Variance Inflation Factor (VIF), estimating path coefficients, and assessing the explanatory power of the model through the coefficient of determination (R^2). In addition, the predictive relevance of the model was examined.

To determine the statistical significance of the estimated relationships, a bootstrapping procedure with 5,000 resamples was performed. This approach allows for robust estimation of standard errors and enables the testing of direct, indirect (mediating), and moderating effects within the proposed model.

4. RESULTS & DISCUSSION

4.1. Sample characteristics

Table 2 summarizes the demographic characteristics of the respondents. The final sample includes 315 participants, with a fairly balanced gender composition, comprising 54.92% females and 45.08% males.

In terms of age distribution, most respondents are concentrated in the 23–26 age group (40.00%), followed by those aged 27–30 (34.92%) and 31–35 (25.08%). This pattern indicates that the sample is largely composed of young individuals who are in the early stages of their professional development.

With respect to years since graduation, the largest proportion of respondents completed their studies within the past 1–3 years (41.90%), while 35.87% graduated 4–7 years ago and 22.22% fall into the 8–10 year category. This variation suggests that the sample captures individuals with different levels of post-graduation experience.

Overall, the demographic structure of the sample demonstrates both diversity and relevance, thereby supporting the robustness and generalizability of the study findings.

Table 2. Profile of the samples

Variable	Category	Frequency	Percent (%)
Gender	Female	173	54.92
	Male	142	45.08
Age	23–26	126	40.00
	27–30	110	34.92
	31–35	79	25.08
Years since graduation	1–3 years	132	41.90
	4–7 years	113	35.87
	8–10 years	70	22.22

4.2. Measurement model

The adequacy of the measurement model was assessed by examining its reliability, convergent validity, and discriminant validity. As reported in Table 3, all constructs satisfy the recommended evaluation criteria.

In terms of reliability, the Cronbach's Alpha coefficients of the latent variables range from 0.789 to 0.873, which lie within the acceptable range of 0.6 to 0.9. Additionally, Composite Reliability (CR) values for all constructs are above 0.8, suggesting strong internal consistency among the measurement items. These results indicate that the constructs demonstrate a satisfactory level of reliability.

Regarding convergent validity, the indicator loadings exceed the recommended threshold of 0.7, with values ranging from 0.741 to 0.896. Moreover, the Average Variance Extracted (AVE) values are all above 0.5, varying between 0.612 and 0.798, indicating that the observed variables adequately represent their respective latent constructs. Hence, convergent validity is confirmed.

Discriminant validity was further evaluated using the Heterotrait–Monotrait (HTMT) ratio. All HTMT values fall below the threshold of 0.85, suggesting that the constructs are sufficiently distinct from one another. This provides evidence supporting discriminant validity.

It is worth noting that the indicators related to family business background (FBB) show relatively high loadings (between 0.889 and 0.896) and an AVE value of 0.798, indicating strong convergence. However, these values remain within acceptable limits and do not raise concerns regarding redundancy among the indicators.

Overall, the measurement model meets the necessary reliability and validity requirements of PLS-SEM, thereby providing a sound basis for subsequent structural model analysis.

Table 3. Results of Measurement Model Assessment: Reliability, Convergent Validity, and Discriminant Validity

Latent Variable	Indicators	Outer loadings	Cronbach's Alpha	Composite Reliability (CR)	Average Variance Extracted (AVE)
DC	DC1	0.767	0.804	0.872	0.629
	DC2	0.747			
	DC3	0.821			
	DC4	0.775			
DE	DE1	0.790	0.795	0.867	0.620
	DE2	0.767			
	DE3	0.788			
	DE4	0.828			
DEI	DEI1	0.787	0.789	0.863	0.612
	DEI2	0.793			
	DEI3	0.769			
	DEI4	0.780			
DSE	DSE1	0.794	0.843	0.889	0.615
	DSE2	0.774			
	DSE3	0.776			
	DSE4	0.807			
	DSE5	0.769			

