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Mohammad Younis Mohammad
Alkhalaileh

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Head of the Doctoral School: Prof. Dr. Balogh, Péter professor, DSc

**The Factors Affecting Students' Intention to Become Digital
Entrepreneurs: The Case of the Universities of Jordan.**

PhD Student:

Mohammad Younis Mohammad Alkhalailah

Supervisor:

Judit Katonáné Kovács

Associate Professor, Department of Micro and Macroeconomics

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The Factors Affecting Students' Intention to Become Digital Entrepreneurs: The Case of the Universities of Jordan.

The aim of this dissertation is to obtain a doctoral (PhD) degree in the scientific field of “management and business”.

Written by: Mohammad Younis Mohammad Alkhalaileh certified

Doctoral final exam committee:

	name	academic degree
President:
members:

Date of the doctoral final exam: 20.....

Reviewers of the dissertation:

	name, academic degree	signature
.....:
.....:

Review committee:

	name, academic degree	signature
President:
Secretary:
members:

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1. INTRODUCTION

1.1 Introduction

The future prosperity of nations depends on the vigor of their youth—a demographic that holds the key to driving economic and social development (Perezniето & Harding, 2013). In the Middle East and North Africa (MENA) region, where most people are under 35 years old, there is a massive opportunity for growth (The World Bank., 2020). Despite this promising demographic profile, the International Labor Office (2015) highlights alarming youth unemployment rates, particularly in the MENA region. In Jordan, a country deeply committed to progress, the third quarter of 2021 witnessed a concerning unemployment rate of 23.2%, with a noteworthy proportion affecting individuals holding university degrees (Department of Statistics, 2022). These stark figures have prompted the government to take decisive action, recognizing the urgent need to address the unemployment challenge head-on.

As unemployment escalates, entrepreneurship emerges as a potent tool to generate more job opportunities and foster new economic opportunities (Miller, Bell, Palmer, & Gonzalez, 2009). Promoting entrepreneurship is not just a good idea; it is a pivotal strategy to enrich the lives of young people, particularly in developing nations (Setti, 2017). To amplify youth participation in economic development, countries must harness their innovative talents and nurture the entrepreneurial spirit (Mahadea, Ramroop, & Zewotir, 2011).

Digital technologies like smartphones, the Internet, and various applications are revolutionizing the global economy by reshaping how entrepreneurship works (The World Bank, 2016). The fast spread of digital technologies has significantly changed competitive settings, created new business structures, and opened new doors for young entrepreneurs (Bharadwaj, Sawy, Pavlou, & Venkatraman, 2013). The utilization of digital networks and the Internet has forged a distinct digital ecosystem for entrepreneurs, facilitating the establishment of businesses founded on digital models (Wetherbe, McLean, Leidner, & Turban, 2006).

In response to the rapid growth of the digital world, the Government of Jordan established a Ministry for Digital Economy and Entrepreneurship. This ministry aims to set up infrastructure for digital entrepreneurship and develop policies to tackle the challenges Jordanian entrepreneurs face (Ministry of Digital Economy and Entrepreneurship, 2019). However, creating such policies cannot be enough without addressing the role of university support systems in promoting digital entrepreneurship. Since universities play a crucial role in shaping students' intentions to become entrepreneurs, universities must go beyond mere educational

support and offer comprehensive assistance, including concept development and business development support (Saeed, Yousafzai, Yani-De-Soriano, & Muffatto, 2015).

In entrepreneurship research, scholars have employed social cognition models to identify critical factors affecting entrepreneurial intentions and actions (Krueger & Carsrud, 1993; Liñán, Urbano, & Guerrero, 2011). Amidst various models, the theory of planned behavior (TPB) has demonstrated its practicality (Ajzen, 1991). At the core of TPB is entrepreneurial intention, which is best predicted by three key elements: attitudes toward entrepreneurship, subjective norms, and perceived behavioral control.

Previous studies aimed to identify the factors influencing entrepreneurial intention. They looked at internal psychological factors (e.g., risk-taking) and external environmental factors (e.g., perceived university support) separately. However, only a few studies simultaneously consider internal and external factors (Karimi et al., 2017).

On the other hand, as the number of internet users increases, digital knowledge and skills can significantly boost the development of digital startups (Gilster, 1997). Conversely, a lack of digital literacy among students can impede the creation of such startups. Thus, digital literacy is crucial, particularly for digital entrepreneurs (Suparno, Saptono, Wibowo, & Narmaditya, 2020). Surprisingly, few studies delve into how digital literacy shapes the desire to start digital businesses (W. Ng, 2013).

Moreover, limited empirical studies in developing countries explore the inclination toward digital entrepreneurship among undergraduates (Alkhalaileh, 2021a, 2021b; Alkhalaileh, Kovács, & Kovács, 2023; Al-Mamary, Abdulrab, Alwaheeb, & Alshammari, 2020; Younis, Katsioloudes, & Al Bakri, 2020).

Therefore, this study addressed the previous gaps by investigating how internal and external factors and digital literacy impact the students' intention to become digital entrepreneurs.

1.2 Research Objectives

The objectives of the study are listed below:

1. Delve deep into existing research on entrepreneurial intentions, covering theory and empirical findings.
2. Build a conceptual framework based on critical factors identified in the vast literature on entrepreneurial intentions.
3. Undertake an empirical investigation into the multifaceted determinants shaping digital entrepreneurial intentions among students at Jordanian universities.
4. Examine how students' personality traits shape their attitudes toward entrepreneurship and perceived behavioral control within the context of Jordan.
5. Investigate the nuanced effects of the Theory of Planned Behavior (TPB) factors and the university's perceived support of students' digital entrepreneurial intentions.
6. Investigate how digital literacy affects students' digital entrepreneurial intentions in Jordan.

1.3 Research Questions

The research attempts to answer the following main questions:

- 1- What factors stimulate digital entrepreneurship intention among undergraduate students in Jordan?
- 2- Do TPB factors (perceived behavior control, subjective norms, and attitude toward entrepreneurship) positively influence students' digital entrepreneurial intentions?
- 3- Do perceived university support factors positively influence students' digital entrepreneurial intentions?
- 4- Do personality traits positively impact students' perceived behavior control and attitude toward entrepreneurship?
- 5- Does digital literacy positively influence students' digital entrepreneurial intentions?

1.4 The Significance of the Study

The significance of the study lies in several key aspects:

1. **Addressing a Gap in Research:** The study fills a gap in the existing literature by examining digital entrepreneurship intentions, specifically among university students in Jordan. This focus on a specific demographic and context adds valuable insights to the broader field of entrepreneurship research.
2. **Informing Policy and Practice:** By identifying the factors influencing digital entrepreneurship intentions among students, the study provides valuable information for policymakers, educators, and other stakeholders. This can inform the development of targeted interventions and support programs to promote digital entrepreneurship education and initiatives within universities.
3. **Economic Development:** Promoting digital entrepreneurship among university students has the potential to contribute to economic growth and innovation in Jordan. By fostering an entrepreneurial mindset and providing students with the necessary skills and support, the study may help to create a more vibrant entrepreneurial ecosystem and stimulate job creation and economic development.
4. **Academic Contribution:** The study's findings contribute to the academic literature on entrepreneurship, particularly in the context of digital entrepreneurship and higher education. The study may also stimulate further research and exploration into related topics and areas of inquiry.

2. LITERATURE REVIEW

2.1 Entrepreneurship and Digital Entrepreneurship

In recent decades, the significance of entrepreneurship has undergone a remarkable surge, positioning itself as a pivotal force driving economic growth on a global scale (Kuratko, 2007). Traditional entrepreneurship has long been characterized by its reliance on conventional business models, offline interactions, and physical infrastructure (Liñán & Chen, 2009). In this model, entrepreneurs typically navigated within tangible market spaces, leveraging interpersonal networks and brick-and-mortar establishments to pursue their ventures (Davey, Plewa, & Struwig, 2011).

However, the advent of digitalization predicted a seismic shift in this landscape, catalyzing the emergence of digital entrepreneurship (Yaghoubi Farani, Karimi, & Motaghed, 2017). The proliferation of information and communication technologies (ICTs) unleashed unprecedented opportunities for innovation and disruption, empowering entrepreneurs to transcend geographical constraints and traditional entry barriers (Youssef, Boubaker, Dedaj, & Carabregu-Vokshi, 2021). Digitalization facilitated the creation of virtual marketplaces, online platforms, and data-driven business models, enabling entrepreneurs to reach wider audiences, streamline operations, and harness the power of big data and analytics. As a result, digital entrepreneurship became a blend of entrepreneurial creativity and digital skills, ushering in a new era of economic growth and innovation (Kraus, Palmer, Kailer, Kallinger, & Spitzer, 2019).

Recently, many studies have tried to understand the unique characteristics of digital entrepreneurship as it is a growing concept stemming from the traditional entrepreneurship model (Hull, Hung, Hair, Perotti, & Demartino, 2007). However, the difference between those two models is how entrepreneurs use the power of technology to operate and deliver their services or products. Researchers use many terms to represent digital entrepreneurship, such as cyber entrepreneurship, Internet entrepreneurship, e-entrepreneurship, and technology entrepreneurship (Aleidi & Chandran, 2019; Chang, Shu, Wang, Chen, & Ho, 2020; Guthrie, 2014; Nambisan, Lyytinen, Majchrzak, & Song, 2017). There are plenty of definitions for "digital entrepreneurship"; therefore, the author includes Table 1 summarizing researchers' most common definitions.

TABLE 1: DIGITAL ENTREPRENEURSHIP DEFINITIONS.

Author (s)	Digital Entrepreneurship Definition
(Hull et al., 2007)	Digital entrepreneurship is a subcategory of traditional entrepreneurship in which some or all physical parts of a traditional business become digitized.
(Guthrie, 2014)	Creating a venture to generate income from selling digital goods electronically.
(Giones & Brem, 2017)	The creation of new products and services based on the internet, running services exclusively in the cloud, and utilizing technologies like big data or artificial intelligence.
(Veit et al., 2014)	A business model is considered digital if changes in digital technologies trigger essential alterations in how business is conducted and revenues are generated.
(European Commission, 2014)	Using cloud and mobile technology, big data, and social media in entrepreneurship.
(Kraus et al., 2019)	Any entrepreneurial activity that moves the whole business, or the main part of it digitally can be characterized as digital entrepreneurship.

Note. The table was created by the author, Mohammad Younis Al Khalailah, 2022.

C. Hull et al. (2006) proposed the most comprehensive digital entrepreneurship model to describe the extent to which digitalization is distributed in a business setting. This model explores how digital technology is used in different parts of a company and how various departments contribute to digitalization. At its core, the model looks at the digital nature of a business's products or services, a crucial aspect that often sets apart new Internet-based companies. Another aspect to consider is the electronic distribution of digital products and services. That can significantly impact a company's markets and competitive strategies. The model also looks at how companies communicate digitally with external stakeholders, such as suppliers and customers. The final part involves the virtual interactive experience within a company's internal operations. New technologies have allowed team members to collaborate on projects even if they are in different locations. Those businesses adopt digital structures by incorporating virtual communication networks into their operations.

With various definitions of digital entrepreneurship offered by scholars, studies need a clear definition when using it. Hence, due to the importance of the four pillars of the digital environment proposed by C. Hull et al. (2006), this study used their definition as a base to create a new definition of digital entrepreneurship as follows: The creation of an online business that aims to sell digital goods/services, where the company's core activities such as trade and communication between consumers and suppliers occur only online. Moreover, the study

defines a digital entrepreneur as someone who uses information and communication technologies (ICTs) to create and deliver core business activities and functions, such as production, marketing, distribution, and stakeholder management, exclusively online (N. Hair, Wetsch, Hull, Perotti, & Hung, 2012).

2.2 Importance of Digital Entrepreneurship

In recent years, extensive digital entrepreneurial activities and innovation have been propelled mainly by the power of information technologies (Agarwal, Ferratt, & De, 2007). These technologies enabled digital entrepreneurs to play an essential role in socio-economic development, creating new jobs and offering innovative products/services (European Commission, 2014; Islami, 2019; Younis et al., 2020).

In today's digital era, entrepreneurship opens avenues for flexible work, allowing individuals to operate seamlessly from any location. This form of digital entrepreneurship not only facilitates ease of work but also holds the potential to foster gender equality, bolster social inclusion, and contribute significantly to local and sustainable development in various countries. Consider the impactful intersection of climate, agriculture, and traffic data with cutting-edge technologies. This synergy enables the development of applications and services to address pertinent challenges, such as optimizing agricultural production, enhancing crisis relief responses, expanding access to online education, evolving healthcare systems, improving energy management, and tackling issues like traffic congestion and accidents (Welsum, 2016). Digital entrepreneurs play a pivotal role in this landscape by employing technology to gather and analyze valuable data. This data, in turn, becomes a catalyst for the creation of new opportunities, financial resources, and market access by connecting buyers and sellers. These collective efforts improve countries' economic, social, and productivity conditions and foster more vital collaboration between the private and public sectors and other key stakeholders. As a result, digital entrepreneurship emerges as a highly dynamic force that drives positive change in many spheres.

Digital entrepreneurship significantly impacts both universities and students. It requires universities to change how they provide educational support, helping students gain skills needed in today's rapidly changing digital world (Secundo, Rippa, & Cerchione, 2020). This shift involves integrating entrepreneurship and digital literacy into educational programs, establishing innovation hubs, and building strong connections. Consequently, universities transform into a center point that fosters innovation and facilitates the development of digital businesses (Secundo et al., 2020).

On the other hand, digital entrepreneurship offers students a distinctive opportunity to use what they learn in class and apply it in real-life situations, elevating them from passive technology users to active creators (Wetherbe et al., 2006). This approach seeks to blur the lines between academia and industry, fostering an environment where learning becomes a dynamic and hands-on experience. Student involvement in digital entrepreneurship boosts career opportunities, improves problem-solving skills, and helps spur economic growth and innovation (Sussan & Acs, 2017). Additionally, digital technologies enable students to initiate their projects while studying, potentially transforming their time in education into a successful business venture (Iborra, Álvarez, Sánchez, Pastor, & Suárez, 2016; Welsum, 2016).

For digital entrepreneurship to flourish, governments, societies, and universities must cooperate to create the right ecosystem to inspire people to start new businesses. Therefore, the study attempts to understand what prompts young Jordanians to participate in digital entrepreneurship, an essential regional and global development issue.

