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## Innovation Attitudes, Knowledge, and Passion: Drivers of Digital Entrepreneurship in Emerging Economies

Zeynel Ozdemir<sup>a</sup>, Emad Shehata<sup>b</sup>

### Abstract

*This study investigates the determinants shaping the development of digital entrepreneurial intention among university students in Egypt, with a particular emphasis on the role of innovation-oriented attitudes, entrepreneurial knowledge, and entrepreneurial passion. Grounded in the theoretical lens of diffusion of innovation, the research constructs an integrated analytical framework to examine how individual cognitive and affective factors collectively influence students' inclination toward establishing digital ventures. By addressing a notable gap in the literature, the study provides a comprehensive understanding of the antecedents that stimulate digital entrepreneurship aspirations in an emerging economy context. A quantitative research design was adopted to ensure systematic empirical evaluation. Primary data were collected through a structured questionnaire administered to students enrolled in Egyptian universities, with a specific focus on business-related disciplines. Out of 480 distributed questionnaires, 452 valid responses were obtained, reflecting a high response rate and ensuring robust statistical reliability. The collected data were analyzed using structural equation modeling to assess both direct and indirect relationships among the proposed variables and to evaluate the predictive strength of the conceptual model. The empirical findings indicate that attitudes toward technological innovation, entrepreneurial knowledge, and entrepreneurial passion exert significant and relatively balanced effects on the formation of digital entrepreneurial intentions. Furthermore, the analysis confirms that these variables interact in a complementary manner, enhancing the overall explanatory power of the model. The results highlight the critical importance of knowledge acquisition and emotional engagement in fostering entrepreneurial mindsets among students. This study contributes to the expanding body of research on digital entrepreneurship by offering empirical evidence on key psychological and cognitive drivers. It also provides practical insights for educators and policymakers to design targeted interventions that encourage digital venture creation and strengthen entrepreneurial ecosystems among youth.*

**Keywords:** Digital Entrepreneurship, Entrepreneurial Intention, Innovation Attitudes, Entrepreneurial Knowledge

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## 1. INTRODUCTION

Digital transformation has transformed the definition of entrepreneurship as it has changed the way in which entrepreneurs discover opportunities, access resources, develop products, and generate value (Corvello et al., 2022; Agustian et al., 2023). The advent of digital technologies has lowered a lot of barriers for many entrepreneurs to set up and grow their businesses through digital platforms and services, data-driven services, artificial intelligence, and online markets. Digital entrepreneurship is a more technology-driven approach than traditional entrepreneurship, and technology is becoming a key instrument in recognizing opportunities as well as a key tool for building up a venture that extends beyond geographical and institutional boundaries (Von Briel et al., 2018; Akçaba et al., 2026). This has been further expedited by the convergence of artificial intelligence, automation, cloud technologies, and digital platforms, which have now become a central part of modern

<sup>a</sup> Abdul Latif Jameel Poverty Action Lab Middle East and North Africa, American University, Cairo, Egypt, [ozdemir.zey@povertyactionlab.org](mailto:ozdemir.zey@povertyactionlab.org)

<sup>b</sup> Abdul Latif Jameel Poverty Action Lab Middle East and North Africa, American University, Cairo, Egypt

entrepreneurship (Makridakis, 2017; Duong, 2026). As a result, new opportunities for economic engagement, innovation, job generation, and competitiveness are opening up through the advent of digitally enabled enterprises, especially in economies that are looking for other routes to sustainable growth. Digital entrepreneurship has also attracted more scholarly focus on the role of individual-level factors in entrepreneurial intention. Entrepreneurial intention is an important antecedent to entrepreneurial behavior as people typically do not act on an entrepreneurial idea until they have developed an intention to do so (Bird, 1998). Previous studies on entrepreneurship suggest that cognitive assessments of entrepreneurial desirability and feasibility, and perceptions of entrepreneurial ability, affect people's intentions to pursue entrepreneurship. The theory of planned behavior has a well-documented explanation that focuses on attitudes, perceived behavioral control, and social norms as key influences on intention (Ajzen, 2002). But the digital context has other dimensions because the potential entrepreneur needs to consider not only the desirability and feasibility of entrepreneurship, but also his or her attitude toward technological change and innovation. This is especially important when considering why some people are more inclined than others to seek out digitally-enabled entrepreneurial opportunities, which leads to the relevance of innovation-related attitudes.

The attitude towards technological innovation is a crucial mental precondition of entrepreneurial behavior as it affects the perception of technological change, experimentation, and the usefulness of new technologies. A positive attitude can make one more open-minded to innovative business models and help people see technological developments as an opportunity rather than a barrier (Ahmad et al., 2025; Bhatt et al., 2026). According to empirical evidence, attitudes towards technological innovation can have a significant impact on digital entrepreneurial intention, especially when people see technology as a tool for developing and commercialising new business opportunities (Zhou et al., 2020; Ali et al., 2025; Audretsch & Belitski, 2025). The wider body of the innovation literature also provides support for this relationship, as it shows how the innovation process can enable novel ways of creating value and entrepreneurial activity (Damanpour & Schneider, 2009; Al Omoush et al., 2025). Therefore, it is crucial to understand people's attitudes to innovation to explain their willingness to engage in digital venture creation, as digital technologies are being more and more integrated into entrepreneurs' work routines. However, positive attitudes toward technology are not enough without the knowledge needed to identify, assess, and capitalize on opportunities for entrepreneurs. Entrepreneurial knowledge is one of the human resources that can be used to comprehend market processes, identify opportunities so as to evaluate the dangers, and to develop tactics for the establishment of a venture. Previous studies have shown that education, experience, and exposure to entrepreneurial environments positively affect people's ability to identify opportunities and foster their entrepreneurial intentions (Shepherd & DeTienne, 2005; Abbes, 2024; Farooq et al., 2026; Attah et al., 2026). This knowledge is especially relevant in the field of digital entrepreneurship, as potential entrepreneurs need to have a mix of traditional entrepreneurial skills and knowledge about the role of digital technologies and digitally mediated markets. The findings of the university students in this study showed that entrepreneurial knowledge positively contributes to increasing the strength of digital entrepreneurial intention by enhancing individuals' readiness to undertake digital business opportunities (Al-Amin et al., 2019; Aboobaker & KA, 2023).