EK	EK1	0.761	0.795	0.867	0.620
	EK2	0.790			
	EK3	0.783			
	EK4	0.814			
FBB	FBB1	0.894	0.873	0.922	0.798
	FBB2	0.896			
	FBB3	0.889			
PEU	PEU1	0.788	0.823	0.881	0.649
	PEU2	0.836			
	PEU3	0.747			
	PEU4	0.848			
PU	PU1	0.785	0.803	0.869	0.624
	PU2	0.741			
	PU3	0.840			
	PU4	0.792			

Table 4. Discriminant Validity Assessment Using the Heterotrait–Monotrait Ratio (HTMT)

	DC	DE	DEI	DSE	EK	FBB	PEU	PU	FBB x DSE
DC									
DE	0.104								
DEI	0.413	0.397							
DSE	0.343	0.357	0.784						
EK	0.090	0.143	0.573	0.556					
FBB	0.436	0.366	0.752	0.682	0.661				
PEU	0.092	0.101	0.091	0.207	0.062	0.076			
PU	0.084	0.096	0.083	0.213	0.068	0.077	0.135		
FBB x DSE	0.084	0.059	0.273	0.119	0.13	0.091	0.036	0.111	

4.3. Structural model

The structural model was evaluated by examining collinearity issues and analyzing the relationships among the constructs in the model. The results presented in Table 5 indicate that the model does not suffer from multicollinearity.

Specifically, the Variance Inflation Factor (VIF) values for all constructs are below the threshold of 3.0, ranging from 1.013 to 2.148. According to the recommendation of Hair et al. [14], VIF values below 3 indicate that no serious multicollinearity exists among the predictor variables. This confirms that the explanatory variables in the model are relatively independent and do not bias the estimation of path coefficients.

For the main dependent variable, digital entrepreneurial intention (DEI), the predictor variables—including digital competence (DC), digital experience (DE), entrepreneurial knowledge (EK), digital entrepreneurial self-efficacy (DSE), family business background (FBB), and the interaction term (FBB × DSE)—all exhibit low VIF values (ranging from 1.024 to 2.148). This suggests that the model maintains stability in the structural regression analysis.

In addition, the predictors of DSE, namely perceived usefulness (PU), perceived ease of use (PEU), entrepreneurial knowledge (EK), digital competence (DC), and digital experience (DE), also show very low VIF values (approximately close to 1.0), indicating a high level of independence among these variables. This is particularly important in a model with multiple predictors, as it enhances the robustness of hypothesis testing.

Moreover, the interaction term (FBB × DSE) has a low VIF value (1.024), indicating that the inclusion of the moderating variable does not introduce multicollinearity into the model. This ensures the validity of testing the moderating role of family business background in the relationship between digital entrepreneurial self-efficacy and digital entrepreneurial intention.

In summary, the results confirm that the structural model does not violate the assumption of multicollinearity, providing a solid foundation for further analysis of causal relationships and hypothesis testing.

Table 5. Collinearity Statistics (VIF) - Inner Model – Matrix

	DC	DE	DEI	DSE	EK	FBB	PEU	PU	FBB x DSE
DC			1.275	1.013					
DE			1.158	1.027					
DEI									
DSE			1.685						
EK			1.656	1.014					
FBB			2.148						
PEU				1.021					
PU				1.021					
FBB x DSE			1.024						

The outcomes of the hypothesis testing, as reported in Table 6 and Figure 2, demonstrate that the majority of the proposed relationships are statistically supported and align with the theoretical framework.

Concerning technology acceptance variables, both perceived usefulness (PU) and perceived ease of use (PEU) exhibit positive and statistically significant effects on digital entrepreneurial self-efficacy (DSE), with path coefficients of $\beta = 0.212$ and $\beta = 0.196$ ($p < 0.001$), respectively. This finding indicates that favorable evaluations of technology enhance individuals' confidence in applying digital tools for entrepreneurial purposes.