2.3 Entrepreneurship in Jordan

As a developing market economy, Jordan relies mainly on human capital, natural resources, tourism, foreign aid, and remittances from abroad (Global Entrepreneurship Monitor, 2020). The country faces a significant challenge, with an unemployment rate soaring 23.2% among its 11,109,683 population (Department of Statistics, 2022). Due to the negative impacts of this spike on the economy overall, the government has taken crucial steps to develop a supportive entrepreneurial ecosystem to help address the unemployment issue. One noteworthy initiative is REACH 2025, designed to propel the digitization of the entire Jordanian economy, generate employment, and enhance human resources (Ministry of Digital Economy and Entrepreneurship, 2019). The Queen Rania Center for Entrepreneurship (QRCE) is an example of an NGO helping foster digital entrepreneurship in Jordan since 2004 (Queen Rania Center for Entrepreneurship, 2022).

Interestingly, most Jordanians (55%) aged 24 years and under have grown up during a remarkable technological period. As a result, they are very open to embracing and learning new technologies. The newest generations of Jordanians are more connected, educated, and globally aware than previous generations and are equipped to lead the new era of digitalization (Innovative Jordan, 2017).

ICT infrastructure is an essential pillar of digital entrepreneurship these days. Jordan was one of the pioneers who laid down the foundation of a supportive telecommunications sector in

1999. In addition to delivering 4G services to businesses and homes, the country's major telecom providers also integrated the Internet of Things in many aspects of the sector. Jordan's robust ICT infrastructure has enabled entrepreneurs from all backgrounds to choose the country to launch and grow their digital startups. However, creating a supportive entrepreneurship ecosystem requires continuous collaboration from all parties. For example, accelerators, incubators, and other initiatives have emerged to foster entrepreneurship in Jordan. In addition, social innovation labs, fabrication labs (FabLabs), and 3D printing houses have supplied young entrepreneurs with new tools, software, and opportunities to convert their ideas into real business (Innovative Jordan, 2017). These collective efforts have paved the way for the successful launch of digital startups in Jordan, including notable names like Maktoob (acquired by Yahoo in 2009), Jamalon (the largest online bookstore in the Middle East), Rubicon Group Holding (a global transmedia company), and Opensooq (the largest online marketplace in the Middle East) (Innovative Jordan, 2017).

Technology-based startups (TBSs) estimated a contribution to the Jordanian economy of around US\$ 168 million, which is 0.5% of Jordan's nominal GDP in 2016 (Kalaldehy & Al-Homsi, 2019). Due to the limited Jordanian market and the need to promote Jordan's export capabilities, TBSs are especially promising due to their superior export performance compared to mature firms in the ICT sector and other sectors.

On the other side, the higher education sector in Jordan is essential for comprehensive development on many levels. In recent decades, the education sector has witnessed significant improvements in its study programs that control both the quantity and the quality development of higher education institutions. The number of registered universities is 17; 10 are public, and seven are private (The Ministry of Higher Education and Scientific Research, 2022). Eight universities have innovation and entrepreneurship centers divided equally between the public and private universities. The University of Jordan pioneered the creation of an entrepreneurship center in 2004. Most of these centers provide entrepreneurial services to students within the same university. However, only some centers offer these services for a broader population segment, including students from different universities and other beneficiaries from all over the country.

Notably, Jordanian universities do not have independent entrepreneurship departments, and very few entrepreneurship programs are available within other departments. Jordanians only have access to two universities offering minor or major programs in entrepreneurship. The two programs are only available at the graduate level. The only major program is a master's degree in entrepreneurship offered by Princess Sumaya University for Technology. On the other hand,

Hashemite University offers a minor program that combines innovation, creativity, and information systems subjects. However, only a few subjects are offered at the undergraduate level that are directly related to entrepreneurship and small business theory.

The influence of government policies and initiatives is crucial in shaping university strategies and driving changes in entrepreneurship education (Matlay, 2011). Since 1994, Jordan has implemented policy reforms to the whole education system to prepare the students to enter the contemporary economy by equipping them with ICT skills, critical thinking, and an entrepreneurial mindset (Bills, 2015). However, effective implementation of these policies is lacking (Masri, Jemni, Al-Ghassani, & Badawi, 2010). Consequently, universities in Jordan grapple with a weak entrepreneurial ecosystem and a fragile educational system that hampers the development of essential entrepreneurial skills (Alakaleek, 2019). According to the Global Entrepreneurship Monitor (GEM) report, the rate of entrepreneurial activity in Jordan has declined from 18.3% in 2004 to 10.2% in 2009 to 8.2% in 2016. Notably, the age group between 18 and 24 years old (Usually bachelor students) has the lowest engagement in entrepreneurial activities (Global Entrepreneurship Monitor, 2016). The report also highlights the importance of dedicating significant resources through entrepreneurial education and specialized training to develop the skills and mindset crucial to supporting Jordanian entrepreneurs (Global Entrepreneurship Monitor, 2016). As discussed above, entrepreneurship education in Jordan is still in its early stages. To keep up with the rapid technological advancements and align with the government's push for a digital economy, universities must take focused and intensive actions to support these endeavors.

2.4 Theoretical Perspectives on Entrepreneurial Intentions

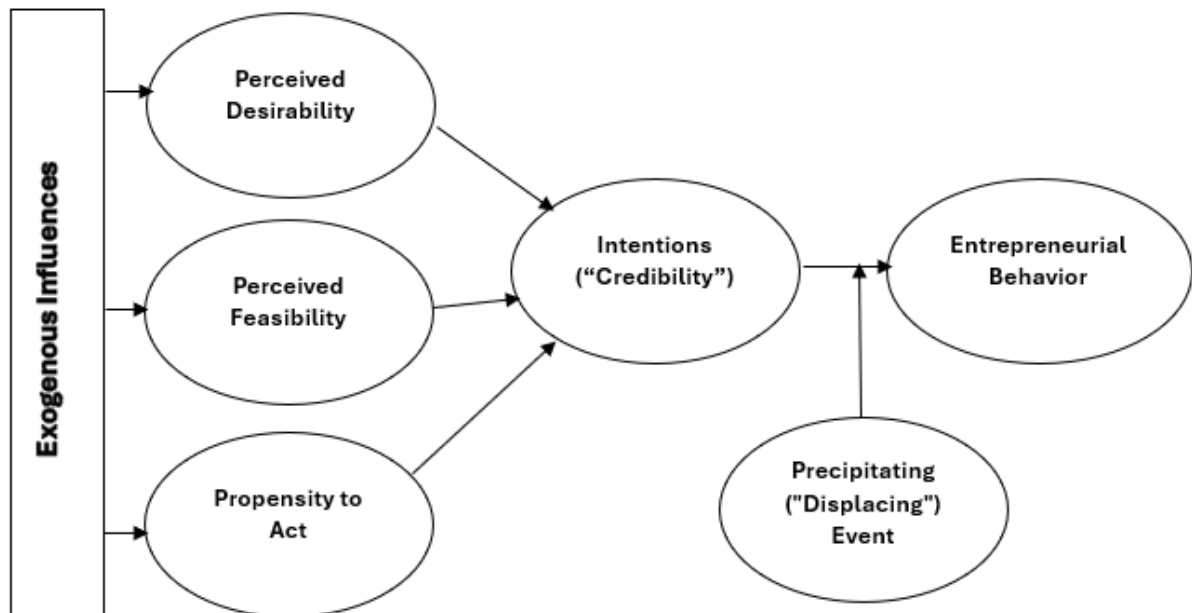
This section explores theories explaining entrepreneurial intentions and the factors influencing them. A thorough grasp of these theories will help create the theoretical framework for this research. In entrepreneurship, the initial step is having the intention to start a business as a career choice (Gartner & Shane, 1995). Entrepreneurial intention refers to an individual's motivation and readiness to create a business (Ajzen, 1991). Scholars have developed various theories to predict the factors that influence these intentions. The three most widely known theories are Shapero's (1984) theory of the entrepreneurial event, Krueger and Carsrud's (1993) intentional basic model, and Ajzen's (1991) theory of planned behavior.

2.4.1 The Model of The Entrepreneurial Event - Shapero (1984)

The model of the entrepreneurial event is a foundational theory that focuses on the process individuals go through before engaging in entrepreneurial activities. According to Shapero, the

entrepreneurial event unfolds in several stages. It begins with the individual perceiving specific opportunities in the environment, such as identifying a market need or a potential business idea. This opportunity perception triggers a cognitive process, formulating entrepreneurial intentions (Shapero, 1984). The illustration of this model is in Figure 1.

FIGURE 1: THE MODEL OF THE ENTREPRENEURIAL EVENT



Note. From (Shapero, 1984, p. 29).

The entrepreneurial event model breaks down into three essential components: perceived entrepreneurial desirability, perceived entrepreneurial feasibility, and "propensity to act." When discussing perceived entrepreneurial desirability, we look at how individuals assess the attractiveness and desirability of getting into entrepreneurship as a career. It reflects how much someone sees entrepreneurship as a compelling and valuable pursuit. Factors influencing perceived desirability include personal values, aspirations, and societal perceptions of entrepreneurship. For instance, individuals who value autonomy and innovation may perceive entrepreneurship as highly desirable (Shapero, 1984).

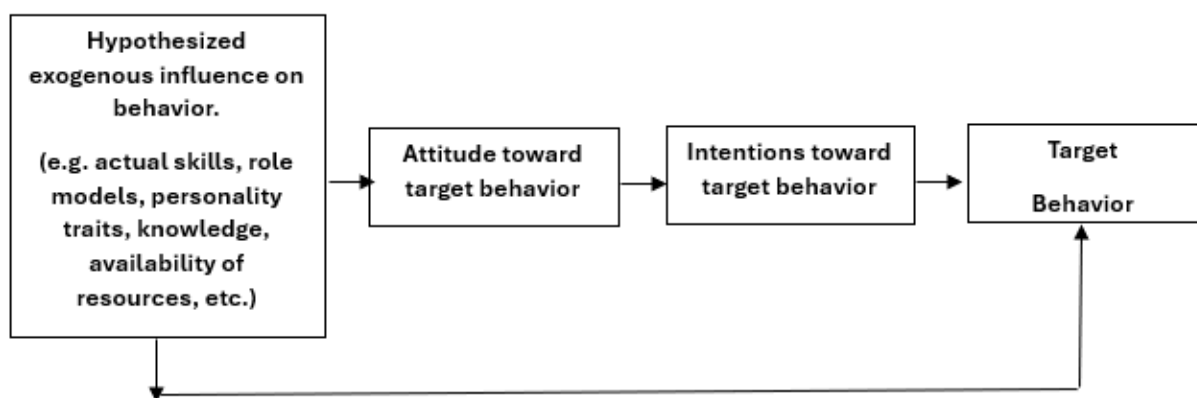
Perceived entrepreneurial feasibility, another pivotal component of Shapero's model, hones in on individuals' self-assessment of their capacity to initiate and operate a business successfully. This aspect considers factors such as the individual's skills, knowledge, and the availability of resources necessary for starting a business. Individuals who hold a belief in their competencies and resources are more likely to perceive entrepreneurial feasibility positively, underscoring the role of individual beliefs and perceptions in the entrepreneurial journey. Lastly, "propensity to act" in Shapero's model signifies that individuals will likely translate their intentions into actual entrepreneurial behavior. It represents the gap between the intention to start a business

and taking concrete steps to make it a reality. Shapero's model thoroughly explains the psychological processes in entrepreneurial decision-making, covering personal perceptions of desirability and feasibility and the action-oriented side of entrepreneurship (Shapero, 1984). However, the main disadvantage of Shapero's model lies in its emphasis on cognitive processes and individual perceptions, potentially overlooking the broader socio-economic and institutional contexts that significantly influence entrepreneurial activities. Moreover, it has not undergone extensive empirical testing and application, especially for potential entrepreneurs whose "displacing" effect might not be relevant (Krueger & Carsrud, 1993).

2.4.2 The Intentional Basic Model - Krueger and Carsrud (1993)

The "intentional basic model" outlines how external factors impact entrepreneurial behavior. According to Krueger and Carsrud (1993), these influences indirectly affect actions by changing attitudes. The authors argue that only intentions directly influence behavior, while attitudes influence intentions. External factors can impact attitudes or moderate the link between intentions and behavior, either supporting or hindering the realization of entrepreneurial intentions. Krueger and Carsrud (1993) suggest that intentions are specific to the person and context. In contrast, external factors are typically related to individual characteristics (like personality traits) or situational aspects (such as economic conditions). Henceforth, it is not astonishing that external factors frequently indirectly influence entrepreneurial behavior. Figure 2 illustrates this model.

FIGURE 2: THE INTENTIONAL BASIC MODEL



Note. From (Krueger & Carsrud, 1993, p. 317)

Despite its simplicity, Krueger and Carsrud's model may need to fully capture the complexity of various factors connecting entrepreneurial intention and behavior, limiting its ability to predict attitude-intention outcomes in empirical tests (Liñán et al., 2011).

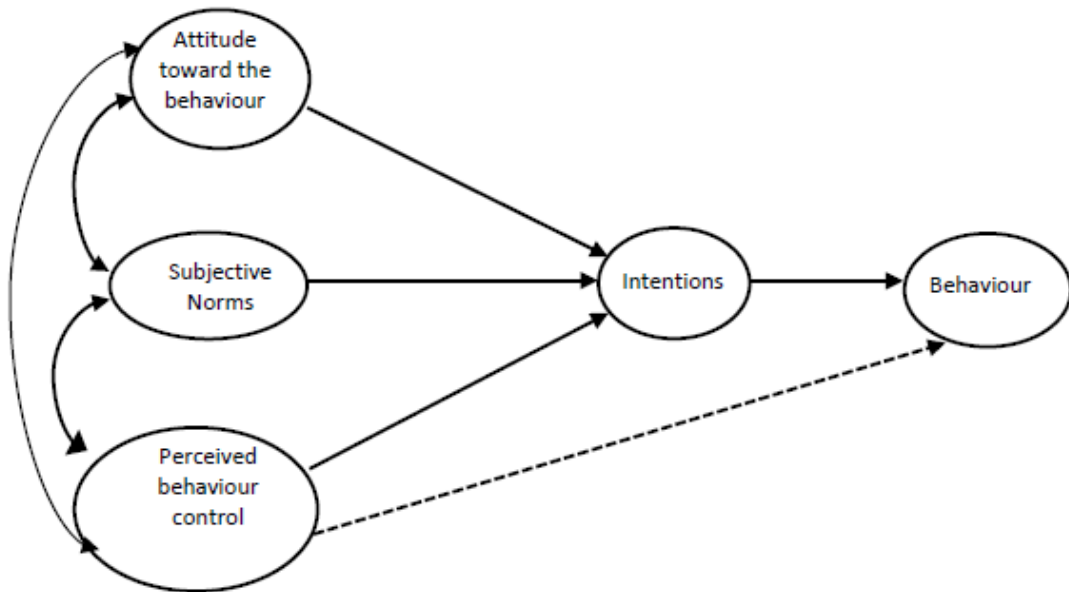
2.4.3 The Theory of Planned Behavior (TPB) – Ajzen (1991)

The theory of planned behavior is widely used in numerous contexts, such as psychology, social sciences, and management, to understand human intentions and behavior (Ajzen, 1991). In entrepreneurship, cognitive models (e.g., TPB) showed the ability to recognize, measure, and evaluate a person's entrepreneurial potential and capabilities more comprehensively than personal traits and demographics models (Liñán et al., 2011). TPB delves into the cognitive processes involved in planning and executing entrepreneurial actions, gaining significant attention from scholars seeking a deeper insight into entrepreneurial intentions and behavior over the past decade (Yaghoubi Farani et al., 2017).

