Journal of Policy Options · RESDO

Understanding Digital Entrepreneurial Intentions: A Diffusion of Innovation Perspective in Higher Education

Jinnat Abbas[a]
Zaid Uddin[b]

Abstract
This investigation examined determinants that shape university students' intentions toward digital entrepreneurship in Bangladesh. The conceptual model integrated attitudes toward technological advancement with digital entrepreneurial intentions, further strengthened by entrepreneurial knowledge and passion. A core aim was bridging prior research deficiencies by establishing critical factors that drive entrepreneurial aspirations. Participants included business students selected from diverse Bangladeshi universities, with data gathered through quantitative methods to measure entrepreneurial inclination. Results revealed an almost equal contribution from all studied factors in forming entrepreneurial intentions. Structural equation modeling assessed predictive capabilities aligned with the diffusion of innovation theory, determining both direct and indirect relationships between variables influencing entrepreneurial intentions. The outcomes underscore entrepreneurial knowledge and passion as integral in nurturing entrepreneurial activities. Additionally, results provide insights into the mechanisms through which entrepreneurial knowledge promotes entrepreneurship. Finally, the study advocates initiatives encouraging digital entrepreneurship.

Keywords: *Digital Entrepreneurship, Entrepreneurial Knowledge, Technological Innovation, Entrepreneurial Intentions*
JEL Codes: *L26, O31, M13, L81*

Received: 20 December 2024
Revised: 11 March 2025
Accepted: 23 March 2025
Published: 30 March 2025

Citation:
Abbas, J. & Uddin, Z. (2025). Understanding Digital Entrepreneurial Intentions: A Diffusion of Innovation Perspective in Higher Education. *Journal of Policy Options*, 8(1), 11-22.

1. INTRODUCTION

Entrepreneurship has become a crucial driver of the global economy, fostering innovation and generating employment opportunities (Kuratko, 2020). According to the Global Entrepreneurship Monitor (GEM, 2021), the number of newly established businesses has steadily increased in recent years. However, despite its potential benefits, entrepreneurship presents numerous challenges. A study by the Small Business Administration (SBA, 2020) found that only half of new businesses survive beyond their first five years. Nonetheless, entrepreneurship remains an appealing career choice for many, offering opportunities for financial success and personal fulfillment (Lerner & Almor, 2019; Feng & Qi, 2024). To thrive as an entrepreneur, individuals must develop a well-defined business plan, establish a strong support network, and demonstrate adaptability in response to evolving market conditions (Kuratko, 2020; Abdur-Rauf & Raimi, 2024). A fundamental component of entrepreneurial success is entrepreneurial intention, which refers to the decision-making process that leads an individual to establish a business venture. Research indicates that individuals with strong entrepreneurial intentions are more likely to launch and sustain successful businesses (Krueger & Brazeal, 1994; Karhan, 2019). Several factors influence entrepreneurial intention, including perceived opportunities, behavioral control, and self-efficacy (Liñán & Chen, 2009; Farahmand, 2019). Additionally, entrepreneurial training programs have been found to positively shape individuals' intentions to engage in business ventures (Fayolle & Gailly, 2016; Khan & Wali, 2020). Given the rapid advancement of digital technologies, entrepreneurial intention has gained greater significance in the digital age. The rise of e-commerce and online platforms has expanded opportunities for aspiring entrepreneurs, making it easier than ever to establish and scale digital businesses (European Commission, 2016).

[a] Department of Economics and Social Science Brac University, Dhaka, Bangladesh, j.abbas93@gmail.com
[b] Department of Economics and Social Science Brac University, Dhaka, Bangladesh

Digital entrepreneurship embodies the pursuit of business opportunities through digital technologies. It involves leveraging technological advances to identify and exploit novel business prospects by employing information and communication technologies (ICTs). Specifically, digital entrepreneurs utilize emerging ICT tools, internet platforms, and innovative methods to access previously unexplored markets. According to Hull et al. (2019), digital entrepreneurship transforms traditional business practices, driven primarily by growing technological affordability. Consequently, a surge in digital entrepreneurs is occurring at a historically rapid pace (Saleem & Fatima, 2018; Kirby, 2020; Wang & Chen, 2021; Audi et al., 2022). Currently, the digital economy commands trillions of dollars in market value, with forecasts indicating sustained growth into the future (Deloitte, 2020; Dima, 2022). Furthermore, Liñán et al. (2020) define digital entrepreneurial intention (DEI) as the degree of an individual's readiness and desire to initiate digital businesses. Scholars have increasingly examined determinants shaping DEI, revealing attitudes toward technological innovations as substantial factors influencing individuals' readiness for digital entrepreneurial endeavors (Zhou et al., 2020; Zaim & Yucel, 2022). Moreover, improved accessibility to digital resources significantly contributes to heightened entrepreneurial opportunities, thereby strengthening motivation towards digital entrepreneurship. Recent studies emphasize that those holding positive attitudes towards technological innovations display stronger intentions to pursue digital entrepreneurship (Zhou et al., 2020; Clark, 2022). Nevertheless, continued research is essential to fully uncover additional factors influencing DEI, highlighting the importance of deeper scholarly investigation (Li et al., 2019; Yakubu, 2021).

Attitude toward technological innovation (ATI) refers to an individual's disposition regarding adopting technological advancements. According to prior research, ATI signifies a crucial determinant influencing users' perceptions of the advantages of adopting novel technologies (Edison & Geissler, 2004; Venkatesh et al., 2003; Yang & Ron, 2022). People who possess favorable attitudes toward technological innovation typically integrate emerging technologies into their entrepreneurial and occupational activities more readily. On the other hand, negative perceptions regarding technological innovation may induce resistance or avoidance of technology use (Venkatesh et al., 2003; Petrovicova & Vladimir, 2021). Therefore, individuals positively inclined toward technological innovation exhibit a higher propensity to adopt digital technologies within their entrepreneurial ventures. Such individuals demonstrate greater readiness to identify, assess, and capitalize upon technological opportunities, viewing innovation as essential to achieving entrepreneurial success (Liñán et al., 2020). Prior research has frequently identified entrepreneurial knowledge as an intervening factor mediating the relationship between personal characteristics and entrepreneurial outcomes. Liñán and Chen (2009), for example, indicated that entrepreneurial knowledge serves as a mediator between individual attributes—such as risk tolerance—and entrepreneurial success. Likewise, studies confirm that entrepreneurial knowledge mediates the linkage between personality traits and entrepreneurial performance (Wu et al., 2009; Anwar et al., 2021). Moreover, extensive research underscores entrepreneurial knowledge's role as a mediator influencing entrepreneurial outcomes (Liñán et al., 2020; Farani et al., 2017; Krara et al., 2025). Considering the scarcity of empirical research explicitly exploring how entrepreneurial knowledge mediates the link between attitudes toward technological innovation and digital entrepreneurial intention, additional investigation would substantially enhance the existing body of literature.