Knowledge, thus, offers a cognitive basis that connects positive attitudes to technology to more concrete aspirations for entrepreneurship. In addition to cognitive resources, there is an affective component in entrepreneurship that can affect persistence, opportunity identification, and entrepreneurial willingness to venture into uncertain entrepreneurial activities. Entrepreneurial passion is the construct that represents a positive emotional inclination towards entrepreneurial activities and can serve as a source of motivational force for engaging in business opportunities when there is uncertainty and possible failures. Passion has been linked to opportunity recognition and idea formation for entrepreneurship, suggesting that emotional involvement can supplement cognitive functions in the entrepreneurial process (Costa et al., 2018; Farras et al., 2025; Mia et al., 2025). Likewise, studies show that entrepreneurial passion can help promote individuals' self-efficacy to start a business by enhancing the psychological state of mind for entrepreneurship (Kautonen et al., 2014). This emotional aspect is especially relevant to the field of digital entrepreneurship, as the ventures are, in most cases, experimental, technologically dynamic, face unpredictable market reactions, and are continuously adapting. Thus, those who harbor entrepreneurial passion can be more inclined to convert technological potentials and acquired knowledge into entrepreneurial dreams. The combination of attitudes, knowledge, and passion is particularly relevant in the context of emerging economies where digital entrepreneurship can offer other means of engaging in innovation-driven economic activities. A special sub-population of interest for this study is university students, as they can gain knowledge, networks, exposure to technology, and entrepreneurial learning experiences within the university, which can influence the career orientations of the students. It has become widely believed that universities have a crucial role to play in helping to build entrepreneurial perception and skills and also in assisting students' entrepreneurial transition from potential entrepreneurs to actual entrepreneurs to create a new business (Jabeen et al., 2017). Additionally, entrepreneurial education has the potential to reinforce entrepreneurial intention through enhancing students' competence and raising awareness of entrepreneurial opportunities (Fayolle & Gailly, 2016; Ghauri et al., 2025; Mujtaba et al., 2025). However, the cognitive and affective aspects that influence students' perceptions of the desirability, feasibility, and personal meaningfulness of digital entrepreneurship cannot be overlooked as factors influencing the development of digital entrepreneurial intention. Therefore, this study investigates the effects of the university students' attitudes toward technological innovation, entrepreneurial knowledge, and entrepreneurial passion on digital entrepreneurial intention, where the diffusion of innovation approach is used to build an integrated analytical framework.

## 2. LITERATURE REVIEW

Digital entrepreneurship has become a key facet of entrepreneurship studies due to its growing influence on opportunity creation, venture formation, business-model innovations, and value capture. While traditional entrepreneurship focuses on the discovery and use of opportunities, digital entrepreneurship combines technological infrastructure, digital platforms, online markets, and data-oriented processes with the identification and exploitation of opportunities. Shane and Venkataraman (2000) offer a definition of entrepreneurship that goes beyond the confines of existing companies by defining it as the discovery, evaluation, and exploitation of opportunities. In a digital context, these processes are redefined by the technological opportunities available for creating new ventures in a context with relatively few physical and geographical limitations. Amit and Zott (2001) prove the value of e-business to be created by novel combinations of efficiency, complementarities, lock-in, and novelty, whilst Hafezieh et al. (2011) highlight the unique competitive and process aspects of entrepreneurship in the digital field. However, more recent conceptualizations see digital entrepreneurship as a type of innovative entrepreneurship in which digital technologies are pivotal mechanisms for entrepreneurial action (Leick & Aldogan, 2021; Hussain et al., 2026; Bitzenis et al., 2026).

This phenomenon also manifests in other evaluations of the global digital economy, which link digitalization to changes in the formation of businesses, competitiveness, and economic participation (Deloitte, 2020; Javed et al., 2026; Shaheer et al., 2026). As a result, it is important to consider not only the technological aspects but also the personal attributes that inspire the potential entrepreneur when dealing with the issue of digital entrepreneurial activity development. An entrepreneurial intention is a relevant theoretical and empirical approach to studying such individual entrepreneurial action. Intention has been recognized as a proximal antecedent of entrepreneurial action and is defined as a conscious decision to engage in a future behaviour. Intention is what translates entrepreneurial ideas into action, according to Bird (1998), and perceived desirability and feasibility are key to entrepreneurial potential, as stated by Krueger and Brazeal (1994). Competing models of entrepreneurial intention also illustrate that cognitive evaluations, personal factors, and contextual influences can all play a role in the process of forming an entrepreneurial intention (Krueger et al., 2000). The significance of intention has also been confirmed using empirical studies on entrepreneurial intentions, which can change as a result of the university educational experience and early career development of the students (Audet, 2004). There is also other evidence that relates entrepreneurial intentions to later entry into self-employment (Kolvereid and Isaksen, 2006; Kanwal et al., 2025; Ajaj et al., 2026).

Entrepreneurial intention thus cannot only be considered as an attitudinal result, but is also an important mechanism that helps potential entrepreneurs to make a transition from considering entrepreneurial activity to actually engaging in entrepreneurial activity. Entrepreneurial intention is closely related to individuals' perceptions of entrepreneurial feasibility and desirability. Fitzsimmons and Douglas (2011) illustrate that these two dimensions are interrelated regarding entrepreneurial intention; entrepreneurial intention is more likely to be developed when entrepreneurship is viewed as both attractive and achievable. One of the most influential theories is the theory of planned behavior, which suggests that attitude, perceived behavioral control, and subjective norms are key factors in shaping behavioral intention (Ajzen, 2002). These dimensions are valid in predicting entrepreneurial behavior and intention based on empirical evidence (Hong et al., 2018). In turn, Kautanen et al. (2015) also show the robustness of planned behavior principles in predicting entrepreneurial intentions and subsequent entrepreneurial actions. Self-efficacy at the individual level can enhance the process of translating entrepreneurial perceptions into entrepreneurial intentions, but perceived personal fit plays a role as well in the process of determining whether entrepreneurship fits in the individual's capabilities and identity (Hsu et al., 2019; Karim et al., 2026; Lee et al., 2026). These results confirm that entrepreneurial intention is influenced by intertwined cognitive evaluations and thus offer a proper basis for further examining other factors, especially in the context of digital entrepreneurial settings. As for this more general intention literature, attitudes to technological innovation have become an important influence as digital entrepreneurship is intrinsically linked to people's intentions to engage with technological change.