As Ajzen (1991) outlined, TPB asserts that three pivotal elements influence an individual's behavioral intentions: attitude toward the behavior, subjective norm, and perceived behavioral control. Firstly, attitude toward the behavior signifies an individual's evaluation of undertaking a specific action, indicating whether they perceive it favorably or unfavorably. Secondly, subjective norms consider the perceived social pressure or influence from significant others, like family, friends, or mentors, regarding the performance of the behavior. Lastly, perceived behavioral control encompasses the individual's evaluation of their ability to carry out the behavior, considering internal and external factors that might facilitate or hinder the action.

One strength of Ajzen's TPB lies in its comprehensive consideration of social and psychological factors that influence intentional actions. By incorporating subjective norms, it acknowledges the role of social influences in shaping behavioral intentions. Additionally, perceived behavioral control adds a dimension of self-efficacy, recognizing that an individual's belief in their ability to control and execute a behavior is pivotal in the decision-making process. The TPB has found widespread application in various fields, including entrepreneurship, providing a robust framework to understand and predict the factors influencing entrepreneurial intentions and subsequent actions (Fishbein & Ajzen, 2011; Liñán et al., 2011). Therefore, the author used Ajzen's theory to empirically investigate the factors affecting digital entrepreneurial intentions. Figure 3 presents the original form of the model.

FIGURE 3: THE THEORY OF PLANNED BEHAVIOR



Note. From (Ajzen, 1991, p. 182)

2.5 TPB and Digital Entrepreneurship Intention

Entrepreneurship is a long-term process, and Entrepreneurial Intention (EI) is the first step in the evolution of this process (Zhao, Seibert, & Hills, 2005). Intention is an inevitable phase in embarking on one's business (Shook, Priem, & McGee, 2003). The Theory of Planned Behavior emerges as the optimal predictive model for entrepreneurial intention, asserting that behavioral actions are significantly influenced by one's intention, emphasizing that a stronger intention can lead to corresponding actions (Krueger & Carsrud, 1993; Liñán et al., 2011). Scholars have presented various interpretations of entrepreneurial intention, one of which is the dedication of individuals to initiate a new business (Krueger & Carsrud, 1993). Thompson (2009) perceives entrepreneurial intention as a firm acknowledgment by someone that they intend to commence a new business, coupled with conscious plans. In alignment with the Theory of Planned Behavior (TPB), digital entrepreneurial intention is the degree of an individual's motivation and preparedness to establish an online business.

The three motivational variables of the TPB model are applied to entrepreneurship in the following way:

Attitude towards entrepreneurship (ATE) refers to the degree to which the individual holds a positive or negative personal valuation about entrepreneurship (Ajzen, 1991). It encompasses

their beliefs, perceptions, and feelings regarding entrepreneurship as a career path or a means of creating and managing businesses. Previous research has found that having a positive entrepreneurial attitude involves viewing it as an attractive and viable option and significantly improves one's entrepreneurial intention (Al-Mamary et al., 2020; Anwar, Jamal, Saleem, & Thoudam, 2021; Fatoki, 2020). From a gender perspective, in their study about female digital entrepreneurs in Saudi Arabia, Aleidi and Chandran (2019) found that women's digital intentions are most strongly related to their attitudes. Thus, women with a high attitude toward entrepreneurship are likelier to start a digital business. A positive attitude towards entrepreneurship not only encourages individuals to explore digital business opportunities but also fosters a mindset of innovation and risk-taking, which are essential traits for success in the digital entrepreneurial landscape (Utami, 2017). In an unexpected turn, the investigation conducted by Lai and To (2020) unveiled that individuals' inclination toward e-entrepreneurship exerted no substantial impact on their e-entrepreneurial intention. Intriguingly, they highlighted the influential role of entrepreneurship education and policy in shaping attitudes, subjective norms, and perceived behavior control within the Chinese demographic (Lai & To, 2020). Aligning with this perspective, Ridha and Burhanuddin (2017) discovered that the attitude toward the behavior factor exhibited no effect on the intention of youth entrepreneurs in the agricultural sector in Indonesia. Another study found that institutional support positively affected engineering students' attitudes toward entrepreneurship, whereas the regular academic curriculum negatively impacted ATE (Lingappa, Shah, & Mathew, 2020).

Subjective norm (SN) refers to the pressure an entrepreneur perceives from the social environment and the approval they receive from influential individuals (Ajzen, 1991).

Culture, in its conceptualization, is a powerful force that shapes entrepreneurial intentions. It encompasses a spectrum of values tied to a specific group or society (Mueller & Thomas, 2001). These values influence motivational intention factors, nudging individuals towards behaviors that may deviate from the norm in a different societal context. A supportive culture, for instance, can stimulate more entrepreneurial intentions and, therefore, more new ventures (Mueller & Thomas, 2001). Interestingly, Begley and Tan (2001) posit that subjective norms wield a more pronounced influence on intention within collectivist cultures, whereas their effect tends to be more subdued in individualist societies.

Empirical evidence in the literature strongly supports the influence of subjective norms on individual behavior and intention. The perception of subjective norms exhibits a positive correlation with entrepreneurial intention – the more substantial the perceived social pressure,

the more pronounced the inclination toward entrepreneurship (Anwar et al., 2021; Choukir, Aloulou, Ayadi, & Mseddi, 2019; Lai & To, 2020; Ridha & Burhanuddin, 2017). Aleidi and Chandran's (2019) study further illuminates the robust influence of subjective norms on the digital entrepreneurial behavior of Saudi women. The researchers posit that in a collectivistic culture such as Saudi Arabia, it is unsurprising for women's conduct to be shaped by the support they receive from those close to them (Aleidi & Chandran, 2019). Another study found that subjective norms mediate the relationship between role models and EI (Choukir et al., 2019). However, a significant indirect role of subjective norms was found in Chilean scientists' entrepreneurial intention, mediated by attitudes and perceived behavioral control, indicating the importance of promoting a social entrepreneurial culture to foster academic entrepreneurship (Acuña-Duran, Pradenas-Wilson, Oyanedel, & Jalon-Gardella, 2021).

On the flip side, a few studies did not confirm the significance of subjective norms in predicting entrepreneurial intention (Al Saiqal, Ryan, & Parcero, 2019; Su et al., 2021). These studies confirm that students' entrepreneurial intentions tend to be motivated by individual factors rather than social or normative factors. According to Doanh (2021), subjective norms directly and indirectly influence Vietnamese students' entrepreneurship intention (through ATE and PBC). Moreover, SN shows an indirect effect on EI and a direct effect on ATE and PBC among UAE students (Al Saiqal et al., 2019).

Perceived Behavioral Control (PBC) refers to how difficult or easy it is for an individual to perform a particular behavior or to achieve a specific outcome in a given situation (Liñán & Chen, 2009). Actions perceived as easy are more likely to be performed by people than actions perceived as complex. Perceived behavioral control reflects how personal beliefs affect actual behavior. In other words, PBC refers to the beliefs someone holds regarding the knowledge, abilities, and skills they need to achieve a particular entrepreneurial goal and whether these skills and resources are likely to hinder or facilitate the achievement of that goal (Miranda, Chamorro-Mera, & Rubio, 2017).

While some research studies refer to PBC as self-efficacy, others prove that it is an entirely different construct (Doanh, 2021). Moreover, this factor appeared to have the most influential impact on entrepreneurial intention (Hassan, 2020; Karimi et al., 2017; Lai & To, 2020). At the same time, it showed a moderate to weak effect on EI for the UAE sample (Al Saiqal et al., 2019) and appeared to have a minor effect on EI among Vietnamese students (Doanh, 2021). However, perceived behavioral control was found to fully mediate the relationship between entrepreneurial knowledge and DEI (Yaghoubi Farani et al., 2017). There is controversy

surrounding establishing a direct PBC-DEI relationship, even though much support stands for it (Al Saiqal et al., 2019; Aleidi & Chandran, 2019).

Table 2 summarizes the chosen research studies, highlighting the sample of the research and the main findings.

TABLE 2: LITERATURE REVIEW SUMMARY OF TPB FACTORS AND DIGITAL ENTREPRENEURSHIP INTENTION.

Research	Sample	Main Findings
(Al-Mamary et al., 2020)	261 Saudi university business students	ATE have direct and positive impact on EI. SN is not significant to EI.
(Anwar et al., 2021)	663 students of three universities in India	ATE, SN, PBC have a direct and positive relationship with the EI.
(Al Saiqal et al., 2019)	544 UAE senior university students.	ATE & PBC directly influence EI. SN indirectly influence EI. Family and social groups may promote EI.
(Acuña-Duran et al., 2021)	1,027 Chilean research scientists.	Indirect effect of SN on EI.
(Doanh, 2021)	2218 senior Vietnamese undergraduates.	SN have both direct and indirect effects on EI. Also, Self-efficacy moderates the correlation between ATE & EI.
(Lingappa et al., 2020)	210 senior engineering students in India.	ATE, SN, and PBC have a positive relationship with EI. Peer effects dominate over curriculum and institutional support in fostering EI.
(Yaghoubi Farani et al., 2017)	200 undergraduate computer sciences students from Iran	ATE & PBC are significantly relate to digital EI. Entrepreneurial knowledge has indirect effects on EI. ATE & PBC have indirect effects of entrepreneurial knowledge.
(Choukir et al., 2019)	1,496 business freshman Saudi students.	ATE, SN & PBC have an effect on EI. While, SN and PBC mediate the relationship between role models and EI. Gender moderates the relationships of role models with EI, PBC with EI, and role models with SN.
(Lai & To, 2020)	220 young Chinese adults.	SN and PBC significantly influenced their e-entrepreneurial intention. Nevertheless, people's ATE did not have a significant influence on their e-entrepreneurial intention.
(Aleidi & Chandran, 2019)	520 last-year female university students in public universities in Saudi Arabia.	ATE, SN & entrepreneurial self-efficacy play a role in women's IT entrepreneurial intention.
(Ridha & Burhanuddin, 2017)	189 respondents from Indonesia	Significant effect of SN on EI. While ATE and PBC showed a non-significant effect on EI.

Note: ATE: Attitude Toward Entrepreneurship; SN: Subjective Norms; PBC: Perceived Behaviour Control; EI: Entrepreneurial Intention. The table was created by the author, Mohammad Younis Al Khalailah, 2023.

Therefore, Ajzen's assertion that all three motivational factors are crucial for entrepreneurial intentions despite variations across situations and countries is supported. As a result, the author puts forth the following hypothesis:

H1a: Attitude towards entrepreneurship (ATE) positively impacts the digital entrepreneurial intention (DEI) of undergraduates in Jordan.

H1b: Subjective norm (SN) positively impacts the digital entrepreneurial intention (DEI) of undergraduates in Jordan.

H1c: Perceived Behavioral Control (PBC) positively impacts the digital entrepreneurial intention (DEI) of undergraduates in Jordan.

2.6 Digital Literacy and Digital Entrepreneurial Intention

To succeed in online ventures, digital entrepreneurs must grasp Internet culture and technological skills (Chen, 2014). That means they rely more heavily on digital-related skills (digital literacy) than traditional entrepreneurs (Chen, 2013). According to Gilster (1997), digital literacy is understanding, evaluating, and integrating information from multiple formats when presented through computers. Another definition by Martin (2005, p. 135) described digital literacy as: "The awareness, attitude and ability of individuals to use digital tools and facilities to identify appropriately access, manage, integrate, evaluate, analyze and synthesize digital resources, construct new knowledge, create media expressions, and communicate with others, in the context of specific life situations, in order to enable constructive social action; and to reflect upon this process."

Digital literacy has three dimensions: (I) technical, (II) cognitive, and (III) social-emotional, as described by Ng (2013). Within the technical dimension, proficiency extends beyond mere familiarity with information and communication technology (ICT) to encompass the acquisition of operational skills essential for both learning and day-to-day activities. This dimension necessitates the capability to interact with input and output devices seamlessly. On the other hand, the cognitive dimension delves into critical thinking prowess throughout searching, evaluating, and crafting digital content. It also involves the analytical capacity to discern and select apt software programs tailored for learning or executing specific tasks, as Ng (2012) elucidated. The social-emotional dimension constitutes using correct or acceptable ways of communicating online, protecting individual safety and privacy, and recognizing how to deal with internet threats (Wan Ng, 2012).

A considerable amount of the literature has demonstrated that digital literacy has a significant and positive impact on entrepreneurship intention (Bayrakdaroglu & Bayrakdaroglu, 2017; Mugiono, Prajanti, & Wahyono, 2020; Suparno et al., 2020), as well as on entrepreneurship behavior (Mudasih, Subroto, & M.Si, 2021). Moreover, according to Bayrakdaroglu and Bayrakdaroglu (2017), digital literacy is the best indicator of DEI. In alignment with that, Suparno et al. (2020) found that digital literacy accounted for 18% of the variance in DEI among 146 Indonesian students. The inference was that students with high digital literacy levels were more inclined towards digital entrepreneurship than their counterparts with lower digital literacy levels (Bayrakdaroglu & Bayrakdaroglu, 2017). Conversely, Islami's (2019) study showed that DL has a limited influence on entrepreneurship intention. Digital platforms and technologies have opened up opportunities for students to become entrepreneurs in the digital world. That can partly relate to the fact that youngsters are more likely to be familiar with technology and prefer working in a digital atmosphere rather than in an office (Suparno et al., 2020).