Entrepreneurial knowledge (EK) emerges as the most influential predictor of DSE ($\beta = 0.434$, $p < 0.001$), surpassing all other variables. This result underscores the importance of knowledge as a key resource in strengthening self-efficacy, in line with human capital theory. Additionally, digital competence (DC) and digital experience (DE) also contribute positively to DSE ($\beta = 0.266$ and $\beta = 0.225$, respectively; $p < 0.001$), suggesting that both skill proficiency and hands-on experience are essential for building confidence in digital contexts.

For the dependent construct, digital entrepreneurial intention (DEI), EK, DC, and DE are found to exert positive direct influences ($\beta = 0.120$, $\beta = 0.124$, and $\beta = 0.123$, respectively; $p < 0.05$). Nevertheless, their effects are relatively weaker when compared to that of DSE. In contrast, DSE shows the strongest impact on DEI ($\beta = 0.341$, $p < 0.001$), emphasizing its central role in shaping entrepreneurial intention.

The mediation analysis further indicates that all indirect effects via DSE are statistically significant ($p < 0.001$). Among these, the most substantial indirect pathway is EK → DSE →

DEI (β = 0.148), followed by DC (β = 0.091), DE (β = 0.077), PU (β = 0.072), and PEU (β = 0.067). These results highlight the pivotal function of DSE in transmitting the effects of technological and individual capability factors to entrepreneurial intention.

Furthermore, the moderating analysis reveals that family business background (FBB) positively influences the relationship between DSE and DEI (β = 0.155, p < 0.001). This suggests that individuals with a business-oriented family background are more capable of converting their self-efficacy into entrepreneurial intention. In other words, FBB serves as a reinforcing factor that amplifies this relationship.

Table 6. Hypothesis testing

Hypothesis		Path coefficient	t-value	p-value	Decisions
H1	PU -> DSE	0.212	5.006	0.000	Supported
H2	PEU -> DSE	0.196	4.567	0.000	Supported
H3	EK -> DSE	0.434	10.523	0.000	Supported
H4	DC -> DSE	0.266	6.531	0.000	Supported
H5	DE -> DSE	0.225	5.426	0.000	Supported
H6	EK -> DEI	0.120	2.439	0.015	Supported
H7	DC -> DEI	0.124	3.032	0.002	Supported
H8	DE -> DEI	0.123	2.772	0.006	Supported
H9	DSE -> DEI	0.341	6.113	0.000	Supported
H10	PU -> DSE -> DEI	0.072	3.585	0.000	Supported
H11	PEU -> DSE -> DEI	0.067	3.485	0.000	Supported
H12	EK -> DSE -> DEI	0.148	5.518	0.000	Supported
H13	DC -> DSE -> DEI	0.091	4.654	0.000	Supported
H14	DE -> DSE -> DEI	0.077	4.182	0.000	Supported
H15	FBB x DSE -> DEI	0.155	4.747	0.000	Supported

Figure 2 further indicates that the coefficients of determination (R^2) for DSE and DEI reach 41.3% and 55.7%, respectively, suggesting that the model possesses substantial explanatory capability. In particular, perceived usefulness (PU), perceived ease of use (PEU), entrepreneurial knowledge (EK), digital competence (DC), and digital experience (DE) collectively account for a considerable share of the variance in DSE. In turn, DSE, together with EK, DC, DE, and family business background (FBB), explains a notable proportion of the variation in DEI. These findings indicate that the proposed model performs well in explaining and predicting the key constructs.

Overall, the structural model provides evidence that both technological factors and individual capabilities affect digital entrepreneurial intention through direct pathways as well as indirect mechanisms mediated by digital entrepreneurial self-efficacy. In addition, contextual influences, particularly family business background, further enhance this relationship. These results support the robustness of the proposed framework and offer deeper insights into the factors shaping digital entrepreneurial intention within the digital economy.