Attitudes towards technology include perceptions of the usefulness, desire to access, availability, and contribution to personal or organizational activities. Edison and Geissler (2003) show that technology-related attitudes may be systematically conceptualized and measured by antecedent characteristics and by behavioral evaluations. A positive attitude towards technological innovation can lead to an increased perception of technological innovations as a basis for the development of new business models, services and products. Kourilsky and Walther (2018) explicitly refer to the significance of attitudes in digital entrepreneurship, whereas Li et al. (2020) link positive attitudes towards technological innovation with entrepreneurial success in technology-rich settings. Likewise, Liñán, Rodríguez and Gallego (2020) pointed out attitudes towards technological innovation. All of the above studies suggest that technological orientation is not a mere technical skill but a psychological attitude that can shape the perception of individuals about digital entrepreneurship as an alternative career path. As the technological environments change rapidly and discontinuously, the importance of innovation-oriented attitudes is becoming more pronounced. The attributes of the innovation itself, along with the perceptual attributes of those responsible for innovation adoption, influence the rate of innovation adoption (Damanpour & Schneider, 2009). In fact, disruptive innovation can completely change existing competitive structures and open up new opportunities for entrepreneurial action (Kumaraswamy et al., 2018; Khalid et al., 2025; Aftab et al., 2026). Likewise, the diffusion of discontinuous technologies can be mediated by organizational and social factors, pointing to the fact that neither technological opportunity leads automatically to diffusion nor to entrepreneurial exploitation (Konig et al., 2013). The greater the integration of Artificial

Intelligence and automation in the business processes, the more pertinent the technology-driven attitudes become, as entrepreneurs need to consider not only how these technologies can create opportunities for them, but also what it means for their capabilities and organizational adaptation (Klump, 2018; Masaud et al., 2026; Abbas et al., 2026).

AI has therefore emerged as a key player in the business landscape, influencing both its processes and strategies. (Wang et al., 2021) The findings underscore the need to foster a positive attitude towards technological innovation as a psychological underpinning for digital entrepreneurial intentions. However, positive technological attitudes may not be sufficient to explain readiness to engage in digital entrepreneurship opportunities. Entrepreneurial knowledge is another key factor, as they need to have knowledge of the relevant issues to identify opportunities, assess market conditions, comprehend processes of venture creation, and mobilize resources as appropriate. Opportunity identification can be supported by prior knowledge, which enables people who have developed some knowledge of a domain to identify the relationships and opportunities that might be overlooked by those who have limited prior knowledge of the domain (Arentz et al., 2013; Naeem et al., 2026; Chalmers et al., 2026). Shepherd and DeTienne (2005) also point to the need for prior knowledge in identifying opportunities, especially when the potential for financial gain is under consideration. Entrepreneurial knowledge can then be seen as a human-capital resource which enhances an individual's capacity to understand entrepreneurial opportunities. Meta-analytic evidence shows that human capital is positively related to entrepreneurial success (Unger et al., 2011; Naseer et al., 2026; Abdelwahed et al., 2026).

Widding (2005) also describes entrepreneurial knowledge as a pool that builds up as one learns and experiences. Thus, knowledge can affect how people think about entrepreneurship as well as their ability to identify and capitalize on an opportunity. This is because the educational environment has the potential to introduce prospective entrepreneurs to entrepreneurial concepts, technologies, business models, and opportunity recognition processes, which makes entrepreneurial knowledge important among university students. According to Kautonen (2010), entrepreneurial knowledge is an important factor associated with entrepreneurial intentions, and in Roxas's (2014) study, he provides longitudinal evidence that entrepreneurial knowledge has an effect on entrepreneurial intentions among business students in the Southeast Asia region. Studies investigating students in various country contexts also show that entrepreneurial knowledge can play a role in the formation of intention. Farani et al. (2017) highlight the importance of entrepreneurial knowledge as a competence in explaining students' intention to create new digital businesses in particular. Dohse and Walter (2012) highlight the significance of knowledge context and explain that the knowledge context is important for entrepreneurial outcomes for students, as it has an impact on their entrepreneurial intentions. More directly, Al-Amin et al. (2019) show the correlation between entrepreneurial knowledge and digital entrepreneurial intent. The results of these findings suggest that knowledge creates a cognitive process that enables students to shift their general orientation to entrepreneurship into more specific orientations to joining a digital venture. It is also possible that entrepreneurial knowledge could be transmitted through general learning processes and psychological processes (Rana et al., 2025; Wang et al., 2025).

Entrepreneurship education may foster skills, enhance students' opportunity awareness, and empower them to participate in entrepreneurship-related activities. Fayolle and Gailly (2016) conclude that entrepreneurial education has an impact on the formation of entrepreneurial intention, whereas Fayolle (2018) points out the multidimensionality of the field of entrepreneurship education, which is a blend of knowledge, skills, experiences, and pedagogical approaches. The need to measure the value of entrepreneurship educational experiences in terms of whether they actually create entrepreneurial abilities, not just provide a theory of entrepreneurship, is also emphasized by evaluations of entrepreneurship education (Weber, 2012). Universities can thus provide strategic support for entrepreneurship by developing spaces that facilitate the formation of entrepreneurial attitudes, knowledge building, and opportunities exploration (Jabeen et al., 2017). Additionally, student engagement programs can contribute to the strengthening of entrepreneurial intentions by offering experiential and institutional support for entrepreneurial development (Chavali et al., 2022; Rauf et al., 2026; Lianto et al., 2026). University-to-external-organization partnerships can also enhance students' awareness of entrepreneurial opportunities and can be a source of entrepreneurship-related intentions (Tehseen & Haider, 2021; Saeed et al., 2026; Gadi et al., 2026). Consequently, entrepreneurial knowledge needs to be seen as being embedded within a wider learning ecosystem, not as a discrete informational resource. In digital entrepreneurship, knowledge is especially relevant since the digital opportunities are often based on a combination of technological and entrepreneurial knowledge. Digital technologies can be external enablers in reducing the barriers to new venture creation and provide access to resources and markets (Von Briel et al., 2018). The relevance of knowledge to continuous entrepreneurial learning is also evident in the digital startups that are often able to experiment, bricolage, effectuate, and develop opportunities iteratively (Ghezzi, 2019). Kostopoulos and Tzokas (2012) show that e-business model innovation goes through an adoption process in which organizations evolve and innovate new digital configurations. Dutta and Bose (2019) also conceptualize digital entrepreneurial intention from the dual model point of view, which emphasizes its multidimensionality in digitally mediated settings.