Mugiono et al. (2020) found that online business learning and creativity variables mediate the relationship between digital literacy and DEI. Another comparative study conducted in Sri Lanka between men and women found that digital literacy negatively impacts entrepreneurship intention (Gunathilaka & Samaraweera, 2021). They claimed that most private companies in Sri Lanka hire many digitally literate employees and pay them premium salaries; those employers believe that enhancing the efficiency of using technology leads to maximizing their companies' profits. Even digitally literate people must pay higher operation fees when running a digital business. As a result, most people with digital literacy prefer to work for someone else rather than work for themselves (Gunathilaka & Samaraweera, 2021). Additionally, an indirect positive and significant connection exists between IT factors and women's digital entrepreneurial intention (Aleidi & Chandran, 2019).

Table 3 summarizes the chosen research studies, highlighting the sample of the research and the main findings.

TABLE 3: LITERATURE REVIEW SUMMARY OF DIGITAL LITERACY AND DIGITAL ENTREPRENEURIAL INTENTION.

Research	Sample	Main Findings
(Bayrakdaroglu & Bayrakdaroglu, 2017)	175 bachelor business & engineering students in Turkey.	Digital literacy & financial literacy have significant positive effect on individual's intention of internet entrepreneurship. Whereas the effect of digital literacy is stronger in comparison to financial literacy.

(Gunathilaka & Samaraweera, 2021)	The Department of Census and Statistics Sri Lanka in 2018.	Digital literacy also makes a significant impact on self-employment choice for both men and women and men and women with digital literacy are less likely to be self-employed.
(Suparno et al., 2020)	146 students joined entrepreneurship education courses in Indonesia.	Digital literacy has an 18% effect on intention. The character of entrepreneurship, Entrepreneurship education, and Economic literacy provide about 13%, 72%, and 22% effect, respectively.
(Mudasih et al., 2021)	81 students in Indonesia.	Digital literacy has a significant effect on the entrepreneur behavior.
(Mugiono et al., 2020)	160 students At Marketing Department in Indonesia.	DL and online business learning have a positive and significant effect on online EI. Online business learning variables and creativity mediate digital literacy towards online entrepreneurial intentions.
(Aleidi & Chandran, 2019)	520 senior female students in universities in Saudi Arabia.	A strong positive and significant correlation exists between IT factors and women's IT entrepreneurial intention indirectly.
(Islami, 2019)	140 students at Economic Education Study Program in Indonesia.	DL had limited influence on the EI, especially on entrepreneurial behaviours. However, the EI is proven to mediate digital literacy towards entrepreneurial behaviours.

Note: DL: Digital Literacy; ; FL: Financial Literacy; EI: Entrepreneurial Intention. The table was created by the author, Mohammad Younis Al Khalailah, 2023.

The existing literature reveals conflicting results regarding the significant influence of digital literacy on digital entrepreneurial intention (DEI). Despite testing digital literacy's predictive power for entrepreneurial intention in developing countries, its specific applicability to young Arab countries remains insufficiently explored. Therefore, the author proposes the following hypothesis:

H2: Digital Literacy positively impacts the digital entrepreneurial intentions (DEI) of undergraduates in Jordan.

2.7 Perceived University Support and Digital Entrepreneurial Intention

University support is pivotal in fostering a supportive entrepreneurial ecosystem, acting as a catalyst for innovation and economic growth. Through research initiatives, academic partnerships, and incubation programs, universities contribute to developing a vibrant environment where budding entrepreneurs can thrive (Rippa & Secundo, 2019). The intellectual capital within universities serves as a valuable resource, providing aspiring entrepreneurs with access to cutting-edge knowledge, mentorship, and industry insights (Miranda et al., 2017). Furthermore, universities often bridge academia and the business world, facilitating the transfer

of groundbreaking research into real-world applications. This collaboration benefits the entrepreneurs by equipping them with the latest advancements and enhances the region's overall competitiveness by promoting a culture of innovation and entrepreneurship (Sussan & Acs, 2017).

Additionally, university support creates a network of interconnected resources that empowers entrepreneurs to navigate the complex challenges of starting and growing a business. By offering access to research facilities, funding opportunities, and a diverse pool of talent, universities contribute to the holistic development of entrepreneurs (Saeed et al., 2015). The support extends beyond the confines of the academic setting, fostering a sense of community and collaboration. Universities help entrepreneurs connect with like-minded individuals, industry experts, and potential investors through events, workshops, and networking opportunities (Kraaijenbrink, Bos, & Groen, 2010). This interconnected ecosystem not only accelerates the growth of startups but also encourages a culture of resilience and adaptability, essential qualities for success in the ever-evolving entrepreneurial landscape. University support is instrumental in shaping a conducive environment where innovation can flourish, ultimately driving economic progress and societal development (Kremer, 2019).

Studies suggested that university support should be viewed from the student's perspective to understand how it impacts their career choice (Kraaijenbrink et al., 2010). Thus, perceived university support (PUS) is the students' perception that their university is helping them to pursue an entrepreneurial career (Saeed et al., 2015). Universities are essential in stimulating entrepreneurial intention among students (Ahmed, Chandran, & Klobas, 2017; Liñán & Chen, 2009). The way students perceive their university environment significantly influences their entrepreneurial intentions. For instance, Aboobaker and Renjini (2020) and Sun et al. (2017) found that entrepreneurship education in college positively affects the student's inclination to start a new business.

Perceived educational support (PES) is a crucial factor, describing the degree to which a university provides students with the proper knowledge, skills, internship, and networking opportunities to launch a new company (Saeed et al., 2015). This support allows students to gain practical experience, applying their knowledge in real-world situations, which can be facilitated through activities like business simulations or apprenticeship programs. Moreover, providing students with networking opportunities can also enhance PUS; these connections with other entrepreneurs and role models can provide specific professional knowledge and be inspirational for those students (Kraaijenbrink et al., 2010).

However, more than educational support is required to shift students' intention to start their own company. Thus, universities can promote individual EIs by offering a supportive entrepreneurial environment besides educational programs such as concept development and business development support (Kraaijenbrink et al., 2010). Perceived concept development (PCD) refers to how the university encourages the early stages of entrepreneurship by creating awareness and motivation to facilitate opportunity recognition and the development of startup ideas (Saeed et al., 2015). Business development support (PBD) refers to the extent to which the university assists in the later stages of business growth by providing the students with financial means, enabling them to benefit from the university's reputation, and becoming the leading customer for those potential students entrepreneurs (Kraaijenbrink et al., 2010).

Students exposed to a supportive university environment have greater odds of being motivated to pursue an entrepreneurial career. They can also increase their business knowledge, self-confidence, and self-efficacy, thereby developing their entrepreneurial intentions (Mustafa, Hernandez, Mahon, & Chee, 2016). Two studies examined the effect of perceived university support on the Chinese population; one found a significant impact on the attitude toward entrepreneurship and perceived behavioral control (Su et al., 2021). The other discovered a positive effect on entrepreneurial intention and found that self-efficacy is a complete mediator in the relationships between perceived university support and intentions (Shi, Yao, & Wu, 2020).

The three dimensions of university support (perceived educational support, concept development support, and business development support) significantly affected entrepreneurial self-efficacy, which impacted the EI accordingly (Saeed et al., 2015). Another study found that perceived educational support and concept development support significantly and positively impact the prediction of entrepreneurial intention among female students in Pakistan (Sidratulmunthah, Saddam, & Malik, 2018). In contrast, the same study found that perceived business development support negatively affected the EI.

As illustrated in the study of Mustafa et al. (2016), only the perceived concept development and proactive personality positively and significantly impacted entrepreneurial intention. However, perceived educational and business development support did not significantly affect EI. In alignment with that, Shen et al. (2017) study found that perceived university support—namely, PES, PCD, and PBD—has no significant effect on perceived desirability and feasibility among students in the U.S.A. They argued that entrepreneurship university support programs are effective only when they are “practically oriented” rather than “theoretically oriented” (Shen et al., 2017). However, they also found that perceived family support and perceived structural

support positively impact perceived desirability and feasibility for pursuing an entrepreneurial career (Shen et al., 2017). In alignment with that, different researchers found that perceived university support had an insignificant effect on entrepreneurial intentions among Bangladeshi, Malaysian, and Jordanian students, respectively (Hassan, 2020; Yusoff, Ahmad, & Halim, 2016; Alkhalaileh et al., 2023). Moreover, educational and concept development support did not significantly affect technopreneurial intentions among Bulgarian students (Yordanova, Filipe, & Coelho, 2020). Table 4 summarizes the related research studies, highlighting the sample of the research and the main findings.

TABLE 4: LITERATURE REVIEW SUMMARY OF PERCEIVED UNIVERSITY SUPPORT AND DIGITAL ENTREPRENEURIAL INTENTION.

Research	Sample	Main Findings
(Su et al., 2021)	1856 students attended entrepreneurship courses at 89 Chinese universities.	Perceived university support significantly affected student ATE and PBC. While SN didn't affect EI directly.
(Shen et al., 2017)	473 college students in a major state university in the U.S.A.	Perceived university support is not significantly related to perceived desirability, perceived feasibility, & EI. The results indicate that perceived desirability and feasibility of entrepreneurial action remain significant predictors of EI.
(Hassan, 2020)	380 students attended entrepreneurship courses at Bangladesh universities.	ESE and Entrepreneurial education affect students' ISE. Entrepreneurial networks and perceived university support were found to have no association with ISE.
(Mustafa et al., 2016)	141 undergraduate students enrolled in entrepreneurship modules in Malaysia.	Proactive personality and concept development support have a significant impact on EI. Additionally, students' proactive personality affected their EI more than the university support environment.
(Sidratulmunthah et al., 2018)	306 female senior business students from Pakistani universities.	Proactive personality, ESE and university support factors except that of perceived business development support can nurture the EI. Moreover, ESE partially mediates the relationship between proactive personality and EI.
(Saeed et al., 2015)	805 university student enrolled in entrepreneurship modules in Pakistan.	PUS have a positive effect on ESE. Moreover, ESE had a significant effect on EI. Individual motivations such as self-realization, recognition, and role had an additional impact on intention.
(Shi et al., 2020)	374 students of Tianjin University China.	ESE & PUS has positive effects on independence-oriented and growth-oriented intentions. Moreover, ESE acts as a complete mediator in the relationships between perceived university support and EI.

(Yordanova et al., 2020)	337 Bulgarian STEM students.	University research excellence has a strong positive impact on the odds of technopreneurial intentions, while university business development support weakly and positively affects the technopreneurial intentions. Concept development support has no significant effect on the technopreneurial intentions.
(Yusoff et al., 2016)	318 agriculture senior students in Malaysian universities.	Agropreneurship curriculum, agropreneurship experiential learning, perceived desirability, and perceived feasibility significantly explained agropreneurial intentions significantly. However, agropreneurial intention was not impacted by perceived university support.
(Alkhalailah et al., 2023)	399 bachelor business students in eight universities in Jordan.	The three factors of perceived university support had not significantly related to DEI

Note. ESE: Entrepreneurial Self-efficacy; ISE: Intention towards social entrepreneurship; PUS: Perceived university support; EI: Entrepreneurial Intention; DEI: Digital Entrepreneurial Intention. The table was created by the author, Mohammad Younis Al Khalaileh, 2023.

In conclusion, supportive university environments increase students' interest in entrepreneurship by increasing their awareness, trust, and confidence to choose entrepreneurship as a career path. Therefore, the author proposes the following hypothesis:

H3a: Perceived educational support positively impacts the digital entrepreneurial intention (DEI) of undergraduates in Jordan.

H3b: Perceived concept development positively impacts the digital entrepreneurial intention (DEI) of undergraduates in Jordan.

H3c: Business development support positively impacts the digital entrepreneurial intention (DEI) of undergraduates in Jordan.

2.8 Personality Traits as TPB Antecedents

Personality comes from within a person and involves essential characteristics that explain consistent behavior patterns (Ewen, 2014). That means personality encompasses mental, emotional, social, and physical aspects, whether visible or not and conscious or unconscious. Traits are essential and stable units ingrained in the individual's personality but still vary from one person to another, determining behaviors in various situations (Smith, 1999). Therefore, understanding entrepreneurship and who the entrepreneur is requires both trait and behavioral approaches. In this context, an entrepreneur is identified and set apart from others based on specific personality traits and behaviors associated with entrepreneurial activities and decision-making (Vodă, Covatariu, & Ghiuță, 2019).

The growing emphasis on the role of personality traits in entrepreneurial success reflects a shift in research focus toward understanding the individual characteristics that contribute to thriving in the entrepreneurial landscape. Scholars have increasingly acknowledged that external factors do not solely dictate entrepreneurship but are also intricately tied to internal attributes, with personality traits emerging as significant determinants. This acknowledgment aligns with the notion that an individual's inclinations, encompassing feelings, thoughts, and attitudes, are instrumental in shaping their attitude to entrepreneurship (Tran & Von Korflesch, 2016).

McClelland's influential work in 1961 served as a cornerstone in linking personality traits to the establishment of businesses. His findings suggested that individuals exhibit a fundamental need for achievement, a desire to wield power, and a drive to establish affiliations to initiate entrepreneurial endeavors (McClelland, 1961). This groundbreaking insight established a foundation for subsequent research, inspiring scholars to explore the nuanced connections between various components of personality attributes and their influence on entrepreneurial intentions across diverse geographical and cultural contexts. Many researchers have contributed to this burgeoning field of research by delineating the intricate relationships between different facets of personality attributes and their impact on individuals' intentions to engage in entrepreneurial activities (Ahmed, Klobas, & Ramayah, 2021; Batool, Rasheed, Malik, & Hussain, 2015; Zovko, Bilić, & Dulčić, 2020).

Researchers have underscored the assertion that distinct personality traits serve as differentiators between individuals who choose to become entrepreneurs and those who do not (Tan, Pham, & Bui, 2021; Zhao et al., 2005). Recent studies by Bandera and Passerini (2020) and Ismail et al. (2012) have expanded the exploration to compare traditional and digital entrepreneurs. This comparative analysis reveals apparent differences in the personality traits of each group, highlighting the unique qualities required for success in the digital landscape. The findings suggest that digital entrepreneurs operating in a rapidly evolving and technologically driven environment must cultivate specific characteristics that directly impact their behavior. These traits become instrumental in helping digital entrepreneurs navigate challenges, make informed decisions, and adapt to the dynamic nature of the digital business landscape (Bandera & Passerini, 2020).

Researchers have explored a variety of traits to find an explanation for one's desire to start a business. A recent review of personality traits' literature identified several factors related to entrepreneurial intent, including innovativeness, locus of control, risk attitude, self-efficacy, and big-5 model (openness, conscientiousness, extraversion, agreeableness, and neuroticism) (Kerr, Kerr, & Xu, 2018). On top of that, other studies included a broader collection of

personality traits such as triumph, self-image, personal control, novelty (Ullah, Du, & Batool, 2018), self-esteem, and creativity (Batool et al., 2015). However, several traits, including risk-taking propensity, locus of control, need for achievement, and innovativeness, have been defined as four essential personality traits (Anwar et al., 2021; Roy, Akhtar, & Das, 2017).