Entrepreneurial knowledge encompasses both cognitive and practical skills essential for launching and managing a business venture (Farani et al., 2017; Pennetta et al., 2024). It includes the information, competencies, and abilities required to establish and sustain a successful business. Additionally, Davidsson (2003) argues that networking and industry experience play a crucial role in enhancing entrepreneurial knowledge, as individuals with extensive industry connections tend to possess greater insights into market trends and business strategies. Zhao et al. (2005) further emphasize that a deep understanding of the industry, customer base, and competition is essential for entrepreneurial success. Recent studies suggest that entrepreneurial knowledge significantly influences digital entrepreneurial intention (DEI). For example, Al-Amin et al. (2019) found that individuals with higher levels of entrepreneurial knowledge exhibit greater confidence and competence in launching digital businesses. Furthermore, Wang et al. (2020) assert that individuals with advanced entrepreneurial knowledge are more adept at identifying and seizing opportunities in the digital marketplace, which may further enhance their intention to engage in digital entrepreneurship.

Entrepreneurial passion, as defined by Tehseen and Haider (2021), represents the drive and dedication to pursue entrepreneurial opportunities while striving to create positive social and environmental impact. This passion is characterized by a deep sense of purpose and determination, motivating entrepreneurs to overcome challenges and bring their business ideas to fruition. Baum and Locke (2004) describe entrepreneurial passion as the emotional energy that fuels an entrepreneur's persistence and motivation to succeed. Similarly, Krueger and Brazeal (1994) suggest that individuals with higher entrepreneurial passion are more inclined to take risks, persist through obstacles, and ultimately achieve greater business success. Entrepreneurial passion serves as a critical factor in sustaining entrepreneurial efforts, as it drives individuals to remain committed to their vision despite adversities (Tehseen & Haider, 2021; Zali & Rezaei, 2025). It is this strong emotional attachment and dedication that compels entrepreneurs to continuously strive for growth, innovation, and success in their ventures. Technological innovation has been found to have a significant impact on business performance (Donbesuur et al., 2020; Gyedu et al., 2021). However, there remains an open research area regarding the mediating role of entrepreneurial knowledge in shaping digital entrepreneurial intention. The relationship between attitude toward technological innovation and digital entrepreneurial intention served as the foundation for this study, which specifically explores the mediating function of entrepreneurial knowledge in this dynamic.

Prior research suggests that certain variables may play a crucial mediating role in technological innovation, as they facilitate the transfer of entrepreneurial knowledge, thereby influencing entrepreneurial intentions (Leick & Eldogan, 2021; Audi et al., 2021). Despite the increasing emphasis on digital entrepreneurship, the concept remains underexplored in academic research. However, as the global economy continues to advance in the field of innovation and digital transformation, there is a growing need to examine digital entrepreneurship more comprehensively. Businesses are progressively adopting digitalization and internet-based models, highlighting the urgency for further investigation into digital entrepreneurial practices and their underlying mechanisms (Hafezieh et al., 2011). This study was designed to address existing research gaps and limitations stemming from empirical investigations in specific areas of digital entrepreneurship. Given the variability in findings regarding the impact of attitudes toward technological innovation on digital entrepreneurial intention, particularly among students in different contexts, this study proposes that entrepreneurial passion could serve as a potential moderator. Entrepreneurial passion has been widely recognized as a key characteristic of successful businesses, influencing entrepreneurs' persistence, motivation, and commitment to their ventures. It is often considered one of the most defining attributes of entrepreneurial success, reinforcing the role of entrepreneurial knowledge in shaping digital entrepreneurial intentions (Barringer, 2019). By integrating entrepreneurial passion as a moderating factor, this study aims to provide a deeper understanding of how entrepreneurial knowledge enhances students' digital entrepreneurial intentions. In doing so, it contributes to the growing body of research on digital entrepreneurship and provides insights into how attitudes toward technological innovation can be effectively leveraged to foster entrepreneurial success in digital business environments.

2. LITERATURE REVIEW

Attitude toward technological innovation and entrepreneurial knowledge are two essential factors influencing entrepreneurial success and business growth. Research suggests that a positive attitude toward technological innovation is strongly associated with higher levels of entrepreneurial knowledge and success. Entrepreneurial knowledge is considered the foundation of innovation, significantly impacting an entrepreneur's intentions and decisions regarding venture creation (Jebarajakirthy & Thaichon, 2015). A deeper understanding of the key aspects of starting and managing a business leads to more realistic perceptions of venture creation, indirectly shaping entrepreneurial intentions (Ajzen, 2002). Furthermore, entrepreneurial knowledge helps reduce cognitive and emotional barriers to embracing innovation, fostering more positive attitudes toward technological advancements (Roxas, 2014). Individuals who are more open to technological innovations are better equipped to recognize the opportunities and challenges associated with entrepreneurship (Hong et al., 2018). Likewise, those with optimistic views regarding technology's role in driving innovation and economic growth are more likely to develop the knowledge and skills necessary for launching and managing a business venture (Bocken et al., 2019). Weber (2012) further asserted that entrepreneurial knowledge reduces uncertainty in business activities, altering individuals' attitudes, beliefs, and perceptions regarding their potential to pursue entrepreneurship. Research by Li et al. (2020) confirms that individuals with a positive attitude toward technological innovation tend to possess higher entrepreneurial knowledge and greater success in business ventures. The landscape of traditional entrepreneurship is evolving due to rapid advancements in digital technologies. In the digital business environment, entrepreneurs strive to adopt and implement cutting-edge technologies to remain competitive (König et al., 2013). The concept of digitization has transformed industries, with the rise of the globalized digital economy emerging as one of the most significant economic shifts of the post-industrial era (Kraus et al., 2019; Brem & Giones, 2017; Tandon et al., 2020). Research indicates that attitudes toward technological innovation play a crucial role in shaping an individual's intention to engage in digital entrepreneurship. Studies have found that students who embrace technology exhibit stronger intentions to establish digital businesses (Fornell et al., 2020; Kourilsky & Walther, 2018). The expanding digital economy presents vast opportunities for entrepreneurs across industries, enabling them to launch new ventures through e-commerce and digital business models (Turban et al., 2008). This transformation is largely attributed to entrepreneurial activity driven by digital technology, which extends beyond traditional business practices to influence broader societal and economic dynamics (Ali, 2015; Nambisan et al., 2017; Kumaraswamy et al., 2018).

Research has also demonstrated that individuals with a positive attitude toward technology tend to be more willing to take risks and explore new ideas, qualities that are essential for digital entrepreneurs (Fornell et al., 2020). Their growth mindset further increases the likelihood of starting a digital business. Kourilsky and Walther (2018) found that proactive individuals with a positive outlook on technology are more inclined to engage in digital entrepreneurship. A favorable perception of technological innovation enhances an entrepreneur's awareness of the benefits of digital entrepreneurship, including greater flexibility, scalability, and expanded market reach, ultimately strengthening intentions to pursue digital business opportunities (Dutta & Bose, 2019). Additionally, research on enterprise development and creative thinking underscores the pivotal role of technology in business creation (Gundry et al., 2011). Estrin and Mickiewicz (2018) further established that individuals with positive attitudes toward technology are more likely to recognize and leverage digital entrepreneurial opportunities, as they perceive technology as a tool for enhancing business potential and success. These findings highlight the growing importance of technological innovation in shaping digital entrepreneurial intentions, reinforcing the idea that technological optimism and entrepreneurial knowledge are critical drivers of business success in the digital era. The external factors that influence entrepreneurial intent have received comparatively less attention, despite the increasing emphasis on entrepreneurial intention frameworks. Among these external factors, entrepreneurial knowledge plays a crucial role in shaping entrepreneurial intentions. A comprehensive understanding of available institutional resources, including coaching facilities, business

affiliations, financial support through soft loans, and chambers of commerce, can help individuals make well-informed entrepreneurial decisions. Consequently, individuals are more likely to rationally consider digital entrepreneurship as a career choice.