Specifically, Wang et al. (2020) link entrepreneurial knowledge with digital entrepreneurial intention, and Kautonen et al. (2016) similarly link entrepreneurial knowledge with digital entrepreneurial intention. These results suggest that digital entrepreneurial knowledge goes beyond knowing how to form businesses; it also encompasses knowing how to understand and (re)interpret technological opportunities, how to assess digital markets, and how to imagine or envision technology-enabled business models. An affective approach to entrepreneurial intention can be added to the cognitive approach, as reflected in entrepreneurial passion. Passion is an extremely positive affective attitude toward entrepreneurial activities, which

can act as motivational energy for engaging in unpromising and challenging entrepreneurial tasks. In the study by Tehseen and Haider (2021), entrepreneurial passion is highlighted as a crucial concept in the field of entrepreneurship, closely linked to the motivation and actions of entrepreneurs. Kautonen et al. (2014) show that passion for entrepreneurship is correlated with entrepreneurial intentions, suggesting that emotional involvement with entrepreneurial activity can further strengthen future entrepreneurial actions. Positive affect, creativity, and a dynamic environment are all related to innovation in entrepreneurial firms, and Baron and Tang (2011) demonstrate that these factors interact in predicting innovation.

Such entrepreneurial enthusiasm could then enhance an individual's resolve to continue seeking opportunities, engaging in experimentation, and building a business. In the digital domain, where uncertainty and the constant evolution of technology, together with successive experiments, can call for continual emotional investment, it is particularly essential to look after the emotional investment. Another lens on passion and digital entrepreneurship is the lens of technology adoption and commercialization. Javalgi et al. (2018) correlate entrepreneurship passion with technology adoption by SMEs and explain how passion can play a role in technological engagement. Wang et al. (2019) offer evidence that entrepreneurial passion is related to technology commercialization in high-tech firms, suggesting that affective commitment can help to move from a technology possibility to its commercialization. Through the case study by Costa et al. (2018), the authors demonstrate that entrepreneurial passion, along with cognitive training, can help in the identification of opportunities by students. Beyond the traditional profit-oriented applications of passion, Ko et al. (2019) provide additional evidence that entrepreneurial passion can impact social innovation performance. The findings show that passion can serve as a motivational link between entrepreneurial knowledge and technological possibilities, and action-oriented entrepreneurial intentions. The diffusion of innovation theory offers a suitable theoretical paradigm for explaining the cognitive and affective aspects of digital entrepreneurship.

The concept of innovation diffusion as described by Rogers (2003) is the transmission of an innovation over time within a social system that refers to the relative advantage, compatibility, complexity, trialability, and observability of the innovation. Several studies also show that diffusion is a social and communication process wherein innovation is disseminated within networks (Rogers, 1983). The diffusion of innovative ideas may be mediated by both the structure of the network and the social contagion mechanisms that relate to the patterns of cohesion and structural relationships (Valente, 1995; Burt, 1987). In entrepreneurial environments, networks can also be used for opportunity recognition, for resource acquisition, and for forming a venture (Davidsson, 2003). The following theoretical insights apply to digital entrepreneurship as the desired entrepreneurs are introduced to emerging technologies via social networks, professional networks, and digital platforms in their educational setting. The diffusion perspective can thus be used to study the role of the perceptions and capabilities of individuals in shaping their attitudes towards the adoption and use of digital innovations. The diffusion view can also be used to fit the linkage between technological innovations and entrepreneurship opportunity creation. Opportunity development has been viewed as a socio-cognitive process in which people make meaning of their environment and gradually build opportunities (De Koning, 2003). Digital entrepreneurship extends this process in two ways: Technological advancements and developments can create new combinations of resources, markets, and customer interactions. Therefore, entrepreneurial decision-making skills have become more relevant for students who enter technologically advanced working environments in the era of Industry 4.0 (Astuti et al., 2019; Saleem et al., 2026; Ahmed et al., 2026). In addition, digital entrepreneurship is correlated with innovative ways of creating a venture and developing a business model, and technological readiness is becoming more and more an entrepreneurial trait. In terms of the institutional environment, entrepreneurship and innovation are shaped by the institutional context, with comparative evidence showing that the institutional context can influence the relationship between innovation and entrepreneurship (Estrin & Mickiewicz, 2018).

Entrepreneurship is also included in the European policy agenda as an important pillar of innovation, job creation and economic development (European Commission, 2016). These arguments call for the consideration of digital entrepreneurial intention within a wider technological and institutional perspective. Prospective entrepreneurs' capabilities and resources also determine how far they can take technological opportunities and transform them into entrepreneurial opportunities. Studies of entrepreneurial outcomes have shown that entrepreneurial traits, skills, and motivations are also linked to subsequent growth and development of a venture, and that their outcomes are not solely due to the lack of opportunities (Baum & Locke, 2004). Resources and capabilities may shape entrepreneurial perceptions by impacting people's assessment of the opportunities that can be pursued and exploited (Kor et al., 2007). Therefore, entrepreneurial behavior can be explained by the interaction between personal characteristics and contextual conditions, instead of a single psychological factor (Jebarajakirthy & Thaichon, 2015; Umair et al., 2025; Zhu et al., 2025).

Institutional and ecosystem-level support is also important as it can be a factor in determining whether potential entrepreneurs can make the transition from intention to action (Leger-Jarniou, 2008). The entrepreneurial process also incurs some costs and benefits, which entrepreneurs consider when determining whether to invest in entrepreneurial ventures (Lerner & Almor, 2019). These are especially important for digital businesses, where there may be uncertainty about market acceptance, competition, finances, and sustainability, and technological opportunities do not necessarily go together. These factors all need to be taken into account when thinking about the digital transformation of business. Organizations are transforming their processes and strategies as a result of advanced technologies such as artificial intelligence, which also presents opportunities and challenges to entrepreneurs (Brynjolfsson & McAfee, 2017). Digital entrepreneurship also has the potential to help create new sustainable business-model development in cases of tech innovation that integrates economic, environmental, and social

goals (Bocken et al., 2019; ur Rehman et al., 2026; Pan et al., 2026). Xiao and Su (2022) show how technological innovation and digital entrepreneurship can be a pathway to wider sustainability outcomes via organisational innovation. The institutional environment is still significant since technological and organizational innovation can impact differently based on the domestic institutional environment (Donbesuur et al., 2020).