Risk-taking propensity (RT) is characterized as making uncertain decisions or acting regardless of the outcome (Jackson, 1976). A risk-taker is eager to take uncertain actions throughout everyday life, willing to place cash in new and insecure plans, aims to pursue risky endeavors, and can move to a far-off place looking for attractive and profitable possibilities (Keat, Selvarajah, & Meyer, 2011). The entrepreneurial process necessitates dealing with minimally organized and extremely unpredictable possibilities while accepting responsibility for the outcomes of often risky decisions; therefore, individuals with a substantial risk tolerance are more likely to have a higher tendency to be entrepreneurial.

Locus of control (LC) is a personality trait that defines an individual's beliefs regarding his ability to control events in his life (Hermawan, Soetjipto, & Rahayu, 2016). It can be both internal and external. Individuals with an internal locus of control believe they have personal control over the events in their lives. In contrast, those with an external locus of control believe that events are outside their control. Therefore, individuals with a high degree of faith in their ability to manage their environment are likelier than others to have favorable attitudes toward entrepreneurship (Karimi et al., 2017). Interestingly, LC is a trait influenced by culture; according to Mueller and Thomas (2001), countries with more individualistic cultures display greater internal LC than collectivist cultures.

Innovativeness (I): Schumpeter (1934) described innovation as the precursor of entrepreneurship and said that entrepreneurs are innovators. Robinson et al. (1991) believe that innovation is a fundamental characteristic of entrepreneurs that enables them to see opportunities in even the most challenging situations, thus behaving differently than non-entrepreneurs. An example of Innovativeness is finding novel ways to reach a new market by developing a new product using cutting-edge technology. Individuals with high innovative capabilities are more likely to become digital entrepreneurs in the future (Biswas & Verma, 2021).

Need for Achievement (NA) is an individual's desire to achieve specific goals, either to reach a sense of self-satisfaction or to meet reputable societal standards (McClelland, 1961). Individuals with a high need for achievement (NA) have a distinctive ability to take charge of problem-solving, set and accomplish goals, and exhibit a robust work ethic. These individuals

harbor a strong desire for success and are more inclined to engage in entrepreneurial behaviors. The need for achievement reflects a person's capability to excel in challenging tasks, a keen eagerness to enhance their performance, a willingness to take full responsibility for specific tasks, and the decisiveness to outperform their peers (McClelland, 1961).

Previous studies have shown that personality qualities directly or indirectly affect entrepreneurial behavior and intentions (Biswas & Verma, 2021; Munir, Jianfeng, & Ramzan, 2019; Yasir, Liren, Mehmood, & Arfat, 2019). For example, Innovativeness had the most substantial influence on ATE and PBC, followed by a propensity to take risks among Pakistani MBA students (Ahmed et al., 2021). The study of Al-Mamary et al. (2020) on 261 business students in Saudi Arabia found that risk-taking has a direct and positive effect on EI, while innovativeness does not show a significant effect on EI. Moreover, the results of the study conducted on 663 students from Indian universities revealed that risk-taking, locus of control, and innovativeness have a positive effect on attitude towards entrepreneurship, perceived behavioral control, and EI directly (Anwar et al., 2021). In addition, perceived feasibility mediated the relationship between Innovativeness and Vietnamese social entrepreneurial intention (Tan et al., 2021).

Other studies used a wider range of personality traits, such as internal locus of control, perceived creativity, and proactive personality, and showed a positive effect on sustainability-oriented entrepreneurial intentions (Fatoki, 2020). The need for achievement, locus of control, and risk-taking were found to be directly associated with ATE and PBC, according to data collected from 346 students who had taken part in entrepreneurship courses at seven Iranian public institutions (Karimi et al., 2017). In the multicultural study between China and Pakistan, 1,016 final-year business and non-business students were surveyed through convenience sampling technique; the results showed a stronger influence of personality traits (risk-taking propensity, proactive personality, and internal locus of control) among Chinese students compared to Pakistani population (Munir et al., 2019). Other results revealed that only the need for achievement positively affects DEI among 203 students at Qatar University. At the same time, LC and RT showed no significant effect on DEI (Younis et al., 2020). A comprehensive study of personal traits combined a big-5 model with the need for achievement, locus of control, and self-efficacy found that locus of control was an essential characteristic among Kenyan students. In contrast, the Need for Achievement trait was not crucial for digital entrepreneurs to succeed (Shimoli, Cai, Naqvi, & Lang, 2020).

Interestingly, commercial and social entrepreneurs share similar personality traits like proactiveness and innovativeness. However, other traits like empathy and moral obligation

were considered social entrepreneurial traits (Tan et al., 2021). Table 5 summarizes the related research studies, highlighting the sample of the research and the main findings.

TABLE 5: LITERATURE REVIEW SUMMARY OF PERSONALITY TRAITS AS TPB ANTECEDENTS.

Research	Sample	Main Findings
(Al-Mamary et al., 2020)	261 university business students from Saudi Arabia	RT, SE, autonomy, proactiveness & competitive aggressiveness do have direct and positive impact on EI. While, I is not significant to EI.
(Anwar et al., 2021)	663 students of three universities in India	RT, I, and LC have a direct and positive relationship with EI, ATE, and SE. Moreover, RT, I, & LC have a significant indirect relationship with the EI through the mediation of ATE and SE.
(Ahmed et al., 2021)	324 senior MBA students from Pakistan	I had the strongest influence on ATE and PBC. Also, RT had a positive effect on ATE and PBC. The need for autonomy and stress tolerance were not significant, and neither was family background nor work experience.
(Younis et al., 2020)	203 students in Qatar University	ATE is not associated with RT & LC. However, perceived support and perceived barriers have a strong relationship with PBC.
(Ullah et al., 2018)	90 senior business students in Pakistan	Self-image, personal control and novelty played a significant role in EI. While, triumph insignificantly affects EI.
(Batool et al., 2015)	2000 business students in top ranked business institutes of Pakistan.	Personal control, self-esteem, and creativity, with the mediating role of SE, have significant and positive effects on EI. Meanwhile, NA has no significant effect on EI.
(Zovko et al., 2020)	160 business students in University of Split, Croatia	RT positively affects EI. Surprisingly, SE, SN, role models, education, and the NA failed to affect EI significantly.
(Fatoki, 2020)	408 senior business students in three South African universities.	ATE, PBC, LC, perceived creativity, and proactive personality have a significant positive relationship with SOEI. The moderating effect of gender had no significant effect.
(Karimi et al., 2017)	346 students enrolled in entrepreneurship courses at seven Iranian universities.	NA, RT, LC indirectly related to EI via the proximal ATE and PBC. Perceived contextual support and barriers indirectly related to EI via proximal PBC while perceived barriers also directly related to EI.
(Munir et al., 2019)	1,016 senior university students (business and non-business) from China and Pakistan.	RT, proactive personality and LC have a stronger influence on ATE & PBC among Chinese students. The mediation of three dimensions of TPB also revealed differences between country samples.
(Roy et al., 2017)	476 Science & Technology graduates	The relationship between entrepreneurial personality traits and EI is fully mediated by perceived self-efficacy.

	at Indian Institute of Technology.	The moderating influence suggests that student's SE boosts the entrepreneurial personality traits of EI relationships.
(Biswas & Verma, 2021)	880 students in eight universities from India.	NA, LC, RT, I, SE, proactiveness, perseverance, entrepreneurial alertness, entrepreneurial attitude have a positive and significant effect on entrepreneurial intentions.
(Shimoli et al., 2020)	518 Kenyan students studying in various Chinese universities.	Openness to experience, Conscientiousness, Neuroticism, LC, & SE were found to be of higher degree among the Kenyan students. Extraversion, Agreeableness, and NA were not of a significant degree for E-entrepreneurship.
(Tan et al., 2021)	503 individuals attended social entrepreneurship courses in Vitenam.	RT & NA does not affect social entrepreneurial intention. Only perceived feasibility fully mediates the relationship between I and SEI. Individuals who intend to create a social enterprise have a combination of entrepreneurial traits like proactiveness, I, empathy, and moral obligation.

Note. RT: Risk-taking propensity; LC: Locus of Control; I: Innovativeness; NA: Need for Achievement; ATE: Attitude Toward Entrepreneurship; SN: Subjective Norms; PBC: Perceived Behaviour Control; SE: Self-Efficacy; EI: Entrepreneurial Intention; SOEI: sustainability-oriented entrepreneurial intentions; SEI: social entrepreneurial intention. The table was created by the author, Mohammad Younis Al Khalailah, 2023.

The previous literature shows contradictions in the results of personality traits. Therefore, the author proposes the following hypothesis:

H4a: Risk-taking propensity positively impacts students' Attitude toward entrepreneurship (ATE).

H4b: Risk-taking propensity positively impacts students' Perceived Behavioral Control (PBC).

H5a: Locus of control positively impacts students' Attitude toward entrepreneurship (ATE).

H5b: Locus of control positively impacts students' Perceived Behavioral Control (PBC).

H6a: Innovativeness positively impacts students' Attitude toward entrepreneurship (ATE).

H6b: Innovativeness positively impacts students' Perceived Behavioral Control (PBC).

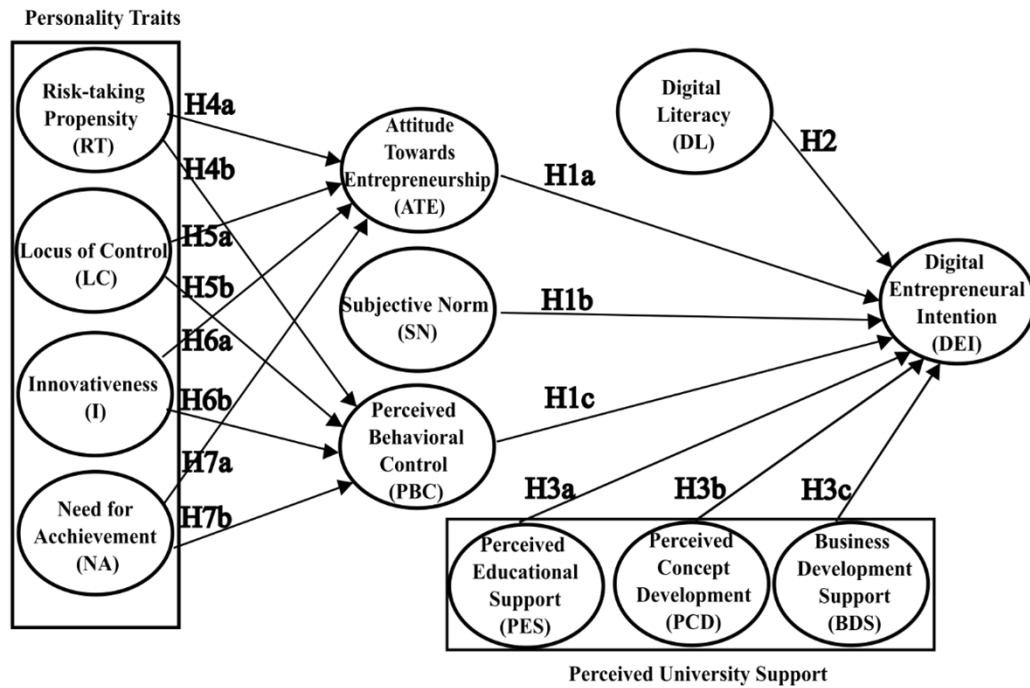
H7a: Need for Achievement positively impacts students' Attitude toward entrepreneurship (ATE).

H7b: Need for Achievement positively impacts students' Perceived Behavioral Control (PBC).

2.9 Conceptual Framework

A robust conceptual framework was developed, building upon insights from previous literature and aligned with our formulated hypotheses. The framework provides a structured foundation for understanding the relationships and interactions between various variables in the study. See Figure 4.

FIGURE 4: CONCEPTUAL FRAMEWORK.



Note: The figure was created by the author, Mohammad Younis Al Khalaileh, 2022.

3. MATERIALS AND METHODS

3.1 Research Philosophy and Approach

The research philosophy encompasses perceptions, beliefs, and understandings of several theories and practices utilized in research (Cohen, Manion, & Morrison, 2000). In other words, when a researcher engages in research, he/she develops knowledge in a particular field based on their assumptions and beliefs (Saunders, Lewis, & Edition, 2016). There are five main philosophies in business and management: Positivism, Critical Realism, Interpretivism, Postmodernism, and Pragmatism (Saunders et al., 2016). Entrepreneurship research has traditionally followed a positivist philosophy (McDonald, Gan, Fraser, Oke, & Anderson, 2015; Tatli, Vassilopoulou, Özbilgin, Forson, & Slutskaya, 2014). The positivism logic relies on empirical facts, leading to measurable observations, statistical analyses, and definitive findings.

Positivism usually uses a deductive approach where researchers use existing theories to develop hypotheses. It would be possible to test these hypotheses and confirm/reject them, further developing a theory and leading to further research (Saunders et al., 2016). The reason for choosing this approach is supported by entrepreneurship research and mainly entrepreneurial intentions literature (McDonald et al., 2015). Given that this study aims to examine the factors that may influence digital entrepreneurial intentions, using a robust research approach, like a deductive approach, will enhance the generalisability of the results (Saunders et al., 2016).

3.2 Research Method

The research method is the general plan of how the researcher answers the research question(s), follows the objectives, and determines the data collection source. It will also specify the procedure for collecting and analyzing the data and address the ethical issues and the study's limitations (Babbie, 2013). There are three main methods regarding the methodological choice in research: quantitative, qualitative, and mixed. Quantitative research is often connected with positivism, especially when using pre-established and highly structured data-gathering techniques (Saunders et al., 2016). Moreover, quantitative research is usually linked with a deductive approach that uses data to test a theory.

Examining entrepreneurial intentions and the relationships between the study variables requires a psychological measurement standard (McDonald et al., 2015; Tatli et al., 2014). Since this dissertation adopts positivistic and deductive research, implementing quantitative research methods is crucial (Babbie, 2013). Consequently, to answer the research questions and

generalize the findings, a large sample is essential to gather numerical data and analyze statistical hypotheses (Collis & Hussey, 2014).

3.3 Data Collection and Procedures

3.3.1 Data Collection Strategy

The research strategy is a plan of how a researcher intends to answer the research question. In other words, it is the relationship between research philosophy, approach, purpose, and the methods used to collect and analyze data (Denzin & Lincoln, 2011). As Babbie (2013) emphasized, survey techniques are notably associated with positivist and deductive approaches, making them a fundamental aspect of quantitative research. In quantitative research, experiments and surveys are primarily used as research strategies. Survey research, in particular, is commonly implemented through questionnaires, structured interviews, or observation methods (Sekaran & Bougie, 2016). Therefore, a questionnaire survey is used to collect the relevant data (Babbie, 2013; Saunders et al., 2016).