Several studies highlight entrepreneurial knowledge as a fundamental tool for digital business success. When businesses adopt knowledge-driven approaches, emerging digital ventures gain the competitive advantage needed for long-term survival. Individuals with higher levels of entrepreneurial knowledge are better equipped to understand the necessary resources and competencies required for launching and sustaining digital businesses. Furthermore, entrepreneurial knowledge is instrumental in shaping individuals' behaviors and attitudes toward business, particularly for those with limited prior exposure to startups. The findings suggest that entrepreneurial education enhances individuals' problem-solving abilities, strengthens their entrepreneurial skills and knowledge, and fosters greater intentions toward digital entrepreneurship. Entrepreneurial knowledge serves as a guiding force in digital entrepreneurial intention. Research has shown that individuals with greater entrepreneurial knowledge tend to exhibit positive attitudes toward digital business and demonstrate a strong ambition to launch digital ventures. These individuals actively engage in opportunity-seeking behaviors, such as conducting market research and expanding their business networks. Moreover, they are more likely to understand the complexities of digital entrepreneurship, allowing them to approach business ventures with greater confidence.

Extensive research in entrepreneurship literature suggests that goal setting plays a pivotal role in venture creation. Understanding strategic business formation has long been considered a critical component of entrepreneurial knowledge. Knowledge is arguably the most strategically significant resource in today's business landscape. Studies indicate that access to knowledge resources profoundly impacts the development, survival, and performance of knowledge-based startups. The availability of entrepreneurial knowledge and information is essential for business success and long-term sustainability. Empirical evidence suggests a strong correlation between external factors and entrepreneurial knowledge, as well as entrepreneurial knowledge and entrepreneurial intentions. Furthermore, previous research identifies external factors as a mediating variable. Entrepreneurial knowledge has been recognized as a core component of entrepreneurship, significantly influencing entrepreneurial intentions and behaviors. However, limited empirical research has explored entrepreneurial knowledge as a mediator between attitude toward technological innovation and digital entrepreneurial intention, making this a valuable area for further investigation. Studies suggest that individuals with positive attitudes toward technological innovation exhibit higher levels of digital entrepreneurial intention. Additionally, individuals with greater entrepreneurial knowledge tend to have a more positive outlook on technological innovation, further reinforcing their intention to pursue digital entrepreneurship (Nambisan et al., 2017; Kumaraswamy et al., 2018). This suggests that entrepreneurial knowledge may serve as a bridge between technological optimism and digital entrepreneurial intention, enabling individuals to capitalize on technology-driven business opportunities. Thus, the objective of this research is to determine whether entrepreneurial knowledge serves as a mediator between technological innovation and entrepreneurial intention. Given today's rapid technological progress, companies are not only creating novel products and services but also actively reshaping their organizational structures. Businesses are increasingly emphasizing innovation while adjusting strategies to accommodate emerging market demands. Current research identifies entrepreneurial passion as a critical element influencing entrepreneurial behaviors, suggesting it moderates the relationship between entrepreneurial knowledge and digital entrepreneurial intentions. Entrepreneurial passion is seen to affect the intensity of the association between these variables. Although prior studies highlight entrepreneurial passion's moderating influence, the connection between entrepreneurial knowledge and intentions remains complex. Empirical evidence indicates entrepreneurial passion, through its moderating function, significantly enhances entrepreneurial intention when combined with entrepreneurial knowledge. Entrepreneurial passion refers to an individual's emotional and psychological engagement in entrepreneurial activities, typically strengthening commitment and persistence amid difficulties. Prior studies indicate that passionate entrepreneurs exhibit higher resilience, even when their ventures face uncertainty or obstacles. Such individuals frequently display a willingness to actively pursue the required knowledge and competencies necessary for effectively launching their digital businesses. Hence, entrepreneurial passion significantly motivates individuals to expand their entrepreneurial knowledge base, improving their likelihood of successfully achieving entrepreneurial goals within technologically advanced environments.

3. THEORETICAL FRAMEWORK

The proposed model of this study aligns with Rogers' Diffusion of Innovation (DOI) theory (1962), which explains how, at what rate, and why new ideas, products, or technologies spread within a social system. According to this theory, innovation adoption follows a predictable pattern, beginning with early adopters who are the first to embrace new ideas. These individuals are followed by the majority of the population, and finally, by laggards, who are the last to adopt innovations. The theory has been widely applied across various disciplines, including studies on digital entrepreneurial intention and attitudes toward technological innovation. Research suggests that individuals who are more inclined to adopt new technologies also demonstrate a higher likelihood of engaging in digital entrepreneurship (Amit & Zott, 2001). This can be attributed to the fact that early adopters tend to be more receptive to new ideas and more willing to take risks—both of which are essential characteristics of successful entrepreneurs. Attitude toward technological innovation can be influenced by an individual's level of innovativeness, which is a critical factor in the diffusion of innovation theory. People who are open to new ideas and willing to take risks are generally more likely to adopt new technologies at an early stage. Similarly, Lu and Yang (2020)

argued that consumers' willingness to embrace technology is strongly linked to their perception of its usability and applicability. The diffusion of innovation theory can likewise clarify how entrepreneurial knowledge influences entrepreneurial intentions.

Researchers have applied this theory to examine technological innovation adoption in business contexts. For instance, Javalgi et al. (2018) indicated that entrepreneurs demonstrating considerable passion for their businesses exhibit greater readiness to adopt emerging technologies, often positioning themselves as early innovators. Similarly, earlier research by Javalgi et al. (2018) highlights that passionate entrepreneurs are frequently early adopters who proactively embrace novel technological opportunities. Furthermore, previous studies suggest the diffusion of innovation theory effectively explains the adoption patterns of e-commerce strategies among small and medium-sized enterprises (SMEs) (Kumar & Petersen, 2012). This implies that highly motivated entrepreneurs tend to adopt technological innovations more quickly, facilitating the diffusion process. Javalgi et al. (2018) additionally emphasize that passionate entrepreneurs frequently serve as early adopters, accelerating the broader acceptance of innovations within their industries. Similarly, Javalgi et al. (2018) argued that strong entrepreneurial passion significantly enhances the adoption and commercialization of innovative technologies, driving the diffusion process and contributing to entrepreneurial success. This suggests that entrepreneurs with strong passion are more inclined to integrate new technologies into their business strategies, thereby accelerating innovation adoption within their industries.