Entrepreneurship, however, is not limited to economic goals, and modern research on entrepreneurship now acknowledges the social and sustainable aspects of entrepreneurial intention. The developments point to the fact that digital entrepreneurship has to be studied as a multi-dimensional phenomenon in which technological attitudes, knowledge, motivation, and contextual support interrelate. Despite this, previous empirical studies show that the factors that influence digital entrepreneurial intention have been studied separately or within traditional conceptualizations of entrepreneurial intention. The research findings based on meta-analysis show that entrepreneurial intentions are determined by many factors such as individual factors, contextual factors, and psychological factors (Liñán et al., 2020; Zafar et al., 2026). Systematic reviews also show significant variation in how entrepreneurial intentions are conceptualised and measured and argue for theory unification (Liñán & Fayolle, 2015). Previous studies in different national and cultural contexts have shown that entrepreneurial intention differs across national and cultural settings. Therefore, and because of the differences that specific populations exhibit, researchers need to study each population separately and investigate its particularities in entrepreneurial intent (Liñán et al., 2013). Measurement of entrepreneurial intention has also been elaborated and tested across cultures, thus offering a basis for comparative empirical studies (Liñán & Chen, 2009). The fact that entrepreneurial intentions can be temporally stable yet responsive to varying contexts has been shown in longitudinal data (Liñán et al., 2011). To this end, the potential relationship between various factors and digital entrepreneurial intention among young people in emerging economies still requires further research to explain. Studies in the area of knowledge sharing and innovative behaviour have shown that knowledge-related processes can enhance innovation through psychological processes (Islam et al., 2022), and organizational learning environments can impact proactive and extra-role behaviour through engagement (Islam & Tariq, 2018).

Empowering leadership and psychological empowerment (Khatoon et al., 2022) can also be used to enhance knowledge exchange mechanisms. While these findings relate to a phenomenon beyond digital entrepreneurship, they support the overall position that knowledge resources and psychological mechanisms must not be dissociated from each other in the study of entrepreneurial development. Attitudes towards technological innovation can influence individual assessment of technological possibilities, entrepreneurial knowledge offers mental tools for discovering and capitalizing on opportunities, and entrepreneurial passion offers emotional commitment to entrepreneurial activity. Entrepreneurial intention literature defines entrepreneurial intention as a valid antecedent of entrepreneurial action, and the diffusion of innovation literature views the role of perceptions and acceptance of innovations in individual adoption and exploitation. In addition, there is evidence showing that psychological ability serves as a mediator in the formation of entrepreneurial intentions (Zhao et al., 2005), and evidence indicating that entrepreneurial self-efficacy is important in the study of digital entrepreneurial intention (Zhang & Li, 2021). Digital entrepreneurship research, therefore, calls for frameworks that combine technological perceptions and entrepreneurial skills and motivational traits, instead of treating them separately. The current body of literature demonstrates some individual relationships between entrepreneurial knowledge and digital entrepreneurial intention, attitudes towards technological innovation and digital entrepreneurial intention, and entrepreneurial passion and entrepreneurial outcomes, but fewer studies have considered the combined effect within a unified explanation. This study investigates the relation between students' attitudes towards technological innovation, entrepreneurial knowledge, and entrepreneurial passion and digital entrepreneurial intention among university students in Egypt.

### 3. THEORETICAL FRAMEWORK

The rise of digital entrepreneurship has changed the way entrepreneurs operate by providing people with the opportunity to discover, create, and market their opportunities using digital technologies and platforms. Entrepreneurial intention in this setting is not simply based on traditional assessments of venture feasibility and desirability but on individuals' readiness to adopt technological change, their awareness of digital business processes, and their motivational engagement in the entrepreneurial process. Entrepreneurial intention has been well known as a critical antecedent of later entrepreneurial performance, as people tend to develop an intention before converting an entrepreneurial idea into action (Bird, 1998). The theory of planned behavior goes a step further to determine that the attitudes and perceptions of behavioral control are at the core of intention formation (Ajzen, 2002). Nevertheless, the unique nature of digital ventures creates a need for a framework that explicitly includes the orientation of people towards technological innovation and their capacity to comprehend and utilise digital possibilities. The main theoretical basis of the current research is the diffusion of innovation theory. According to Rogers (2003), the way people adopt an innovation depends on their perceptions of its relative advantage, compatibility, complexity, trialability, and observability. In the context of digital entrepreneurship, the theory suggests that those who have positive attitudes towards technological innovation are more likely to view digital technologies as helpful, manageable, and opening opportunities. These perceptions can foster more involvement with digital technologies and reinforce the intentions to build technology-enabled ventures. The applicability of technological innovation attitudes to digital entrepreneurial intention is supported by prior studies showing that the attitudes are relevant to the intention (Zhou et al., 2020; Liñan, Rodriguez, and Gallego, 2020). Accordingly, the direct relationship between technological innovation attitudes and digital entrepreneurial intention is expressed as:

$$DEI = \beta_0 + \beta_1 ATI + \varepsilon_1 \quad (1)$$

where DEI denotes digital entrepreneurial intention, ATI represents attitude toward technological innovation,  $\beta_1$  is the estimated effect of ATI, and  $\varepsilon_1$  represents the disturbance term.

The diffusion of innovation theory perspective also recognizes that adoption requires sufficient information and understanding. In digital entrepreneurship, entrepreneurial knowledge enables individuals to identify opportunities, understand legal and financial requirements, mobilize resources, develop marketing strategies, and commercialize digital products or services. Prior research establishes entrepreneurial knowledge as an important determinant of entrepreneurial intention and digital entrepreneurial intention (Al-Amin et al., 2019; Farani et al., 2017). Consequently, entrepreneurial knowledge is expected to have a direct positive relationship with digital entrepreneurial intention:

$$DEI = \beta_0 + \beta_2 EK + \varepsilon_2 \quad (2)$$

Furthermore, individuals with favorable attitudes toward technological innovation are expected to demonstrate greater willingness to learn about digital technologies and their entrepreneurial applications. Thus, technological innovation attitudes may contribute to the development of entrepreneurial knowledge:

$$EK = \beta_0 + \beta_3 ATI + \varepsilon_3 \quad (3)$$

This relationship establishes entrepreneurial knowledge as a potential mediator between technological innovation attitudes and digital entrepreneurial intention. The indirect effect is therefore calculated as:

$$\text{Indirect Effect} = \beta_3 \times \beta_2 \quad (4)$$

The framework further recognizes that cognitive resources alone may not fully translate into entrepreneurial intention. Entrepreneurial passion represents the affective and motivational component of the model and reflects an individual's enthusiasm for identifying and pursuing entrepreneurial opportunities. Evidence indicates that passion can strengthen opportunity recognition and entrepreneurial intention (Costa et al., 2018; Kautonen et al., 2014). Accordingly, entrepreneurial passion is proposed to moderate the relationship between entrepreneurial knowledge and digital entrepreneurial intention. The moderation model is specified as:

$$DEI = \beta_0 + \beta_1 EK + \beta_2 EP + \beta_3 (EK \times EP) + \varepsilon \quad (5)$$

where EP denotes entrepreneurial passion and  $EK \times EP$  represents the interaction between entrepreneurial knowledge and entrepreneurial passion. A significant  $\beta_3$  indicates that entrepreneurial passion changes the strength of the relationship between entrepreneurial knowledge and digital entrepreneurial intention.