This dissertation uses a mix of a drop-off survey where the researcher traveled to the respondents' locations to distribute and collect the data and mail surveys. The questionnaire for this study is self-administered, meaning that participants fill it out independently. There are numerous ways to distribute and collect the answers to this questionnaire. The researcher used both offline and online methods to get the data.

For the online method, the researcher contacted the instructors and sent them a link for a digital questionnaire version. Next, the instructors sent the questionnaire link to their students by email. On the other hand, the offline method needed a different procedure. In order to facilitate the data collection process, the researcher's supervisor provided a supporting letter. The letter introduced the researcher and the study he intended to conduct. It emphasized the importance of the research and the value of students' participation.

Moreover, it stated that the study was confidential and anonymous. The researcher emailed the targeted universities the letter before his visit. In addition, the researcher contacted the university instructors to set up a date and time for collecting the data. In collaboration with the instructors, the researcher successfully distributed and collected questionnaires from the students at the beginning and end of lectures. However, In some universities, the researcher had to drop off the questionnaires at the business school's secretary's office and come back later to pick up the answered questionnaires.

3.3.2 Time Horizon

Using an appropriate time horizon influences the choice of research strategy. The cross-sectional studies target a particular phenomenon at a particular time, and they often use the survey strategy (Sekaran & Bougie, 2016). A cross-sectional design is chosen for this dissertation. This process includes the distribution of a questionnaire to university students at one time to understand the factors that affect their intentions toward starting a digital startup. Therefore, the researcher collected the data in July 2022 during the summer semester in Jordan.

3.3.3 Sampling Strategy

Selecting a proper sample for research is directly linked to identifying the population. According to Saunders et al. (2016), a population is the complete set of cases or elements from which a sample is drawn. Since part of this study examines the role of university entrepreneurial support among universities in Jordan, the total population is distributed over eight universities that offer entrepreneurial educational and incubation services. Selecting bachelor students as the unit of analysis in investigating digital entrepreneurship is grounded in the recognition that these individuals are near a career tipping point where they need to decide whether to enter self-employment or alternative paths (Choukir et al., 2019; John, 2015; Mustafa et al., 2016). This choice is particularly significant given that bachelor students (typically aged 18 to 24 years old) exhibit the lowest involvement in entrepreneurial activities in Jordan (Global Entrepreneurship Monitor, 2016).

Research on entrepreneurship intention generally focuses on business students (Ahmed et al., 2021; Al-Mamary et al., 2020; Ullah et al., 2018). This inclination is explained by Batool et al. (2015), who note that business students often choose career paths related to entrepreneurship due to their enrollment in various business programs during their university studies.

According to The Ministry of Higher Education and Scientific Research in Jordan, the number of students in higher education institutions reached 267,903, where 70.83% were in public universities and 26.90% were in private universities (The Ministry of Higher Education and Scientific Research, 2015). The targeted population was 15,368 bachelor's business students registering for Business School degrees in those eight Jordanian universities (The Ministry of Higher Education and Scientific Research, 2022).

Obtaining data from an entire population can be challenging, either because it is impractical to survey the whole population or because of time and financial limitations. Thus, choosing a sample representing the targeted population can produce more accurate information and save time and money (Sekaran & Bougie, 2016). The selection of a sampling strategy is influenced by four main factors: the type of population, the complexity of a research study, the type of

measurement, and the number of resources available to conduct the study (Breakwell, Fife-Schaw, Hammond, & Smith, 2006).

However, there are two sampling techniques. One is probability sampling, where every case in the target population is known and has the same chance of being selected as other cases. The second type is non-probability sampling, where every case in the target population is unknown and does not have the same chance of being selected as other cases (Saunders et al., 2016). Due to the researcher's inability to obtain a sampling frame, such as a list of eligible students for the study, nonprobability sampling was applied.

To ensure the variability and representativity of the sample, the researcher targeted all eight universities from different geographical areas in Jordan distributed in three cities in Jordan, namely Amman, Mafraq, and Irbid. Moreover, to meet the urgent need to include public and private universities in the study sample (Al-Mamary et al., 2020; Anwar et al., 2021; Fatoki, 2020), the study's total population has three public and five private universities. In other words, in Amman city, the researcher targeted six universities: The University of Jordan, Middle East University, Philadelphia University, Petra University, Al-Ahliyya Amman University, and Princess Sumayya University for Technology. While in Irbid city, Yarmouk University was targeted. Lastly, in Mafraq city, Al Al-Bayt University was targeted.

The purposive sampling technique was used. It is a non-probability technique that helps focus on specific population characteristics. However, it may decrease the chance of generalizing results, but it provides a strong basis for future research. Business bachelor's students enrolled in the selected universities can be considered a strong representative of the whole population because these students come from different cities with diverse backgrounds and cultures. Moreover, the selected universities offer entrepreneurship education courses and provide entrepreneurial services through innovation and incubation centers. That means providing more accurate data to measure the role of university entrepreneurship support in this study.

Table 6 shows the number of bachelor's business students registered in the targeted universities for 2021/2022. According to Krejcie and Morgan (1970), the sample size needed for the total population in this study is 375 units. A quota sampling technique was used to ensure an adequate representation of business students in the study.

TABLE 6: THE NUMBER OF BACHELOR'S BUSINESS STUDENTS IN THE TARGETED UNIVERSITIES IN JORDAN.

University Name	City	Number of Students	Number of the sample per university
The University of Jordan (Public)	Amman	3581	87
Middle East University (Private)	Amman	1037	25
Philadelphia University (Private)	Amman	478	12
Petra University (Private)	Amman	1308	32
Princess Sumayya University for Technology (Private)	Amman	1751	43
Al-Ahliyya Amman University (Private)	Amman	1063	26
Yarmouk University (Public)	Irbid	3974	97
Al Al-Bayt University (Public)	Al Mafraq	2176	53
Total Number:		15,368	375

Note. The table was created by the author, Mohammad Younis Al Khalaileh, 2023.

3.3.4 Instruments and Measurements

The researcher's primary data source for this study is the questionnaire instrument. The designed instrument used validated and tested scales from previous entrepreneurship literature. The questions follow a five-point Likert scale, with "one" representing the least agreement level and " five " representing the greatest agreement extent. The researcher checked all the scales for internal validity and consistency to ensure they were reliable and valid.

Digital entrepreneurial intention (DEI): Liñán and Chen (2009) developed a 5-item scale to measure digital entrepreneurial intention. This scale is based on the theoretical background of (Ajzen, 1991). The scale has proven reliable and valid in several contexts (Biswas & Verma, 2021; Chen, 2013). Entrepreneurship intention is considered the best predictor of entrepreneurial behavior. According to TPB, *digital entrepreneurial intention* is defined as the level of an individual's motivation and readiness to create a business online (Liñán & Chen, 2009). As an example of the scale items, "I am ready to do anything to be a digital entrepreneur."

Attitude Toward Entrepreneurship (ATT): The degree to which the individual holds a positive or negative personal evaluation about being an entrepreneur (Ajzen, 1991). Liñán and Chen (2009) developed a 5-item scale to measure attitude toward entrepreneurship. The better one's entrepreneurial attitude, the higher one's entrepreneurial intention (Robinson et al., 1991; Utami, 2017). As an example of the scale items, "Being a digital entrepreneur implies more advantages than disadvantages to me."

Subjective Norms (SN): The pressure an entrepreneur perceives from the social environment and the approval he/she receives from influential individuals (Ajzen, 1991). The effects of subjective norms differ from one culture to another. Liñán and Chen (2009) developed a 3-item scale to measure subjective norms. Researchers proved the scale's reliability and validity (Aleidi & Chandran, 2019). As an example of the scale items, "If you decide to create a digital firm, your close family will approve of that decision."

Perceived Behaviour Control (PBC): This refers to how difficult or easy it is for an individual's perception of becoming an entrepreneur (Liñán & Chen, 2009). This factor appeared to have the most influential impact on entrepreneurial intention (Hassan, 2020; Karimi et al., 2017; Lai & To, 2020). Four items were developed to measure perceived behavior control (Liñán & Chen, 2009). This scale is based on the theoretical background of (Ajzen, 1991). As an example of the scale items, "To start a digital firm and keep it working would be easy for me."

Digital Literacy (DL): According to Martin (2005, p. 135), digital literacy is "Individuals' awareness, attitude, and ability to use digital tools and facilities to identify access appropriately, manage, integrate, evaluate, analyze and synthesize digital resources, construct new knowledge, create media expressions, and communicate with others in specific life situations." Chen (2014) has found that digital skills can be an essential predictor of entrepreneurs' intention to start their digital businesses. Ng (2012) adopted nine questions to measure digital literacy. One of the questions in this scale reads: "I can learn new technologies easily."

Perceived University Support (PUS): is defined as the students' perception that their university is helping them pursue an entrepreneurial career (Saeed et al., 2015). The construct has three dimensions. I) Perceived educational support, II) Concept development support, and III) Business development support. These dimensions significantly affected entrepreneurial intention (Saeed et al., 2015). Thirteen items to measure Perceived University Support were adopted by (Kraaijenbrink et al., 2010). An example of the scale items is "My university offers elective courses on entrepreneurship."

Risk-taking propensity (RT) refers to making uncertain decisions or acting regardless of the outcome (Jackson, 1976). Risk-taking propensity is seen as a must-have characteristic of an entrepreneur (Keat et al., 2011). The 4-item scale was used by (Anwar et al., 2021). As an example of the scale items, "I am willing to take higher risks for higher returns."

Locus of Control (LC): The measure shows an individual's beliefs regarding his ability to control events in his life (Hermawan et al., 2016). Zellweger et al. (2011) adopted a 4-item locus of control scale. One of the questions in this scale reads: "Whether I reach a goal or not mainly depends on me and my behavior."

Innovativeness (I): The process of developing new and creative ideas over time (Koh, 1996). Innovation is a fundamental characteristic of entrepreneurs that enables them to see opportunities others do not, even in the most challenging situations (Robinson et al., 1991). Jackson (1976) adopted a 4-item scale to measure innovativeness. One of the questions used in this scale reads: "I often surprise people with new ideas."

Need for Achievement (NA): According to McClelland (1961), the need for achievement is the motive to accomplish something better. Zovko et al. (2020) used five items to measure the need for achievement. Entrepreneurs exhibit a greater need for achievement than non-entrepreneurs (Robinson et al., 1991). As an example of the scale items, "My desire to be successful in my work is very high."

3.3.5 Questionnaire Design

Designing a questionnaire is critical to minimizing bias and ensuring data validity and reliability (Sekaran & Bougie, 2016). This study chose a personally administered questionnaire for its efficiency and ability to encourage honest responses (Saunders et al., 2016). Each question was carefully crafted to accurately measure variables, with simple and clear language to capture respondents' attitudes, perceptions, and feelings (Babbie, 2013).

The current questionnaire started with the personal information section. This way, the respondents could psychologically identify themselves with the questionnaire and may feel compelled to complete it (Denzin & Lincoln, 2011). To make responding to the questionnaire easier, the researcher logically divided the questions into sections and provided instructions on completing each section. The survey included a small introduction explaining the study's purpose and general information about the survey.

As the study is being conducted in Jordan, translating the questionnaire into Arabic was imperative to ensure participants understood its meaning. The questionnaire was translated from English to Arabic by a professional translator in Jordan to ensure that the meanings of the questions were not altered by translation. Moreover, the researcher reviewed the Arabic version to confirm that the meanings are clear and understandable (See the Arabic version of the questionnaire in the Annexes.) The study's survey used validated and tested scales from previous entrepreneurship literature, with some modifications to fit the Jordanian context. The theory of Planned Behaviour (TPB) was considered when designing the questionnaire. Aside from the original constructs used in TPB, more variables were included to give a more comprehensive view of the factors affecting students' intentions in Jordan.

The questionnaire underwent a rigorous validation process to ensure the content validity of its constructs. Thus, the translated questionnaire was sent to a panel of five expert judges in Jordan

who specialized in the study topic. Their invaluable insights and critical assessments were instrumental in identifying potential weaknesses and areas for improvement within the questionnaire. Subsequently, a comprehensive revision process was initiated, incorporating the judges' feedback and suggestions. This collaborative effort enhanced the overall quality and reliability of the questionnaire and strengthened the foundation upon which the dissertation's research findings were built. The final developed questionnaire is in the Annexes.

3.4 Data Analysis

After collecting the data, the researcher analyzed it using IBM SPSS (version 21) and R 3.4.4 software. SPSS was used to remove missing data, outliers, and suspicious response patterns, perform the normality test, and find the frequency distribution of the final sample. On the other hand, The R software was used to employ the Partial Least Squares Structural Equation Modeling (PLS-SEM) as a statistical technique to test theoretical propositions, assess the validity of measurement instruments, and examine the structural relationships between constructs within a unified framework. By leveraging PLS-SEM, the research aims to provide insights into the underlying structure of the phenomenon under investigation, contributing to advancing knowledge in the respective field.

3.5 Data Screening

In order to gain confidence in the data obtained, it is crucial to filter the collected data before beginning data analysis to remove any missing data and outliers (J. F. Hair, Black, & Babin, 2010). Data screening aims to achieve valid and accurate results about the relationship between variables, involving determining missing values, outliers, and suspicious responses and conducting normality and variance tests. The researcher inputted all data into the IBM SPSS (version 21) spreadsheet. Afterward, he ensured the data's completeness and accuracy by identifying and correcting some errors. The EXPLORE option in SPSS was used to verify the accuracy of each categorical variable (e.g., age, gender, marital status, educational level, faculty, and university). That involved employing MINIMUM and MAXIMUM options and VALID and MISSING CASE options to catch errors. These options presented each case's sample size, minimum and maximum values, mean, and standard deviation. Corrections were made when values appeared to be out of range.

3.5.1 Missing Data

One of the most prevalent issues in data analysis is missing data, whose impact is correlated with the volume of missed data and the causes of its absence (Tabachnick & Fidell, 2012a). Missing data affects data reliability, which may affect the results of generalizability.