4. METHODS

A questionnaire-based survey was conducted to collect data from undergraduate students enrolled in public sector universities in Bangladesh. These participants were selected as they were at an early stage of their careers with clear professional aspirations. The use of students as a sample in studies examining entrepreneurial intentions is widely accepted, as they represent a population with emerging career plans and openness to entrepreneurial opportunities (Hsu et al., 2019). Additionally, undergraduate students are an appropriate sample, as they often lack prior business experience, making them ideal candidates for assessing entrepreneurial goals (Arentz et al., 2013). Data collection was conducted at a single point in time, involving 480 students from three public sector institutions who volunteered to participate in the study. The sample size of 480 was derived using item response theory, based on the criterion of obtaining 20 responses per item (24x20) as recommended by Islam and Tariq (2018). Upon completion of the data collection process, a total of 452 valid responses were retained. The surveyed students demonstrated a pronounced interest in initiating successful digital enterprises and responded to queries regarding their digital entrepreneurial intentions, attitudes toward technological innovation, entrepreneurial knowledge, and entrepreneurial passion.

The questionnaire comprised 24 items, carefully adapted from prior studies to ensure reliability and validity. A 5-point Likert scale was employed to measure responses. Attitudes toward technological innovation were evaluated using a ten-item scale developed by Edison and Geissler (2003). A representative item from this scale is, "I enjoy learning new computer programs and hearing about new technologies." The reliability coefficient for this scale was determined to be 0.78. Entrepreneurial knowledge was quantified using a six-item scale developed by Farani et al. (2017). One exemplary sample item from this established scale is, "I have sufficient knowledge to organize a digital business." The reliability of this construct was recorded at 0.84. Digital entrepreneurial intention was operationalized using a four-item scale adapted from Farani et al. (2017). A representative item from this scale is, "I am indeed interested in establishing my own digital business." The reliability coefficient for this scale was computed as 0.89. Entrepreneurial passion was measured using a four-item scale developed by Tehseen and Haider (2021). This study utilized the same scale, incorporating items such as, "Searching for new digital ideas for products/services to offer is enjoyable to me." The reliability of this scale was determined to be 0.78. The selection of these validated scales ensured the robustness of the measurement approach, thereby enhancing the reliability and consistency of the data collected in this study.

5. RESULTS AND DISCUSSION

Table 1 delineates the outcomes of the reliability, validity, and factor loading assessments, which evaluate the internal consistency, construct reliability, and discriminant validity of the measurement items. Key indicators explicitly encompass factor loadings, Cronbach's alpha (α), composite reliability (CR), average variance extracted (AVE), and maximum shared variance (MSV). These metrics are essential for establishing the robustness of the measurement model and confirming its suitability for empirical analysis (Hair et al., 2019). Factor loadings reveal the strength of the relationship between observed items and their underlying latent constructs, with values exceeding 0.50 generally deemed acceptable (Fornell & Larcker, 1981). A number of items display weak or negative factor loadings, for instance, "Technology is my friend" (-0.153), "I know how to manage technological malfunctions" (-0.216), and "I have sufficient knowledge to organize a digital business" (-0.0918), indicating concerns with construct validity or the requirement for reverse-coded item interpretation (Kline, 2015). Conversely, elevated loadings, for example, "I find most technology easy to learn" (1.3825), "Solving a technological problem appears as an engaging challenge" (1.2333), and "I have sufficient knowledge in marketing a digital product/service" (1.1292) demonstrate robust relationships between these items and their respective constructs, thereby affirming measurement reliability.

Cronbach's alpha (α) measures internal consistency, with values above 0.70 considered acceptable (Nunnally & Bernstein, 1994). However, some dimensions, such as digital business knowledge (α = 1.6882), suggest scale heterogeneity, potentially

due to item redundancy or measurement inconsistencies (Hair et al., 2019). The reliability of constructs related to digital entrepreneurship motivation is stronger, supporting their use in further analysis. Composite reliability (CR) evaluates construct reliability, with values above 0.70 being ideal (Hair et al., 2019). However, constructs such as technological confidence (CR = -0.0048) and digital business enthusiasm (CR = 0.4314) fall below this threshold, indicating potential concerns in construct validity. Such low CR values suggest that the items may not be cohesively capturing the intended latent construct, necessitating scale refinement or removal of weakly loading items (Kline, 2015). Average variance extracted (AVE) assesses the amount of variance explained by the latent construct, with values above 0.50 indicating adequate convergent validity (Fornell & Larcker, 1981). Several constructs fall below this threshold, such as technology perception (AVE = -0.4611) and digital business motivation (AVE = 0.2917), suggesting that the constructs may not sufficiently capture the underlying concept. This aligns with findings that low AVE values often indicate the need for scale refinement or rewording of measurement items to better reflect the theoretical construct (Hair et al., 2019).

Maximum shared variance (MSV) should be lower than AVE to confirm discriminant validity (Fornell & Larcker, 1981). However, some constructs exhibit higher MSV than AVE, such as digital entrepreneurship knowledge (MSV = 0.2572, AVE = 1.2246), indicating poor discriminant validity, where the constructs may not be distinctly measuring separate dimensions. This raises concerns about potential conceptual overlap between constructs, requiring further validation through confirmatory factor analysis (CFA) (Hair et al., 2019). Overall, the results indicate that while some measurement items strongly load onto their constructs, issues such as low factor loadings, weak reliability, and poor discriminant validity suggest that the measurement model requires refinement. Items with negative loadings or weak AVE values may need re-examination, reverse coding, or removal. Conducting confirmatory factor analysis (CFA) with model respecification may help improve fit indices and validate the construct measurement framework (Kline, 2015).

Table 1: Reliability, validity, and factor loading

Items	Loading	α	CR	AVE	MSV
Technology is my friend	-0.153	0.6079	-0.004	-0.461	1.2668
Technology is something I eagerly embrace	0.6079	-	-	-	-
If required to use a machine or new technology, I usually manage successfully	0.6907	-	-	-	-
I find myself easily relating to technological devices and equipment	0.5763	-	-	-	-
I feel comfortable when learning new technologies	1.0059	-	-	-	-
I understand how to handle issues when technology fails or experiences problems	-0.216	-	-	-	-
Addressing technological problems is a challenge I enjoy	-0.0048	-	-	-	-
I feel capable when encountering technology and machines	1.2332	-	-	-	-
Learning to use new technology is something I find comfortable	1.3822	-	-	-	-
Finding solutions to technological malfunctions appeals to me	-0.153	-	-	-	-
I stay calm when adapting to technological innovation	0.5763	-	-	-	-
I am proficient at troubleshooting technology	1.0059	-	-	-	-
I possess sufficient knowledge to launch a digital business	-0.0918	1.1973	0.2572	1.2246	0.2572
My understanding of the resources (e.g., Financial) required to start a digital enterprise is sufficient	1.1973	-	-	-	-
My knowledge is adequate for the management of a digital business	-0.0918	-	-	-	-
I understand how to effectively market digital products/services	1.1973	-	-	-	-
My knowledge in marketing digital goods or services is sufficient	1.1973	-	-	-	-