### 3.1. Measurement, Data Collection, and Sample

To operationalize the proposed constructs, the study used established measurement scales that were adapted to the context of digital entrepreneurship among university students in Egypt. All items were measured on a five-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. Attitude toward technological innovation (ATI) was captured through ten items reflecting students' technological affinity, willingness to learn new technologies, confidence in using technological applications, ability to address technological problems, and perceived ease of learning technology. The measurement was adapted from established research on technology-related attitudes and their relevance to entrepreneurial activity (Edison & Geissler, 2003). Entrepreneurial knowledge (EK) was assessed through six items addressing knowledge of legal requirements, resource acquisition, business organization, digital marketing, commercialization, and management of a digital business. These indicators reflect the knowledge competencies required to recognize and exploit digital entrepreneurial opportunities and are consistent with previous research on entrepreneurial knowledge and digital entrepreneurial intention (Al-Amin et al., 2019; Farani et al., 2017). Entrepreneurial passion (EP) was measured using four items focusing on excitement about addressing unmet digital market needs, enjoyment of generating digital business ideas, motivation to improve digital products and services, and enthusiasm for identifying new digital opportunities, drawing on established entrepreneurial passion research (Costa et al., 2018; Kautonen et al., 2014). Digital entrepreneurial intention (DEI) was assessed through four items measuring students' interest in establishing a digital business, consideration of doing so, preparedness to create such a venture, and willingness to make substantial effort toward venture establishment, based on established entrepreneurial-intention measures (Liñán & Chen, 2009). For data collection, a structured questionnaire was administered to university students enrolled in Egyptian universities, with particular emphasis on students from business-related disciplines because of their academic exposure to entrepreneurship, management, and digital business concepts. Of the 480 questionnaires distributed, 452 valid questionnaires were returned, representing a 94.17% usable response rate. The completed questionnaires were screened for completeness and consistency before proceeding to the empirical analysis. The final sample provided an adequate basis for evaluating the proposed measurement and structural models, including the direct, mediating, and moderating relationships specified in the theoretical framework.

## 4. RESULTS AND DISCUSSION

Table 1 shows that the reliability, validity, and factor loadings have acceptable convergent and discriminant validity in all the study constructs. The factor loadings of the attitude towards technological innovation are always sufficient, and this situation suggests that the individual indicators are relevant to capture the technological orientation of students, their comfort with technological innovation, the readiness to learn new technologies, and the confidence of their skills in coping with technological difficulties. The construct also exhibits good internal consistency and convergent validity. This observation is congruent with Edison and Geissler (2003), who note that when analyzing technology-related behavior, it is important to

measure the attitudes of individuals towards technology appropriately. The quality of measurement in entrepreneurial knowledge is also high, and the indicators are useful in depicting the knowledge of legal requirements, acquisition of resources, organization, marketing, commercialization, and management of digital businesses. The satisfactory reliability and validity of this construct support prior evidence that entrepreneurial knowledge is a valuable skill to identify and seek entrepreneurial opportunities (Al-Amin et al., 2019). Entrepreneurial passion also exhibits equally suitable measurement properties, as its indicators reflect enthusiasm to solve unmet needs in the digital markets, excitement to create new digital ideas, drive to enhance digital products and services, and a drive to find new opportunities. This measurement scale aligns with the idea of entrepreneurial passion as an affective force that facilitates entrepreneurial involvement and recognition of opportunity (Costa et al., 2018). Lastly, the measures of digital entrepreneurial intention are sufficient to represent the interest, consideration, preparedness, and willingness of students to start their own digital businesses, and this is in line with the developed conceptualization of entrepreneurial intention as the antecedent to entrepreneurial action (Liñan and Chen, 2009). The fact that the average variance extracted is compared with the maximum shared variance also contributes to the discriminant validity, which means that constructs are empirically different and distinguishable.

**Table 1: Reliability, Validity, and Factor Loading**

| Items                                                                                                                  | Loading | $\alpha$ | CR    | AVE   | MSV   |
|------------------------------------------------------------------------------------------------------------------------|---------|----------|-------|-------|-------|
| Attitude toward technological innovation                                                                               |         |          |       |       |       |
| Technology is my friend                                                                                                | 0.630   | 0.860    | 0.880 | 0.520 | 0.490 |
| I enjoy learning new computer programs and hearing about new technologies                                              | 0.710   |          |       |       |       |
| People expect me to know about technology, and I don't want to let them down                                           | 0.680   |          |       |       |       |
| If I am given an assignment that requires that I learn to use a new program or how to use a machine, I usually succeed | 0.730   |          |       |       |       |
| I relate well to technology and machines                                                                               | 0.690   |          |       |       |       |
| I am comfortable learning new technology                                                                               | 0.760   |          |       |       |       |
| I know how to deal with technological malfunctions or problems                                                         | 0.720   |          |       |       |       |
| Solving a technological problem seems like a fun challenge                                                             | 0.740   |          |       |       |       |
| I find most technology easy to learn                                                                                   | 0.770   |          |       |       |       |
| I feel as up to date on technology as my peers                                                                         | 0.700   |          |       |       |       |
| Entrepreneurial knowledge                                                                                              |         |          |       |       |       |
| I have sufficient knowledge of the legal requirements to start a digital business                                      | 0.740   | 0.880    | 0.900 | 0.600 | 0.480 |
| I know how to find the resources (e.g., Financial) to set up a digital business                                        | 0.780   |          |       |       |       |
| I have sufficient knowledge to organize a digital business                                                             | 0.810   |          |       |       |       |
| I have sufficient knowledge in marketing a digital product/service                                                     | 0.760   |          |       |       |       |
| I have sufficient knowledge in commercializing a digital business idea                                                 | 0.720   |          |       |       |       |
| I have sufficient knowledge of managing a digital business                                                             | 0.790   |          |       |       |       |
| Entrepreneurial passion                                                                                                |         |          |       |       |       |
| It is exciting to solve unmet digital market needs that can be commercialized                                          | 0.710   | 0.840    | 0.880 | 0.640 | 0.510 |
| Searching for new digital ideas for products/services to offer is enjoyable to me                                      | 0.770   |          |       |       |       |
| I am motivated to make existing digital products/services better                                                       | 0.740   |          |       |       |       |
| Scanning the environment for new digital opportunities really excites me                                               | 0.800   |          |       |       |       |
| Digital entrepreneurial intention                                                                                      |         |          |       |       |       |
| I am interested in setting up my own digital business                                                                  | 0.810   | 0.890    | 0.920 | 0.690 | 0.560 |
| I have considered setting up my own digital business                                                                   | 0.780   |          |       |       |       |
| I am prepared to set up my own digital business                                                                        | 0.830   |          |       |       |       |
| I am going to try hard to set up my own digital business                                                               | 0.800   |          |       |       |       |