The researcher distributed 428 questionnaires across eight universities. Five questionnaires had missing data issues. Respondents often omitted one section, and some missed two or three sections. Two questionnaires were completely unusable because respondents consistently provided more than one answer. Additionally, three respondents were from non-business schools, and one respondent did not meet the bachelor's level requirement, making these four participants ineligible for the study. Consequently, seven incomplete or unusable questionnaires and four ineligible participants were excluded. Some other sections also had two to three missing data points. Then, 417 questionnaires were left to be used for analysis. A mean value for a particular construct was calculated utilizing Microsoft Excel, and missing responses were replaced with an approximate mean value calculated based on the mean value (Sekaran & Bougie, 2016).

3.5.2 Suspicious Response Pattern

While entering data, the researcher looked for straight-lining responses in which the participant selected the same answer for most questions. Thus, the researcher excluded ten questionnaires of this pattern, leaving 407 questionnaires for further analysis.

3.5.3 Outliers

An outlier is a response with extreme values in comparison to other responses. There are two types of outliers: univariate outliers, meaning extreme scores on only one variable, and multivariate outliers, meaning strange contributions from more than one variable (Tabachnick & Fidell, 2012a). It is crucial to identify outliers, as they are likely to affect the normality of data, which is a prerequisite for using an analytical tool like structural equation modeling (SEM). By removing such answers, we can improve the reliability of our statistics and estimates.

The author employed the Mahalanobis distance test, as suggested by Tabachnick et al. (2012b), to identify outliers in the database. Using multiple regression, the researcher modeled the dependent variable (digital entrepreneurial intentions) with eleven other factors. The Mahalanobis distance values were incorporated into a column of the original SPSS dataset using IBM SPSS software. The statistical significance of Mahalanobis distance is determined through a Chi-square test at $p < 0.01$ (Tabachnick & Fidell, 2012b).

For the eleven independent variables in the model (with the degree of freedom = 11), the Chi-square table value at $P < 0.001$ is 31.264. Any case with a Mahalanobis distance exceeding Chi-square equals 31.264 is considered a statistically significant outlier. Following this criterion, eight multivariate outliers were detected and removed (refer to Table 7), resulting in 399 cases for the final analysis. This number was used to calculate the descriptive and other statistics in the subsequent subsections.

TABLE 7: RESULTS OF OUTLIER STATISTICS

Mahalanobis Distance	
Case Number (ID)	Statistic
1	60.71482
2	41.36010
3	40.41278
4	36.81536
5	35.61020
6	32.29799
7	32.01466
8	31.31713

Note. The table was created by the author, Mohammad Younis Al Khalaileh, 2023.

3.5.4 Normality Tests

The results of the normality tests, including the Kolmogorov-Smirnov and Shapiro-Wilk tests, revealed significant departures from normal distribution for all the examined variables. The Kolmogorov-Smirnov statistics ranged from .067 to .193, all with corresponding p-values of .000, indicating non-normality. Similarly, the Shapiro-Wilk statistics fell within the range of .865 to .990, again with all p-values being .000, reaffirming the non-normal nature of the data (Sanchez, 2013). These results suggest that parametric statistical tests may not be appropriate for analyzing these variables, and alternative non-parametric methods may be more suitable for subsequent data analysis. See Table 8, which reports the normality tests output from IBM SPSS.

TABLE 8: NORMALITY TESTS

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
DEI	.096	399	.000	.966	399	.000
ATE	.109	399	.000	.963	399	.000
SN	.173	399	.000	.890	399	.000
PBC	.083	399	.000	.984	399	.000
DL	.067	399	.000	.990	399	.006
PES	.091	399	.000	.965	399	.000
PCD	.097	399	.000	.950	399	.000
PBD	.093	399	.000	.963	399	.000
RT	.106	399	.000	.959	399	.000
LC	.109	399	.000	.959	399	.000
I	.112	399	.000	.949	399	.000
NA	.193	399	.000	.865	399	.000

Note. The table was created by the author, Mohammad Younis Al Khalaileh, 2023.

3.5.5 Skewness and Kurtosis Tests

The results of the Skewness and Kurtosis tests provide insight into the distributional characteristics of the examined variables (See Table 9.) Regarding skewness, most variables exhibited negative values, indicating a tendency towards a left-skewed distribution. Specifically, DEI, ATE, SN, PES, PCD, PBD, RT, LC, I, and NA all displayed negative

skewness values ranging from -0.216 to -0.804. Conversely, PBC displayed a skewness value close to zero, suggesting a nearly symmetric distribution. Regarding kurtosis, several variables showed kurtosis values exceeding the typical normal distribution's value, while PES and PCD displayed positive kurtosis values of 0.477 and 0.269, respectively. These findings indicate that the dataset contains variables with diverse degrees of non-normality, which should be considered when selecting appropriate statistical analyses and interpreting the results (Tenenhaus, Amato, & Esposito Vinzi, 2004).

TABLE 9: SKEWNESS AND KURTOSIS TESTS

	N	Skewness		Kurtosis	
		Statistic	Std. Error	Statistic	Std. Error
DEI	399	-.430	.122	-.288	.244
ATE	399	-.480	.122	.213	.244
SN	399	-.720	.122	.175	.244
PBC	399	-.009	.122	-.125	.244
DL	399	-.216	.122	.080	.244
PES	399	-.596	.122	.477	.244
PCD	399	-.599	.122	.269	.244
PBD	399	-.318	.122	-.438	.244
RT	399	-.533	.122	.300	.244
LC	399	-.414	.122	.014	.244
I	399	-.541	.122	.156	.244
NA	399	-.804	.122	-.122	.244
Valid N	399				

Note. The table was created by the author, Mohammad Younis Al Khalaileh, 2023.

Researchers have confidence in using PLS-SEM when dealing with non-normal data, as it provides accurate parameter estimates and can produce reliable results even when the assumptions of normality are violated (N. Hair et al., 2012). Unlike traditional covariance-based SEM methods that assume multivariate normality, PLS-SEM is a non-parametric approach that places minimal distributional requirements on the data. PLS-SEM relies on bootstrapping techniques and does not assume specific distribution shapes, making it flexible and applicable to a wide range of datasets, including those with skewed or kurtotic distributions.

3.6 Frequency Distribution of the Respondents

3.6.1 Age

The descriptive statistics in Table 10 illustrate the age distribution of the respondents. Notably, a significant proportion, comprising 54.1%, falls within the age range of 21 to 24 years, indicating a prominent presence of young adults in the study. Additionally, 37.9% of the participants are between 17 and 20 years old, including many teenagers and early adolescents. In contrast, a comparatively smaller segment, constituting only 8% of the total, falls into the age category of 25 years or older. This demographic breakdown suggests that the research may primarily focus on a relatively young population, potentially offering valuable insights into individuals' attitudes, behaviors, or characteristics in these specific age groups.

TABLE 10: AGE DISTRIBUTION OF RESPONDENTS

Category	Frequency	Percent (%)
17-20 years	151	37.9
21-24 years	216	54.1
25 years or above	32	8.0
Total	399	100.0

Note. The table was created by the author, Mohammad Younis Al Khalaileh, 2023.

3.6.2 Gender

Table 11 reveals the gender distribution among the respondents in this dissertation's dataset. The survey was distributed relatively evenly between genders, with 178 respondents (44.6%) identifying as males and 221 respondents (55.4%) as females. This balanced representation of male and female participants ensures a diverse sample for the research. The equitable representation is conducive to thoroughly exploring potential gender differences in students' entrepreneurial intentions, offering a robust foundation for meaningful insights.

TABLE 11: GENDER DISTRIBUTION OF RESPONDENTS

Category	Frequency	Percent (%)
Male	178	44.6
Female	221	55.4
Total	399	100.0

Note. The table was created by the author, Mohammad Younis Al Khalaileh, 2023.

3.6.3 Marital Status

the distribution of marital status among the students. An overwhelming majority of the participants, totaling 95.7%, identified as singles, indicating that the research predominantly involves unmarried individuals. This emphasis on single status aligns with the study's focus on students, who are recognized as youth. A small percentage of respondents were married (3%),

divorced (0.8%), or fell into the "other" category (0.5%). This detailed breakdown of marital status is essential for contextualizing the research within the demographic of young, unmarried individuals, allowing for a more targeted examination of their entrepreneurial intentions and behaviors.

TABLE 12: MARITAL STATUS DISTRIBUTION OF RESPONDENTS

Category	Frequency	Percent (%)
Single	382	95.7
Married	12	3.0
Divorced	3	.8
Other	2	.5
Total	399	100.0

Note. The table was created by the author, Mohammad Younis Al Khalaileh, 2023.

3.6.4 University Name

The study encompassed eight universities located in Amman, Irbid, and Mafraq. The researcher targeted six universities in Amman, the capital city, with the University of Jordan representing the largest proportion at 21.6%. Other institutions in Amman included Middle East University (8.5%), Philadelphia University (3%), Petra University (8.5%), Al-Ahliyya Amman University (8.3%), and Princess Sumayya University for Technology (11.3%). In Irbid, Yarmouk University comprised a significant % of the sample at 24.6%. Lastly, in Mafraq, Al Al-Bayt University accounted for 14.3% of the sample size (See Table 13.) This comprehensive distribution across universities and cities ensures a diverse representation of students from different academic and regional backgrounds, enhancing the generalizability of the study's findings regarding entrepreneurial intention among Jordanian students.

TABLE 13: UNIVERSITY NAME DISTRIBUTION OF RESPONDENTS

Category	Frequency	Percent (%)
Philadelphia University	12	3.0
Princess Sumayya University	45	11.3
Petra University	34	8.5
The University of Jordan	86	21.6
Middle East University	34	8.5
Al Al-Bayt University	57	14.3
Yarmouk University	98	24.6
Al-Ahliyya Amman University	33	8.3
Total	399	100.0

Note. The table was created by the author, Mohammad Younis Al Khalaileh, 2023.

3.6.5 Employment Status

The descriptive statistics from the dissertation's dataset reveal a significant representation of students who are not employed, totaling 78.9% of the sample. This substantial percentage underscores the prevailing unemployment challenge within Jordan, highlighting the severity of the issue among the student population. In contrast, 21.1% of the students in the sample were actively employed, suggesting that a minority of students manage to secure work opportunities while pursuing their studies. These statistics shed light on the economic context in Jordan and emphasize the need for research and policy initiatives to address youth unemployment, especially among students, who represent a substantial portion of the country's aspiring workforce (See Table 14.)

TABLE 14: EMPLOYMENT STATUS DISTRIBUTION OF RESPONDENTS

Category	Frequency	Percent (%)
Yes	84	21.1
No	315	78.9
Total	399	100.0

Note. The table was created by the author, Mohammad Younis Al Khalaileh, 2023.

3.6.6 Previous Business Ownership

Table 15 highlights a noteworthy distribution of students' prior business experiences. A majority, comprising 65.2% of the respondents, reported no business experience. That indicates that a significant portion of the student population in the study had not engaged in entrepreneurial activities or business ownership before. In contrast, 34.8% of the students had experience as business owners, signifying a substantial minority with entrepreneurial backgrounds. These findings suggest a diverse range of students' prior experiences, with a sizeable portion already having ventured into business ownership, while others are relatively new to entrepreneurial endeavors. This information is valuable for understanding students' baseline level of entrepreneurial experience and can inform strategies for entrepreneurship education and support programs.

TABLE 15: PREVIOUS BUSINESS OWNERSHIP DISTRIBUTION OF RESPONDENTS

Category	Frequency	Percent (%)
Yes	139	34.8
No	260	65.2
Total	399	100.0

Note. The table was created by the author, Mohammad Younis Al Khalaileh, 2023.

3.6.7 Family Members' Status of Self-employment

The descriptive statistics demonstrate an intriguing pattern regarding the influence of family members' involvement in business activities on students' career choices. Most students, accounting for 53.9% of the respondents, reported having family members who own businesses, suggesting a significant familial connection to entrepreneurship. In contrast, 46.1% of respondents indicated that no family members engaged in business activities. This data implies a potential link between family entrepreneurial background and students' career choices, as those with entrepreneurial family members may be more inclined toward pursuing entrepreneurship themselves. This finding underscores the importance of considering familial influences when studying entrepreneurial intentions (See Table 16.)

TABLE 16: FAMILY MEMBER'S STATUS OF SELF-EMPLOYMENT DISTRIBUTION OF RESPONDENTS

Category	Frequency	Percent (%)
Yes	215	53.9
No	184	46.1
Total	399	100.0

Note. The table was created by the author, Mohammad Younis Al Khalaileh, 2023.

3.6.8 Attending Entrepreneurship Course/Training

As shown in Table 17, approximately half of the respondents, accounting for 50.6%, reported receiving prior entrepreneurship education or training. This finding suggests that most students have engaged with formal entrepreneurship curricula or programs. In contrast, 49.4% of the students indicated they had never taken entrepreneurship courses or received training in this domain. This balance between those with prior exposure to entrepreneurship education and those without highlights the diverse educational backgrounds and experiences among the students in the study. It also underscores the potential significance of entrepreneurship education in influencing students' entrepreneurial intentions and career paths, making it a critical area for further exploration within the dissertation's research context.

TABLE 17: ATTENDING ENTREPRENEURSHIP COURSE/ TRAINING DISTRIBUTION OF RESPONDENTS

Category	Frequency	Percent (%)
Yes	202	50.6
No	197	49.4
Total	399	100.0

Note. The table was created by the author, Mohammad Younis Al Khalaileh, 2023.

4. RESEARCH RESULTS AND FINDINGS

4.1 Descriptive Statistics for the Constructs

After data screening, descriptive analysis is examined for further analysis (Sekaran & Bougie, 2016). This section summarizes the mean scores and the standard deviation for the study's twelve variables. Table 18 overviews mean scores and standard deviations for critical variables related to digital entrepreneurship intention, attitudes towards entrepreneurship, social norms, and perceived behavioral control. Let us delve into the explanation for each variable.

Digital Entrepreneurship Intention: The respondents, on average, scored 4.32, indicating a high likelihood of starting an online venture. There is a strong willingness, with a mean score of 4.18, to go to great lengths to become a digital entrepreneur. However, doubts exist about starting a digital business, reflected in a lower mean of 2.52. On the positive side, there is a substantial intention to start a digital company, as shown by an average score of 3.93. Additionally, becoming a digital entrepreneur is a significant professional goal, with participants scoring an average of 3.65. The overall mean for Digital Entrepreneurship Intention is 3.91, suggesting a generally positive intention toward digital entrepreneurship.

Attitudes Towards Entrepreneurship: Participants perceive more advantages than disadvantages in being a digital entrepreneur, as reflected by a mean score of 4.04. A career as a digital entrepreneur is attractive, with a mean score of 4.09. The strong desire to start a digital firm is evident, given the high mean score of 4.36. Respondents expect great satisfaction from being a digital entrepreneur, as indicated by a mean score of 4.16. When compared to various options, the preference is for being a digital entrepreneur, with an average score of 3.71. The overall mean for Attitudes Towards Entrepreneurship is 4.07, representing a generally positive attitude towards digital entrepreneurship.