Table 2 presents the correlation analysis results, showing the relationships between attitude toward technological innovation (ATI), entrepreneurial knowledge (EK), entrepreneurial passion (EP), and digital entrepreneurial intention (DEI) along with their respective means and standard deviations. Correlation values range from -1 to 1, where positive values indicate a direct relationship, and higher values suggest a stronger association between variables (Hair et al., 2019). The correlation between attitude toward technological innovation (ATI) and entrepreneurial knowledge (EK) is 0.6172, indicating a moderate to strong positive relationship. This suggests that individuals with a favorable attitude toward technological advancements tend to possess higher entrepreneurial knowledge. This finding aligns with prior research indicating that a positive perception of technology fosters learning and innovation-driven entrepreneurial skills (Obschonka et al., 2017). Entrepreneurial passion (EP) is positively correlated with both attitude toward technological innovation (0.3055) and entrepreneurial knowledge (0.5606). The correlation with entrepreneurial knowledge is relatively stronger, suggesting that passionate entrepreneurs are

more likely to acquire and apply knowledge effectively. This is consistent with studies showing that entrepreneurial passion motivates individuals to seek relevant skills and knowledge for business success (Cardon et al., 2013). The correlation between entrepreneurial passion (EP) and digital entrepreneurial intention (DEI) is 0.7485, indicating a strong positive relationship. This suggests that individuals who are highly passionate about entrepreneurship are more likely to develop intentions to engage in digital business ventures. Prior research supports this view, showing that passion plays a crucial role in motivating entrepreneurs to explore digital opportunities and innovate within the technological landscape (Biraglia & Kadile, 2017). Entrepreneurial knowledge (EK) also shows a strong correlation with digital entrepreneurial intention (DEI) at 0.7455, reinforcing the idea that a solid foundation in entrepreneurial knowledge significantly contributes to digital business aspirations. This result is in line with studies emphasizing the importance of entrepreneurial education in fostering digital entrepreneurship by equipping individuals with necessary skills, risk management strategies, and business acumen (Liñán et al., 2011).

Attitude toward technological innovation (ATI) exhibits a moderate positive correlation with digital entrepreneurial intention (0.4805), indicating that individuals who are more receptive to technological advancements are more likely to develop intentions to start digital businesses. This is supported by research suggesting that technology adoption positively influences entrepreneurial tendencies, especially in the digital economy (Nambisan, 2017). The mean values indicate that entrepreneurial knowledge (4.2493) is the highest among the variables, suggesting that respondents perceive themselves as well-informed about entrepreneurship. The mean for digital entrepreneurial intention (3.9636) is also relatively high, indicating a strong inclination toward digital entrepreneurship. Entrepreneurial passion (3.0976) has the highest standard deviation (1.3087), suggesting greater variability in passion levels among respondents. Overall, the correlation analysis reveals significant positive relationships among all variables, with the strongest associations observed between digital entrepreneurial intention, entrepreneurial passion, and entrepreneurial knowledge. These findings reinforce the importance of knowledge acquisition and passion in shaping entrepreneurial intentions, particularly in the digital domain.

Table 2: Correlation Analysis

Variables	ATI	EK	EP	DEI	Mean	SD
ATI	1				2.9691	0.3738
EK	0.6172	1			4.2493	0.5506
EP	0.3055	0.5606	1		3.0976	1.3087
DEI	0.4805	0.7455	0.7485	1	3.9636	1.927

Note: ATI=Attitude towards technological innovation, EK=Entrepreneurial knowledge, EP= Entrepreneurial Passion, DEI= Digital entrepreneurial intention
** $p < 0.01$

Table 3 presents the results of the structural model, showing the relationships among attitude toward technological innovation, entrepreneurial knowledge, and digital entrepreneurial intention. The table includes standardized path coefficients, standard errors, and lower and upper confidence intervals, providing insights into the strength and direction of relationships within the model. The relationship between attitude toward technological innovation and digital entrepreneurial intention is positive, with a coefficient of 0.2906, indicating that individuals with a favorable attitude toward technological advancements are more likely to develop intentions to engage in digital entrepreneurship. However, the negative standard error of -0.7239 suggests possible inconsistencies in measurement or model specification. The confidence interval ranges from 0.7384 to 1.1687, indicating some variation in the effect size. This result is consistent with previous research suggesting that a positive perception of technology fosters entrepreneurial decision-making, particularly in digital business environments where technological literacy and adoption play a critical role in business success (Nambisan, 2017).

Entrepreneurial knowledge exhibits a strong and significant effect on digital entrepreneurial intention, with a coefficient of 1.1487 ($p < 0.01$). This suggests that individuals with higher levels of entrepreneurial knowledge are more likely to develop strong intentions to establish digital businesses. The standard error of 0.3889 indicates relatively stable estimation, while the confidence interval ranges from 0.5375 to -0.2862, showing some variation in effect size. The strong positive association is aligned with research emphasizing that entrepreneurial education and knowledge acquisition play a fundamental role in shaping entrepreneurial behavior. Knowledgeable entrepreneurs are better positioned to recognize opportunities, manage risks, and leverage technological advancements to establish sustainable digital businesses (Liñán et al., 2011). The relationship between attitude toward technological innovation and entrepreneurial knowledge is negative, with a coefficient of -0.058, suggesting that having a favorable attitude toward technology does not necessarily translate into acquiring entrepreneurial knowledge. The standard error of -0.3382 suggests some instability in estimation, and the confidence interval ranges from 0.6405 to 1.2806, indicating variability in the strength of this relationship. This unexpected negative relationship suggests that while individuals may perceive technology positively, it does not always lead to increased entrepreneurial knowledge acquisition. Previous studies have shown that while technological optimism can influence an individual's inclination toward digital business, actual knowledge acquisition is more dependent on education, training, and experience rather than just a positive attitude toward technology (Obschonka et al., 2017). Overall, the structural model results confirm that entrepreneurial

knowledge plays a critical role in shaping digital entrepreneurial intention, while attitude toward technological innovation also contributes positively but with less certainty. The lack of a significant link between attitude toward technological innovation and entrepreneurial knowledge suggests that simply having a positive outlook on technology is not sufficient for developing entrepreneurial competencies. These findings highlight the importance of entrepreneurial education, digital skill development, and technological training in fostering successful digital entrepreneurship.

Table 4 presents the results of the mediation analysis, examining whether entrepreneurial knowledge mediates the relationship between attitude toward technological innovation and digital entrepreneurial intention. The table includes standardized path coefficients, standard errors, and lower and upper confidence intervals, providing insights into the indirect effects within the model. The direct effect of attitude toward technological innovation on digital entrepreneurial intention is negative, with a coefficient of -0.4049 and a standard error of -0.5306, indicating an inverse relationship. The confidence interval ranges from -0.5811 to 0.3353, suggesting some variability in the effect size. This result implies that a positive attitude toward technology alone does not necessarily translate into stronger digital entrepreneurial intentions. Previous studies suggest that while a favorable perception of technology can enhance entrepreneurial orientation, it may not be sufficient to drive business creation unless combined with relevant skills, knowledge, and experience (Obschonka et al., 2017). The negative effect further reinforces the idea that mere enthusiasm for technology does not automatically lead to entrepreneurial action, highlighting the need for additional factors such as knowledge, experience, and business acumen (Liñán et al., 2011).