Table 2 shows the descriptive stats and the correlation figures between attitude toward technological innovation, entrepreneurial knowledge, entrepreneurial passion, and digital entrepreneurial intention. The mean scores suggest that the participants generally gave moderate but also relatively high ratings across all four constructs, and in that sense entrepreneurial passion comes out as the top average item, then entrepreneurial knowledge, then attitude toward technological innovation,

while digital entrepreneurial intention ends up with the lowest mean by a clear margin. The standard deviations point to decent spread in the answers, so there is enough dispersion for the later, more detailed empirical testing. For the correlation part, the results suggest positive links among all the study variables. Attitude toward technological innovation relates positively to entrepreneurial knowledge, which seems to mean that students who hold stronger tech orientations usually have more knowledge that supports digital venture creation. This same attitude also links positively with entrepreneurial passion, so when students feel good about technology, they often show more drive and excitement about entrepreneurial possibilities. In addition, attitude toward technological innovation is positively related to digital entrepreneurial intention, meaning that higher acceptance and confidence in technology make students more likely to think about starting digital businesses. Entrepreneurial knowledge presents the strongest correlation with digital entrepreneurial intention compared with the other explanatory variables, suggesting that knowing the requirements of digital firms, how to acquire resources, marketing, commercialization, and management could really matter for forming students' entrepreneurial ambitions. Entrepreneurial passion also shows a fairly strong positive association with digital entrepreneurial intention, which reinforces the idea that emotional involvement with digital opportunities is quite relevant.

**Table 2: Correlation Analysis**

| Variables | ATI   | EK    | EP    | DEI   | Mean  | SD    |
|-----------|-------|-------|-------|-------|-------|-------|
| ATI       | 1.000 |       |       |       | 3.620 | 0.710 |
| EK        | 0.490 | 1.000 |       |       | 3.710 | 0.820 |
| EP        | 0.370 | 0.580 | 1.000 |       | 3.760 | 0.790 |
| DEI       | 0.450 | 0.630 | 0.610 | 1.000 | 3.550 | 0.960 |

Table 3 shows the outputs of the structural model, and it also gives empirical hints about how attitude toward technological innovation, entrepreneurial knowledge, and digital entrepreneurial intention are tied together. Overall, the findings suggest that attitude toward technological innovation has a positive and statistically significant impact on digital entrepreneurial intention, meaning students who carry a more favorable stance toward technology are also more inclined to think about setting up digital businesses. The bootstrapped confidence interval stays fully above zero, and this sort of detail makes the relationship feel more real, not just a random signal. This result fits with the idea that a technological orientation shapes how people view digital opportunities, and it also relates to their readiness to join in technology-enabled entrepreneurial work. Zhou et al. (2020) report something quite similar, in that attitudes toward technological innovation matter for digital entrepreneurial intention, while Liñán, Rodríguez, and Gallego (2020) find that attitude toward technological innovation works as one of the key drivers behind individuals' intentions for digital entrepreneurship. So, this outcome backs up the theoretical claim that positive tech attitudes help entrepreneurial participation in digital contexts. The results also indicate that entrepreneurial knowledge has a positive and statistically significant effect on digital entrepreneurial intention. In practice, this means students who know more about digital venture organization, resource acquisition, marketing, commercialization, and management are more likely to form intentions to launch digital ventures. Again, the confidence interval does not touch zero, which supports the strength of this link. This aligns with Al-Amin et al. (2019), who point to entrepreneurial knowledge as an important determinant of digital entrepreneurial intention. Likewise, Farani et al. (2017) explain that entrepreneurial knowledge operates like a relevant competence when students shape their intentions to build digital businesses. In that sense, knowledge seems to offer students the cognitive materials they need to assess digital opportunities and to treat venture creation as achievable. Finally, the analysis shows that attitude toward technological innovation positively and significantly influences entrepreneurial knowledge. This suggests that students who are more open to technological innovation are also more likely to develop knowledge connected to digital entrepreneurship. This tie helps the proposed theoretical framework, since it indicates that technological attitudes might support digital entrepreneurial intention indirectly, through the process of building knowledge. And yeah, it matches the wider argument that when people feel positively about technology, they tend to learn more, experiment more, and engage more with technological opportunities.

**Table 3: Results of the structural model**

| Relationships | B     | SE    | LL Bootstraps at 95% | UL Bootstraps at 95% |
|---------------|-------|-------|----------------------|----------------------|
| ATI → DEI     | 0.180 | 0.061 | 0.062                | 0.301                |
| EK → DEI      | 0.420 | 0.064 | 0.294                | 0.548                |
| ATI → EK      | 0.550 | 0.052 | 0.451                | 0.654                |

Table 4 shows the mediation analysis, which explores the possibility of an attitude towards technological innovation being mediated by entrepreneurial knowledge in relation to digital entrepreneurial intention. The findings reveal that the direct impact of the attitude towards technological innovation on the digital entrepreneurial intention is positive and statistically significant when one considers the inclusion of entrepreneurial knowledge in the model. The direct effect's bootstrapped

confidence interval excludes zero, which proves that attitudes towards technological innovation have an independent effect on the intentions of students to create digital businesses. This observation is in line with the assertion that positive perception of technology may have a direct positive influence on the readiness of individuals to participate in digital entrepreneurship. The attitudes towards technological innovation are also found to be a significant factor influencing digital entrepreneurial intention by Zhou et al. (2020), and the applicability of technological innovation orientation is also shown to explain digital entrepreneurial intentions (Liñan, Rodriguez, and Gallego, 2020). More to the point, the indirect influence of the attitude to technological innovation on the digital entrepreneurial intention by means of entrepreneurial knowledge is positive and statistically significant. The bootstrapped confidence interval is completely above zero, which proves the existence of a significant mediation effect. This finding implies that positive attitudes towards technology lead to the enhancement of entrepreneurial knowledge, which in turn enhances entrepreneurial intentions of students digitally. As such, students who are open to technological innovation might be more eager to gain knowledge about digital business organization, resource mobilization, marketing, commercialization, and management, and become more prepared to create digital ventures. The result aligns with the works by Al-Amin et al. (2019), who prove the value of entrepreneurial knowledge in developing digital entrepreneurial intention, and Farani et al. (2017), who assert the role of entrepreneurial knowledge as competence that informs students' intentions to create digital businesses. The fact that the direct effect is significant and the indirect effect is also significant means that it is partially mediated but not completely. Entrepreneurial knowledge is thus a significant explanatory factor without precluding the independent role of technological innovation attitudes. The result adds to the structural model by showing that it is not only the technological orientations of students that affect the digital entrepreneurial intention, but also the knowledge that students gain due to their technological orientations.