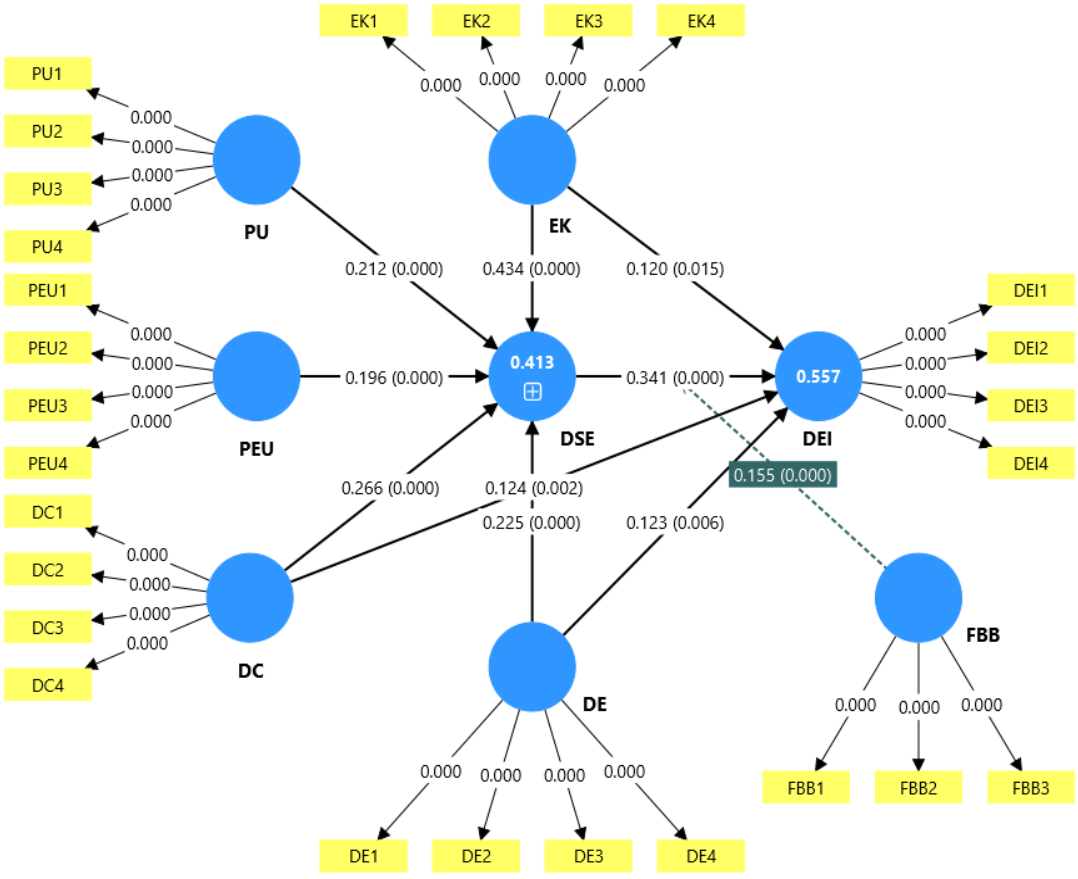

Figure 2. Output of the PLS-SEM

4.4. Discussion

The findings of this study provide important empirical evidence on the determinants of digital entrepreneurial intention in the context of the digital economy, while confirming the central role of DSE within the proposed model.

First, the results indicate that factors derived from the TAM, including perceived usefulness (PU) and perceived ease of use (PEU), have positive effects on DSE. This finding is consistent with prior studies by Davis [4] and Venkatesh et al. [5], which highlight that positive perceptions of technology enhance technology acceptance and usage. In the present study, this finding extends TAM by demonstrating that PU and PEU not only influence technology usage behavior but also contribute to the development of entrepreneurial self-efficacy in digital contexts. This result is also aligned with Wibowo et al. [10], who emphasize the indirect role of technology acceptance through self-efficacy.