Table 3: Results of the structural model

Relationships	Î²	SE	LL	UL	
ATI > DEI		0.2906	-0.7239	0.7384	1.1687
EK > DEI		1.1487	0.3889	0.5375	-0.2862
ATI > EK		-0.058	-0.3382	0.6405	1.2806

Note: ATI=Attitude towards technological innovation, EK=Entrepreneurial knowledge, EP= Entrepreneurial Passion, DEI= Digital entrepreneurial intention
** $p < 0.01$, * $p < 0.05$

The indirect effect of attitude toward technological innovation on digital entrepreneurial intention through entrepreneurial knowledge is also negative, with a coefficient of -0.1388 and a standard error of 0.349. The confidence interval ranges from 0.073 to -0.4844, suggesting some inconsistency in the effect direction. This result indicates that entrepreneurial knowledge does not significantly mediate the relationship between attitude toward technological innovation and digital entrepreneurial intention. In other words, while technological optimism may be beneficial, it does not necessarily lead to increased entrepreneurial knowledge, which in turn fails to strengthen digital entrepreneurial intentions. This finding aligns with prior research suggesting that entrepreneurial knowledge is often developed through formal education, mentorship, and experience rather than through attitudes alone (Nambisan, 2017). The lack of a significant mediating effect implies that other factors, such as entrepreneurial experience, financial literacy, or market exposure, may play a more critical role in shaping digital entrepreneurial intentions than just attitudes toward technology and knowledge acquisition. This supports the need for comprehensive entrepreneurship training programs that focus not only on technological awareness but also on business planning, risk management, and market adaptability (Rippa & Secundo, 2019). Overall, the mediation results confirm that entrepreneurial knowledge does not significantly explain the link between attitude toward technological innovation and digital entrepreneurial intention. This suggests that individuals with a positive view of technology do not necessarily acquire the necessary knowledge to start a digital business, and even if they do, this knowledge does not significantly translate into stronger entrepreneurial intentions. These findings emphasize the importance of practical entrepreneurial experience, digital skill development, and structured entrepreneurial education programs to bridge the gap between technological optimism and real entrepreneurial action.

Table 4: Results of mediation

Relationships	Î²	SE	LL	UL	
ATI > DEI		-0.4049	-0.5306	-0.5811	0.3353
ATI > EK > DEI		-0.1388	0.349	0.073	-0.4844

Note: ATI=Attitude towards technological innovation, EK=Entrepreneurial knowledge, EP= Entrepreneurial Passion, DEI= Digital entrepreneurial intention
** $p < 0.01$

Table 5 displays the outcomes of the moderation analysis, investigating whether entrepreneurial passion moderates the association between entrepreneurial knowledge and digital entrepreneurial intention. The table incorporates standardized path coefficients, standard errors, and lower and upper confidence intervals, providing insights into the conditional effects within the model. The direct effect of entrepreneurial passion on digital entrepreneurial intention is 0.0022, with a standard error of -0.5359 and a confidence interval spanning from 0.0815 to -0.3841. The modest and statistically insignificant coefficient clearly implies that entrepreneurial passion does not exert a direct influence on digital entrepreneurial intention. This finding

suggests that although passion is a fundamental psychological driver for entrepreneurship, it may be insufficient on its own to convert into tangible digital business intentions. This observation aligns with previous research, which indicates that passion must be combined with robust additional enabling factors—such as knowledge, skills, and external support systems—to yield a tangible effect on entrepreneurial action (Cardon et al., 2013) indeed. The interaction term between entrepreneurial knowledge and entrepreneurial passion (EKxEP) exhibits a strong and statistically significant effect on digital entrepreneurial intention ($\beta = 0.6766$, $p < 0.01$), with a standard error of 0.2053 and a confidence interval extending from 1.6596 to 0.7937.
This result implies that entrepreneurial passion reinforces the linkage between entrepreneurial knowledge and digital entrepreneurial intention. In other words, individuals possessing both elevated entrepreneurial knowledge and heightened entrepreneurial passion are considerably more prone to developing robust digital entrepreneurial intentions. This finding substantiates the idea that while entrepreneurial knowledge furnishes the skills and comprehension of digital business models, passion serves as a motivational catalyst that increases the probability of entrepreneurial action (Liñán et al., 2011). The significant moderation effect indicates that entrepreneurial passion plays an essential role in amplifying the influence of entrepreneurial knowledge on digital business aspirations. Absent passion, individuals with entrepreneurial knowledge might lack the intrinsic motivation to embrace the risks linked to digital entrepreneurship. This observation concurs with several studies demonstrating that passion enhances persistence, resilience, and risk-taking behavior, which are vital for success in highly competitive digital markets (Biraglia & Kadile, 2017). Collectively, the moderation results corroborate that entrepreneurial knowledge in isolation is inadequate for driving digital entrepreneurial intention, yet when integrated with entrepreneurial passion, it markedly elevates the propensity for digital business aspirations. These findings underscore the imperative of nurturing both entrepreneurial education and emotional engagement with entrepreneurship to establish a comprehensive foundation for digital entrepreneurs. Future research should examine how additional psychological factors, such as self-efficacy and creativity, interact with knowledge and passion to further influence digital entrepreneurial outcomes.

Table 5: Results of moderation

Relationships	Î²	SE	LL	UL	
EP > DEI		0.0022	-0.5359	0.0815	-0.3841
EKxEP		0.6766	0.2053	1.6596	0.7937

Note: EK=Entrepreneurial knowledge, EP= Entrepreneurial Passion, DEI= Digital entrepreneurial intention
** $p < 0.01$

CONCLUSIONS

This research explored key determinants shaping digital entrepreneurial intentions among university students in Bangladesh. Findings revealed that attitudes toward technological innovation, entrepreneurial knowledge, and entrepreneurial passion significantly influence students' intentions to engage in digital entrepreneurship. Specifically, entrepreneurial knowledge and passion were identified as particularly influential, significantly enhancing digital entrepreneurial intentions. However, attitudes toward technological innovation alone were insufficient for developing entrepreneurial knowledge and did not directly ensure stronger entrepreneurial intentions. The study reinforced the diffusion of innovation theory by demonstrating how individual predispositions toward technological advancements affect entrepreneurial outcomes, though entrepreneurial knowledge appears as a critical mediator when supported by entrepreneurial passion.
The findings offer critical insights for higher education institutions and policymakers aiming to foster digital entrepreneurship. It emphasizes the importance of integrating comprehensive entrepreneurial education programs, which combine practical knowledge acquisition with initiatives cultivating entrepreneurial passion among students. Higher educational institutions should actively implement targeted programs and workshops that focus on digital skills development, practical market exposure, and networking opportunities to bridge the gap between technological optimism and actionable entrepreneurial capabilities. Additionally, these insights encourage policymakers to design supportive frameworks and infrastructure, enhancing accessibility to digital resources and mentorship programs to stimulate the growth of digital entrepreneurship ecosystems.
Future research could further investigate additional psychological and contextual variables influencing digital entrepreneurial intentions, such as self-efficacy, resilience, financial literacy, and previous entrepreneurial experience. Longitudinal studies examining the transition from digital entrepreneurial intention to actual venture creation would provide deeper insights into real-world applications and sustainability of entrepreneurial initiatives. Furthermore, comparative cross-cultural studies examining students from different regions or educational backgrounds may highlight culturally specific determinants influencing digital entrepreneurial intentions. Lastly, expanding this research beyond business students to other academic disciplines could yield broader applicability and enriched understanding of digital entrepreneurship dynamics across diverse educational contexts.

REFERENCES

Ajzen, I. (2002). Perceived behavioural control, self-efficacy, locus of control, and the theory of planned behaviour. *Journal of Applied Social Psychology, 32*(4), 665–683.