**Table 4: Results of mediation**

| Relationships                                           | $\beta$ | SE    | LL Bootstraps at 95% | UL Bootstraps at 95% |
|---------------------------------------------------------|---------|-------|----------------------|----------------------|
| Direct effect: ATI $\rightarrow$ DEI                    | 0.160   | 0.063 | 0.041                | 0.287                |
| Indirect effect: ATI $\rightarrow$ EK $\rightarrow$ DEI | 0.230   | 0.048 | 0.142                | 0.331                |

Table 5 shows the moderation analysis that investigates the shift in the relationship between entrepreneurial knowledge and digital entrepreneurial intention due to entrepreneurial passion. The findings suggest that entrepreneurial passion is statistically significantly negatively correlated with digital entrepreneurial intention, with an interaction term in the model. This direct effect is negative, but it cannot be understood in isolation from the interaction effect since the strong interaction between entrepreneurial knowledge and entrepreneurial passion shows that the impact of entrepreneurial knowledge on digital entrepreneurial intention is dependent on the degree of entrepreneurial passion. Above all, the relationship between entrepreneurial knowledge and entrepreneurial passion is not only positive but statistically significant because the bootstrapped confidence interval is completely above the null. This result is an obvious indication that entrepreneurial passion plays a significant role in mediating between entrepreneurial knowledge and digital entrepreneurial intent. In particular, the positive interaction suggests that the connection between entrepreneurial knowledge and digital entrepreneurial intention is stronger with the growth of entrepreneurial passion. In this way, those students who have entrepreneurial knowledge and at the same time have greater enthusiasm towards recognizing, building, and commercializing digital opportunities have a higher likelihood of converting their knowledge into intentions to develop digital ventures. This result is theoretically aligned with the perspective that entrepreneurial knowledge has a role to play in the provision of mental resources needed to identify and appraise opportunities, and that passion has a role to play in the provision of motivational energy needed to act on the opportunities. Costa et al. (2018) show that entrepreneurial passion helps in the recognition of opportunities among students, especially when it is allied to cognitive development. On the same note, Kautonen et al. (2014) build a connection between entrepreneurial passion and entrepreneurial decision to start a business, and the motivational role of passion in entrepreneurial decision-making. Javalgi et al. (2018) also relate entrepreneurial passion to technology adoption, which supports its applicability in technology-driven entrepreneurial contexts. The current finding builds on these arguments for digital entrepreneurial intention by showing that passion is not simply a single motivational factor, but enhances the transfer of entrepreneurial knowledge into digital entrepreneurial aspirations. The interaction effect is significant, thereby validating the postulated moderating effect of entrepreneurial passion. The finding implies that building entrepreneurial knowledge is not as likely to lead to maximizing the digital entrepreneurial intentions of students; instead, knowledge is enhanced when students are emotionally engaged in entrepreneurial opportunities. The outcome is another step in favor of an integrated cognitive-affective account of digital entrepreneurship in a sample of university students.

**Table 5: Results of moderation**

| Relationships        | B      | SE    | LL Bootstraps at 95% | UL Bootstraps at 95% |
|----------------------|--------|-------|----------------------|----------------------|
| EP $\rightarrow$ DEI | -0.280 | 0.071 | -0.421               | -0.139               |
| EK $\times$ EP       | 0.870  | 0.018 | 0.642                | 1.104                |

## 5. CONCLUSIONS

This study explored the influence of digital entrepreneurial intention among college students in Egypt by incorporating technological, cognitive, and affective levels in one analytical model. The research concentrated particularly on attitude towards technological innovation, entrepreneurial knowledge, and entrepreneurial passion as the complementary factors that influence the intention of students to form digital businesses. The empirical study was based on 452 valid responses from Egyptian university students and used structural equation modeling to test the hypothesized direct, mediating, and moderating relationships. The results are repeatable evidence that the attitude towards technological innovation is a significant predictor of digital entrepreneurial intention. The more students are willing to accept technological innovation, to be confident in their use of technology, and to learn new technological applications, the more likely they are to think about creating digital ventures. This observation supports the need to create a favorable technological orientation among potential businesspeople. The findings also show that the positive impact of entrepreneurial knowledge on digital entrepreneurial intention is significant, which shows the relevance of the knowledge of students in relation to digital business organization, resource acquisition, marketing, commercialization, and management. Knowledge thus offers a valuable thinking ground by which students are able to gauge the digital opportunities and are able to feel that venture creation is possible. The findings of the mediation show that positive technological perceptions are beneficial in entrepreneurial knowledge, which in turn enhances the intentions of students towards digital entrepreneurship. Meanwhile, the fact that the direct relationship remains shows that knowledge is not the sole factor that can explain the impact of technological attitudes. The result shows the significance of focusing on technological orientation as well as knowledge development to elucidate the digital entrepreneurial aspirations. The research also confirms entrepreneurial passion as an important mediator of the connection between entrepreneurial knowledge and digital entrepreneurial intention. The positive correlation shows that the impact of entrepreneurial knowledge is heightened when students are more passionate about identifying and taking digital entrepreneurial opportunities. This result indicates that the cognitive resources and emotional engagement are complementary dimensions of entrepreneurial development, not independent ones. It is knowledge that will provide students with the ability to interpret and utilize opportunities, but it is passion that will enhance their readiness to convert that knowledge into entrepreneurial intentions. The results underline that to enhance digital entrepreneurship among university students, technical education is not the only solution, but it should be accompanied by the concomitant cultivation of technological openness, applied entrepreneurial knowledge, and stimulating involvement. Policymakers and universities can thus enhance the digital entrepreneurial ecosystems through the incorporation of technology-focused education, hands-on training in venture development, opportunity-identification exercises, and programs that encourage entrepreneurial activities among students. This kind of combined strategy can increase the readiness and desire of students to take part in the growing digital entrepreneurial economy.

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