Notably, entrepreneurial knowledge (EK) is identified as the most influential factor affecting DSE, exceeding the effect of digital competence (DC). This finding is consistent with human capital theory [13] and the study by Farani et al. [6], which emphasize that knowledge serves as a fundamental resource enabling individuals to recognize opportunities and develop confidence in entrepreneurial activities. In the context of digital entrepreneurship, this result suggests that possessing an entrepreneurial mindset and the ability to identify potential business opportunities may be more critical than merely having technical skills in using digital technologies. While digital competence supports the operational use of digital tools, entrepreneurial knowledge helps individuals transform technological resources into innovative

business ideas and strategic actions. Therefore, entrepreneurial knowledge not only directly enhances self-efficacy but also acts as a catalyst in strengthening entrepreneurial intention within digital environments.

Furthermore, digital competence (DC) and digital experience (DE) are found to have significant positive effects on DSE, which is consistent with Social Cognitive Theory [11], where self-efficacy is shaped by both capability and experiential learning. This finding is also in line with recent studies such as Ta et al. [7] and Zhao et al. [8], highlighting the importance of digital skills and experience in fostering entrepreneurial intention in digital environments.

Regarding DEI, the results reveal that EK, DC, and DE have positive direct effects, although their impact is relatively modest. This finding supports prior research suggesting that individual resources often influence intention indirectly through psychological mechanisms [3], [11]. In particular, DSE is identified as the most influential determinant of DEI, reinforcing the conclusion of previous studies that self-efficacy is a key predictor of entrepreneurial intention [9]. This suggests that, in the digital economy context, self-efficacy plays a pivotal role in transforming individual resources into entrepreneurial intentions.

The study also confirms the mediating role of DSE in the relationships between technological factors, individual capabilities, and entrepreneurial intention. This finding is consistent with Social Cognitive Theory, which posits that external inputs influence behavior through psychological processes. The result contributes to a deeper understanding of indirect mechanisms in digital entrepreneurship research and provides additional empirical evidence for the mediating role of self-efficacy, which has been underexplored in prior studies.

A notable contribution of this study is the identification of the moderating role of FBB. The results indicate that FBB positively strengthens the relationship between DSE and DEI. This finding is consistent with Carr and Sequeira [15], who argue that exposure to family business environments enhances individuals' entrepreneurial capabilities and facilitates the translation of intention into action. In the context of this study, FBB not only acts as a contextual factor but also amplifies the effect of self-efficacy, thereby highlighting the importance of environmental influences in digital entrepreneurship models.

Overall, the findings not only confirm established theories such as TPB, TAM, and SCT but also extend these frameworks in the context of the digital economy. Specifically, this study proposes an integrated model that combines technological factors, individual capabilities, and contextual influences, while clarifying the mediating and moderating mechanisms underlying digital entrepreneurial intention. These findings contribute to addressing existing research gaps and provide a foundation for future studies in digital entrepreneurship.

5. CONCLUSION AND IMPLICATIONS

5.1. Conclusion

This study investigates the key determinants of digital entrepreneurial intention by adopting an integrated theoretical framework that combines the TPB, TAM, and SCT. The analysis is based on survey data obtained from 315 graduates in Ho Chi Minh City and examined using PLS-SEM, generating robust empirical insights.

First, technology-related factors, including perceived usefulness (PU) and perceived ease of use (PEU), are found to have positive effects on digital entrepreneurial self-efficacy (DSE). Second, individual capability factors such as entrepreneurial knowledge (EK), digital competence (DC), and digital experience (DE) significantly influence DSE, with entrepreneurial knowledge identified as the strongest predictor. Third, DSE is confirmed as the central construct with the strongest impact on digital entrepreneurial intention (DEI), while

also serving as a mediating mechanism linking technological and individual factors to entrepreneurial intention.

In addition, the study reveals that family business background (FBB) plays a positive moderating role in the relationship between DSE and DEI, indicating that contextual factors can enhance the conversion of self-efficacy into entrepreneurial intention.

Overall, the findings suggest that digital entrepreneurial intention is not only driven by technological factors but also significantly shaped by individual capabilities and contextual influences, with self-efficacy playing a pivotal role.

5.2. Theoretical implications

This study offers several theoretical contributions to the literature on digital entrepreneurship.