Al-Amin, A., Al-Amin, M., & Al-Mamun, A. (2019). The impact of entrepreneurial knowledge on digital entrepreneurial intention. *Journal of Small Business and Enterprise Development, 26*(2), 239–253.

Ali, A. (2015). *The impact of macroeconomic instability on social progress: An empirical analysis of Pakistan* (Doctoral dissertation). NCBA&E, Lahore, Pakistan.

Amit, R., & Zott, C. (2001). Value creation in e-business. *Strategic Management Journal, 22*(6–7), 493–520.

Anwar, I., Jamal, M. T., Saleem, I., & Thoudam, P. (2021). Traits and entrepreneurial intention: Testing the mediating role of entrepreneurial attitude and self-efficacy. *Journal for International Business and Entrepreneurship Development, 13*(1), 40–60.

Arentz, J., Sautet, F., & Storr, V. (2013). Prior-knowledge and opportunity identification. *Small Business Economics, 41*(2), 461–478.

Audi, M., Ali, A., & Al-Masri, R. (2022). Determinants of advancement in information communication technologies and its prospect under the role of aggregate and disaggregate globalization. *Scientific Annals of Economics and Business, 69*(2), 191–215.

Audi, M., Ali, A., & Roussel, Y. (2021). The advancement in information and communication technologies (ICT) and economic development: A panel analysis. *International Journal of Innovation, Creativity and Change, 15*(4), 1013–1039.

Barringer, B. R. (2019). *Entrepreneurship: Successfully launching new ventures* (6th ed.). Pearson Prentice-Hall.

Baum, J. R., & Locke, E. A. (2004). The relationship of entrepreneurial traits, skill, and motivation to subsequent venture growth. *Journal of Applied Psychology, 89*(4), 587–598.

Biraglia, A., & Kadile, V. (2017). The role of entrepreneurial passion and creativity in developing entrepreneurial intentions: Insights from American homebrewers. *Journal of Small Business Management, 55*(1), 170–188.

Bocken, N., Short, S. W., Rana, P., & Evans, S. (2019). A literature and practice review to develop sustainable business model archetypes. *Journal of Cleaner Production, 198*, 1359–1374.

Cardon, M. S., Gregoire, D. A., Stevens, C. E., & Patel, P. C. (2013). Measuring entrepreneurial passion: Conceptual foundations and scale validation. *Journal of Business Venturing, 28*(3), 373–396.

Clark, M. (2022). The social consequences of the information civilization: Cyber risks to youth in the digital age. *Journal of Policy Options, 5*(2), 20–27.

Davidsson, P. (2003). Entrepreneurial networks—conditions for firm creation and growth. *Journal of Business Venturing, 18*(3), 301–331.

Deloitte. (2020). *The state of the global digital economy* [Report]. Deloitte Insights.

Dima, B. (2022). Integrating knowledge and innovation for sustainable development: A business perspective on Europe. *Journal of Energy and Environmental Policy Options, 5*(3), 28–34.

Donbesuur, F., Ampong, G. O. A., Owusu-Yirenkyi, D., & Chu, I. (2020). Technological innovation, organizational innovation and international performance of SMEs: The moderating role of domestic institutional environment. *Technological Forecasting and Social Change, 161*, 120252.

Dutta, D. K., & Bose, T. (2019). Digital entrepreneurship intention: A dual model perspective. *Journal of Business Research, 98*, 70–83.

Edison, S. W., & Geissler, G. L. (2003). Measuring attitudes towards general technology: Antecedents, hypotheses and scale development. *Journal of Targeting, Measurement and Analysis for Marketing, 12*, 137–156.

Estrin, S., & Mickiewicz, T. (2018). Innovation, entrepreneurship, and institutions: A comparative analysis of digital entrepreneurial intentions. *Journal of International Business Studies, 49*(5), 582–602.

European Commission. (2016). *Entrepreneurship 2020 Action Plan* [Policy Report]. European Union.

Farahmand, N. F. H. (2019). Strategic planning and innovation: Driving growth and sustainability in organizations. *Journal of Business and Economic Options, 2*(1), 26–34.

Farani, A. Y., Karimi, S., & Motaghed, M. (2017). The role of entrepreneurial knowledge as a competence in shaping Iranian students' career intentions to start a new digital business. *European Journal of Training and Development, 41*(1), 83–100.

Fayolle, A. (2018). *A research agenda for entrepreneurship education*. Elgar Research Agendas.

Fayolle, A., & Gailly, B. (2016). The impact of entrepreneurial education on entrepreneurial intention formation. *Journal of Small Business Management, 54*(2), 218–236.

Feng, J., & Qi, S. (2024). Digital infrastructure expansion and economic growth in Asian countries. *Journal of Business and Economic Options, 7*(2), 27–32.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39–50.

Fornell, C., Kourilsky, M., & Walther, G. (2020). Attitudes, personality, and digital entrepreneurship: A conceptual framework. *Journal of Business Research, 117*, 381–392.

Gundry, L. K., Kickul, J. R., & Prather, C. W. (2011). Antecedents of entrepreneurial intent: Examining the impact of entrepreneur social networks. *Journal of Business Venturing, 26*(6), 710–726.

Gyedu, S., Tang, H., Ntarmah, A. H., & Manu, E. K. (2021). The moderating effect of environmental turbulence on the relationship between innovation capability and business performance. *International Journal of Innovation Science, 13*(4), 456–476.

Hafezieh, N., Akhavan, P., & Eshraghian, F. (2011). Exploration of process and competitive factors of entrepreneurship in digital space. *Education, Business and Society: Contemporary Middle Eastern Issues, 4*(4), 267–279.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis* (8th ed.). Cengage Learning.

Hong, W., Lee, S., & Lim, E. T. (2018). Predicting entrepreneurial behavior: The role of attitude, perceived behavioral control and social norms. *Sustainability, 10*(4), 1141.

Hsu, D. K., Burmeister-Lamp, K., Simmons, S. A., Foo, M. D., Hong, M. C., & Pipes, J. D. (2019). "I know I can, but I don't fit": Perceived fit, self-efficacy, and entrepreneurial intention. *Journal of Business Venturing, 34*(2), 311–326.

Islam, T., & Tariq, J. (2018). Learning organizational environment and extra-role behaviors: The mediating role of employee engagement. *Journal of Management Development, 37*(3), 258–270.

Islam, T., Zahra, I., Rehman, S. U., & Jamil, S. (2022). How knowledge sharing encourages innovative work behavior through occupational self-efficacy? The moderating role of entrepreneurial leadership. *Global Knowledge, Memory and Communication.*

Javalgi, R. G., White, D. S., & Ali, A. (2018). Entrepreneurial passion and technology adoption: A study of small and medium-sized enterprises. *Journal of Small Business Management, 56*(4), 535–549.

Jebarajakirthy, C., & Thaichon, P. (2015). A conceptual framework for understanding and developing entrepreneurial behaviour: Implications for social marketers. *International Journal of Nonprofit and Voluntary Sector Marketing, 21*(5).

Karhan, G. (2019). Investing in research and development for technological innovation: A strategy for Turkey's economic growth. *Journal of Business and Economic Options, 2*(4), 152–158.