First, the study extends the TAM by demonstrating that perceived usefulness and perceived ease of use do not only explain technology-related behavioral intention, but also contribute to the formation of digital entrepreneurial self-efficacy. This finding suggests that technology acceptance can serve as an important psychological antecedent in digital entrepreneurship research. Therefore, the study expands the application of TAM from technology adoption behavior to the formation of entrepreneurial intention in digital environments.

Second, the study reinforces SCT by confirming the central role of digital entrepreneurial self-efficacy in transforming technological perceptions and individual capabilities into entrepreneurial intention. The empirical results show that DSE has the strongest direct effect on digital entrepreneurial intention and mediates the relationships between PU, PEU, EK, DC, DE and DEI. This provides clearer evidence that self-efficacy functions as a key psychological mechanism through which knowledge, competence, and experience are converted into entrepreneurial intention.

Third, the study contributes to the TPB by enriching the understanding of intention formation in the digital entrepreneurship context. While TPB emphasizes intention as a direct antecedent of behavior, this study clarifies how entrepreneurial intention is shaped by digital capability, entrepreneurial knowledge, technological perception, and self-efficacy. In this sense, the study provides a more context-specific explanation of entrepreneurial intention in the digital economy.

Fourth, this study adds to the existing digital entrepreneurship literature by integrating technological, individual, psychological, and contextual factors into a single analytical framework. Previous studies often examined technology acceptance, digital competence, or entrepreneurial knowledge separately. By combining these factors with DSE and FBB, this study offers a more comprehensive explanation of digital entrepreneurial intention.

Fifth, the study advances the literature by confirming the moderating role of family business background. The finding that FBB strengthens the relationship between DSE and DEI suggests that contextual and family-based resources can amplify the effect of self-efficacy on entrepreneurial intention. This contribution is particularly relevant in Vietnam, where family business networks, informal learning, and family support often play an important role in entrepreneurial decision-making. Thus, the study extends digital entrepreneurship research by incorporating the Vietnamese business and family context into the theoretical model.

Overall, the findings provide a clearer theoretical explanation of how digital entrepreneurial intention is formed through the interaction of technology acceptance, entrepreneurial knowledge, digital competence, digital experience, self-efficacy, and family business background. This integrated perspective enriches existing studies on entrepreneurship and digital transformation, especially in emerging economies such as Vietnam.

5.3. Practical implications

Based on the research findings, several practical implications are proposed.

First, higher education institutions should emphasize the enhancement of entrepreneurial knowledge and digital competence among students by integrating courses on digital entrepreneurship, innovation, and technological skills into their curricula. In particular, the development of experiential learning approaches, such as project-based learning and startup simulations, can help students gain practical experience and strengthen their entrepreneurial self-efficacy.

Second, policymakers should develop a comprehensive digital entrepreneurship ecosystem, including training programs, business incubation initiatives, and financial support mechanisms. These efforts can create favorable conditions for individuals to develop their capabilities and transform entrepreneurial intentions into actual ventures.

Third, organizations and enterprises should provide greater access to technology and practical experience for employees, especially within digital environments. Promoting lifelong learning and continuous upskilling in digital competencies can enhance individuals' adaptability and entrepreneurial potential in the digital economy.

Fourth, the findings also suggest that family-related factors play an important role in shaping entrepreneurial behavior. Therefore, fostering an entrepreneurial culture within families and society can contribute to strengthening entrepreneurial motivation and promoting entrepreneurial activities within the community.

5.4. Limitations and future research

Although this study offers meaningful contributions, several limitations need to be recognized.

First, the dataset was obtained from respondents located in Ho Chi Minh City, which may restrict the extent to which the findings can be generalized to other contexts. Future studies are encouraged to broaden the geographical coverage or perform comparative analyses across different regions.

Second, this study employs a cross-sectional research design, which does not capture changes over time. Therefore, future studies are encouraged to adopt longitudinal approaches to examine the development and evolution of entrepreneurial intention.

Third, the study focuses on a set of key variables, while other important factors, such as institutional environment, policy support, and cultural influences-have not been fully considered. These aspects represent promising directions for future research.

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