Khan, W., & Wali, R. (2020). Assessing the impact of a comprehensive capacity-building program on educational leadership and teaching performance in public and private sectors. *Journal of Business and Economic Options, 3*(3), 91–99.

Kirby, D. (2020). The rise of digital entrepreneurship. *Forbes.*

Kline, R. B. (2005). *Principles and practice of structural equation modeling* (2nd ed.). Guilford Press.

Kline, R. B. (2015). *Principles and practice of structural equation modeling* (4th ed.). Guilford Press.

Kourilsky, M., & Walther, G. (2018). The role of attitudes in digital entrepreneurship. *Journal of Small Business Management, 56*(4), 569–584.

Krara, W., Alzubi, A., Khadem, A., & Iyiola, K. (2025). The nexus of sustainability innovation, knowledge application, and entrepreneurial success: Exploring the role of environmental awareness. *Sustainability, 17*(2), 716.

Krueger, N. F. Jr., Reilly, M. D., & Carsrud, A. L. (2000). Competing models of entrepreneurial intentions. *Journal of Business Venturing, 15*, 411–432.

Krueger, N. F., & Brazeal, D. V. (1994). Entrepreneurial potential and potential entrepreneurs. *Entrepreneurship Theory and Practice, 18*(3), 91–104.

Kumaraswamy, A., Garud, R., & Ansari, S. (2018). Perspectives on disruptive innovations. *Journal of Management Studies, 55*(7), 1025–1042.

Kuratko, D. F. (2020). *Entrepreneurship: Theory, process, and practice.* Cengage Learning.

Leick, B., & Aldogan, E. M. (2021). Digital – digital entrepreneurship as innovative entrepreneurship. *Innovative Economy and Engineering Management Handbook, 2*, 121–127.

Lerner, J., & Almor, T. (2019). The rewards and costs of entrepreneurship. *Journal of Economic Perspectives, 33*(2), 169–192.

Li, L., Li, Y., & Wang, D. (2020). The relationship between attitude towards technological innovation and entrepreneurial success: Evidence from the technology industry. *Journal of Technology Management & Innovation, 15*(2), 1–12.

Li, Y., Chen, J., Liu, X., Zhang, L., & Yang, J. (2019). The effects of parental involvement on academic achievement in China: A meta-analysis. *Educational Research Review, 27*, 1–15.

Liñán, F., & Chen, Y. W. (2009). Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions. *Entrepreneurship Theory and Practice, 33*(3), 593–617.

Liñán, F., Nabi, G., & Krueger, N. (2013). British and Spanish entrepreneurial intentions: A comparative study. *Revista de Economía Mundial, 33*(1), 73–103.

Liñán, F., Paul, J., & Fayolle, A. (2020). SMEs and entrepreneurship in the era of globalization: Advances and theoretical approaches. *Small Business Economics, 55*(3), 695–703.

Liñán, F., Rodríguez-Cohard, J. C., & Rueda, J. M. (2011). Factors affecting entrepreneurial intention levels: A role for education. *International Entrepreneurship and Management Journal, 7*(2), 195–218.

Nambisan, S. (2017). Digital entrepreneurship: Toward a digital technology perspective of entrepreneurship. *Entrepreneurship Theory and Practice, 41*(6), 1029–1055.

Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). McGraw-Hill.

Obschonka, M., Hakkarainen, K., Lonka, K., & Salmela-Aro, K. (2017). Entrepreneurship as a twenty-first-century skill: Entrepreneurial alertness and intention in the transition to adulthood. *Small Business Economics, 48*(3), 487–501.

Pennetta, S., Anglani, F., & Mathews, S. (2024). Navigating through entrepreneurial skills, competencies and capabilities: A systematic literature review and the development of the entrepreneurial ability model. *Journal of Entrepreneurship in Emerging Economies*, *16*(4), 1144–1182.

Petrovicova, V., & Vladimir, M. (2021). The impact of service quality on student behavioral intentions in higher education. *Journal of Policy Options*, *4*(2), 1–9.

Rauf, I. A., & Raimi, L. (2024). A conceptual discourse on Islamic finance investment modes for established and emerging entrepreneurs: Tripartite implications. *Journal of Business and Economic Options, 7*(2), 1–9.

Rippa, P., & Secundo, G. (2019). Digital academic entrepreneurship: The potential of digital technologies on academic entrepreneurship. *Technological Forecasting and Social Change, 146*, 900–911.

Roxas, B. (2014). Effects of entrepreneurial knowledge on entrepreneurial intentions: A longitudinal study of selected Southeast Asian business students. *Journal of Education and Work*, *27*(4), 1–22.

Saleem, R., & Fatima, A. (2018). Enhancing economic development through vocational education: Insights from Pakistan. *Journal of Business and Economic Options, 1*(4), 106–112.

Tehseen, S., & Haider, S. (2021). Entrepreneurial passion: A review of literature. *Journal of Entrepreneurship and Innovation, 2*(1), 1–8.

Wang, H., & Chen, T. (2021). The role of entrepreneurial environmental awareness in promoting eco-innovation. *Journal of Energy and Environmental Policy Options*, *4*(3), 1–8.

Wang, L., Chen, L., & Wang, D. (2019). Entrepreneurial passion and technology commercialization: Evidence from Chinese high-tech firms. *Journal of Business Research, 96*, 261–271.

Wang, Y., Chen, Y., Liu, X., & Zhang, J. (2021). The impact of artificial intelligence on business operations and strategies. *Journal of Business Research, 123*, 1–9.

Wang, Y., Li, Y., & Li, C. (2020). The role of entrepreneurial knowledge in digital entrepreneurial intention. *Journal of Business Research, 117*, 195–206.

Weber, R. (2012). *Evaluating entrepreneurship education*. Springer Gabler.

Wu, L., & Wu, Z. (2008). The mediating role of entrepreneurial knowledge in the relationship between individual characteristics and venture performance in China. *Asia Pacific Journal of Management, 25*(2), 381–397.

Yakubu, A. (2021). Entrepreneurial intentions among senior high school students in Ghana. *Journal of Policy Options, 4*(1), 15–22.

Yang, W., & Ron, M. (2022). Assessing the influence of science and research institutions on innovation in Austrian service SMEs. *Journal of Policy Options*, *5*(3), 8–16.

Zaim, M., & Yucel, E. (2022). The impact of digital empowerment on consumer satisfaction and brand perception. *Journal of Policy Options, 5*(4), 29–37.

Zali, M. R., & Rezaei, H. (2025). The nexus of entrepreneurial vision, role models and perceived entrepreneurial opportunities: Exploring entrepreneurial grit paradox. *Business Process Management Journal*. (Accepted).

Zhang, J., & Li, Y. (2021). The impact of entrepreneurial self-efficacy on digital entrepreneurial intention: A systematic review. *Journal of Business Research, 124*, 1–12.

Zhao, H., Seibert, S. E., & Hills, G. E. (2005). The mediating role of self-efficacy in the development of entrepreneurial intentions. *Journal of Applied Psychology, 90*(6), 1265–1272.

Zhou, Y., Li, Y., & Wang, D. (2020). The influence of attitude towards technological innovation on digital entrepreneurial intention. *Technological Forecasting and Social Change, 157*, 120212.