Social Norms: Respondents believe their close family would generally approve of them starting a digital firm, with a mean score of 4.39. Anticipation of approval from close friends is high, as reflected by a mean score of 4.34. The expectation of peer approval is moderate, with an average score of 4.11. The overall mean for Social Norms is 4.28, indicating a high perceived social approval for creating a digital firm.

Perceived Behavioral Control: On average, respondents have a moderate confidence level in knowing the practical details of starting a digital firm, as shown by a mean score of 3.35. There is moderate confidence in the ability to control the creation process of a new digital firm, with participants scoring 3.45. Starting and maintaining a digital firm is considered somewhat challenging, reflected in a mean score of 3.03. However, respondents express a relatively high confidence in their likelihood of succeeding if they attempt to start a digital firm, as indicated

by a mean score of 3.82. The overall mean for Perceived Behavioral Control is 3.41, indicating a moderate level of perceived behavioral control over starting a digital firm among respondents.

TABLE 17: DESCRIPTIVE STATISTICS- MEAN AND STANDARD DEVIATION FOR TPB FACTORS

	Mean	Std. Deviation
Digital Entrepreneurship Intention		
It is very likely that I will start an online venture one day	4.32	.846
I am ready to do anything to be a digital entrepreneur.	4.18	.819
I have serious doubts whether I will ever start a digital business	2.52	.958
I have a firm intention to start a digital company someday.	3.93	.920
My professional goal is to become a digital entrepreneur.	3.65	1.023
	3.91	.683
Attitudes Towards Entrepreneurship:		
Being a digital entrepreneur implies more advantages than disadvantages to me	4.04	.818
A career as a digital entrepreneur is attractive for me.	4.09	.765
If I had the opportunity and resources, I'd like to start a digital firm	4.36	.763
Being a digital entrepreneur would entail great satisfactions for me	4.16	.806
Among various options, I would rather be a digital entrepreneur	3.71	.926
	4.07	.594
Social Norms:		
If you decided to create a digital firm, would people in your close family approve of that decision?	4.39	.828
If you decided to create a digital firm, would people in your close friends approve of that decision?	4.34	.763
If you decided to create a digital firm, would people in your peers approve of that decision?	4.11	.843
	4.28	.654
Perceived Behavioral Control:		
I know the necessary practical details to start a digital firm	3.35	.996
I can control the creation process of a new digital firm	3.45	.906
To start a digital firm and keep it working would be easy for me	3.03	.990
If I tried to start a digital firm, I would have a high probability of succeeding	3.82	.791
	3.41	.718

Note. The table was created by the author, Mohammad Younis Al Khalailah, 2023.

Table 19 below encapsulates mean scores and standard deviations for variables associated with digital literacy. On average, respondents expressed a moderate confidence level in addressing their technical issues independently. Participants, on average, have a moderate awareness of various technologies. There is a general inclination to stay informed about essential new

technologies, as reflected in the above-average mean score. Respondents, on average, feel confident about their ability to grasp and learn new technologies quickly. A moderate confidence level exists in the necessary technical skills for ICT use in learning and creating artifacts.

Moreover, on average, respondents express a high level of confidence in their search and evaluation skills related to obtaining information from the web. Moderate familiarity with web-based activities indicates awareness but not exceptionally high expertise. Participants generally perceive that ICT enhances peer collaboration in project work and other learning activities. There is a relatively high frequency of obtaining online help from friends for university work. The overall mean suggests a moderate to high level of digital literacy among respondents, indicating a generally proficient understanding and usage of digital technologies.

TABLE 18: DESCRIPTIVE STATISTICS- MEAN AND STANDARD DEVIATION FOR DIGITAL LITERACY

	Mean	Std. Deviation
Digital Literacy:		
I know how to solve my own technical problems.	3.44	1.025
I know about a lot of different technologies.	3.42	.945
I keep up with important new technologies.	3.75	.899
I can learn new technologies easily.	4.04	.767
I have the technical skills I need to use ICT for learning and to create artefacts (e.g., presentations) that demonstrate my understanding of what I have learnt.	3.85	.850
I am confident with my search and evaluate skills in regard to obtaining information from the Web.	4.16	.764
I am familiar with issues related to web-based activities e.g., cyber safety, search issues, plagiarism.	3.66	.963
ICT enables me to collaborate better with my peers on project work and other learning activities.	4.10	.796
I frequently obtain help with my university work from my friends over the Internet e.g., through Skype, Facebook, Blogs	4.00	1.011
	3.83	.522

Note. The table was created by the author, Mohammad Younis Al Khalaileh, 2023.

Table 20 encapsulates mean scores and standard deviations for variables associated with Perceived University Support.

Perceived University Educational Support encompasses various aspects that contribute to a positive academic environment for entrepreneurship exploration. Respondents favor the university's provision of elective courses dedicated to entrepreneurship, indicating a supportive

atmosphere for academic inquiry in this domain. This positive sentiment extends to the perception that the university integrates practical project work focused on entrepreneurship, bridging theoretical knowledge with hands-on experience within the academic curriculum.

While the perception of the university offering internships explicitly tailored to entrepreneurship is less pronounced, this aspect warrants further attention or enhancement to align with students' expectations. On a positive note, there is a favorable perception that the university provides academic programs at both the bachelor's and master's levels, underscoring entrepreneurship as a substantive field of study. In addition to formal academic offerings, respondents generally perceive the university's proactive approach in organizing conferences and workshops centered on entrepreneurship. That reflects an institution-wide commitment to fostering awareness and knowledge in the dynamic field of entrepreneurship. Moreover, the university actively facilitates networking opportunities among entrepreneurial students, fostering collaboration and the exchange of shared experiences. The overall perception of the university's educational support in entrepreneurship is generally positive, with respondents acknowledging the multifaceted contributions, including courses, projects, internships, academic programs, and networking opportunities. This comprehensive support structure underscores the university's commitment to nurturing entrepreneurial endeavors among its student community.

Perceived Concept Development Support signifies the university's role in fostering an entrepreneurial mindset and supporting students in their journey toward business ventures. A positive perception of the university actively promoting entrepreneurship as a viable career choice contributes significantly to raising students' awareness in this domain. This emphasis on entrepreneurship as a career choice is complemented by the perception that the university encourages and motivates students to embark on entrepreneurial ventures, underscoring the institution's commitment to cultivating an entrepreneurial mindset among its students.

Additionally, respondents, on average, perceive that the university offers creative and innovative ideas to inspire students to initiate new business ventures. This moderate perception suggests a supportive environment that encourages students to explore and develop innovative concepts for their entrepreneurial endeavors. Furthermore, there is a moderate perception that the university equips students with the necessary knowledge to commence new business endeavors, highlighting the institution's role in providing foundational knowledge and expertise. In summary, the overall perception of the university's support in concept development for entrepreneurship is generally favorable. It encompasses various dimensions: career awareness, motivation, idea generation, and knowledge provision. This holistic approach

aligns with the university's commitment to nurturing and empowering students with the conceptual foundation needed for successful entrepreneurial pursuits.

Perceived Business Development Support is crucial for students venturing into new business initiatives, and the following perceptions shed light on various facets of the university's role in this domain. While the lower mean score suggests a less pronounced perception regarding the university offering financial support for students initiating new business ventures, it indicates potential areas of improvement or clarification. This aspect warrants attention to ensure students are well-informed about available financial assistance opportunities. On average, respondents perceive the university as leveraging its reputation to support students engaged in new business initiatives. That suggests a positive association between institutional reputation and entrepreneurial endeavors, emphasizing the importance of the university's standing in fostering student entrepreneurship. Additionally, there is a moderate perception that the university is a lead customer for students embarking on new business ventures. This perception indicates the university's active involvement in the early stages of business development, potentially providing a supportive platform for students to test and refine their entrepreneurial ideas. In summary, the overall perception of the university's support in business development for entrepreneurship is characterized by a mix of factors, including financial assistance, reputation leverage, and engagement as a lead customer. These dimensions collectively contribute to the university's role in facilitating and nurturing the business development aspect of entrepreneurial initiatives among students.

TABLE 20: DESCRIPTIVE STATISTICS- MEAN AND STANDARD DEVIATION FOR PERCEIVED UNIVERSITY SUPPORT

	Mean	Std. Deviation
Perceived University Educational Support:		
My university offers elective courses on entrepreneurship.	4.02	.909
My university offers project work focused on entrepreneurship.	3.74	.946
My university offers internship focused on entrepreneurship.	3.48	1.123
My university offers a bachelor or master study on entrepreneurship	3.85	1.030
My university arranges conferences /workshops on entrepreneurship.	3.86	.951
My university brings entrepreneurial students in contact with each other.	3.76	.996
	3.79	.750
Perceived Concept Development Support:		
My university creates awareness of entrepreneurship as a possible career choice.	3.78	1.016
My university motivates students to start a new business	3.58	1.149
My university provides students with ideas to start a new business from.	3.54	1.104
My university provides students with the knowledge needed to start a new business.	3.52	1.070

	3.61	.940
Perceived Business Development Support		
My university provide students with the financial means to start a new business.	3.06	1.259
My university use its reputation to support students that start a new business.	3.51	1.107
My university serve as a lead customer of students that start a new business	3.32	1.176
	3.29	1.040

Note. The table was created by the author, Mohammad Younis Al Khalailah, 2023.

Table 21 represents mean scores and standard deviations for variables associated with the personality traits. The variable "*Risk-taking Propensity*" encompasses individuals' attitudes toward taking risks in pursuit of potential gains. Respondents express a generally positive inclination toward risk-taking behaviors, as the mean scores indicate. The statement "I am willing to take higher risks for higher returns" attains a mean score of 4.06, reflecting a readiness to embrace higher levels of risk for the prospect of greater rewards. Similarly, respondents express a propensity for seeking new experiences, even if they entail risks, as evidenced by a mean score of 3.94. The relatively high mean scores across statements suggest an overall positive disposition toward risk-taking, underscoring an openness to ventures that may involve uncertain outcomes.

The variable "*Locus of Control*" pertains to individuals' beliefs regarding how much they can influence events in their lives. The mean scores indicate a prevalent internal locus of control among respondents. Statements such as "Whether I reach a goal or not mainly depends on me and my behavior" and "I myself can determine very much of what is going on in my life" receive mean scores of 4.09 and 3.88, respectively. These scores suggest a belief in personal agency and a conviction that individual actions significantly shape outcomes. The overall mean score of 4.09 reinforces the prevailing sense of internal control, highlighting general confidence in personal efficacy.

The variable "*Innovativeness*" gauges individuals' proclivity for creative thinking and generating novel ideas. Respondents exhibit a positive orientation toward innovativeness, as reflected in the mean scores. Statements such as "I often surprise people with novel ideas" and "Original ideas always occur to me" yield mean scores of 4.06 and 4.09, respectively. These scores indicate a self-perceived capacity for creative contributions. The overall mean score of 4.09 underscores the respondents' collective inclination toward innovation and creative thinking.

The variable "*Need for Achievement*" delves into individuals' aspirations for success and their commitment to surpassing established standards. The mean scores, which convey a strong desire for achievement among respondents, are particularly robust. For instance, statements like

"My desire to be successful in my work is very high" and "I aim to reach targets above certain standards" receive mean scores of 4.55 and 4.44, respectively, suggesting a robust need for accomplishment. The overall mean score of 4.46 further reinforces a prevalent orientation toward high achievement, emphasizing individuals' aspirations for success and excellence in their endeavors.

TABLE 21: DESCRIPTIVE STATISTICS- MEAN AND STANDARD DEVIATION FOR PERSONALITY TRAITS

	Mean	Std. Deviation
Risk-taking Propensity:		
I am willing to take higher risks for higher returns	4.06	.878
I'm looking for new experiences even if their results are risky	3.94	.923
The risk of failure is not a main concern for me.	3.88	1.040
I prefer a business that offers high returns with high risks over a secured job with a steady salary	3.88	1.016
	3.94	.709
Locus of Control:		
Whether I reach a goal or not mainly depends on me and my behavior.	4.09	.888
When I make a plan, I am sure that the planned will become reality.	4.24	.721
I myself can determine very much of what's going on in my life.	3.88	.966
If I get what I want it is the result of my endeavor and personal commitment.	4.16	.855
	4.09	.582
Innovativeness:		
I often surprise people with novel ideas	4.06	.815
I prefer to work in a field that requires excellent creative thinking.	4.18	.810
People often ask for my help in creative activities.	4.03	.835
Original ideas always occur to me	4.09	.854
	4.09	.639
Need for Achievement:		
My desire to be successful in my work is very high.	4.55	.631
I master whatever I am doing.	4.47	.701
I would like to do the best I can at the task.	4.43	.672
I give great importance to being more successful than others on a task.	4.39	.704
I aim to reach targets above certain standards.	4.44	.713
	4.46	.547

Note. The table was created by the author, Mohammad Younis Al Khalaileh, 2023.

4.2 PLS-SEM Analysis

The partial least square path model is the most suitable method for analyzing the data in this research due to its flexibility in examining intricate relationships within a small sample size (J. F. Hair, Hult, Ringle, & Sarstedt, 2021). Its emphasis on predictive modeling, ability to manage complex constructs, and compatibility with non-normal data distributions make it the best choice for understanding how all the factors in the study, including digital literacy, university support, personality traits, and TPB motivational factors, interact with influence digital entrepreneurial intention. Therefore, the author employed PLS-PM to examine the inner and outer connections among different variables and visually represent these relationships using a path diagram (Chin, 1998; Jöreskog & Wold, 1982). The PLS-PM method is valuable for creating latent variables (LV) for each block. The model was developed using a 12-block approach specified through a multi-step process. In the first step, some items were removed when their factor loadings were below 0.7. The reflective model was used for index development, although the formative and reflective methods for modeling LVs were considered valid (Diamantopoulos, 1999; Fornell & Larcker, 1981). The overall model fit was assessed using Goodness-of-Fit (GOF) (Tenenhaus et al., 2004), standardized root mean square residual /SRMR/ (J. F. Hair et al., 2021), and the root mean square residual covariance /RMR/ (J. F. Hair et al., 2021). Model parameter validation was performed using bootstrapping, following Chin (1998). Mean and standard error estimates were calculated from 500 samples, with a general rule that a path coefficient is considered significant if the standard error is less than half the mean. Therefore, standard errors, t statistics, and estimates will be presented together. GOF values of 0.10, 0.25, and 0.36 are considered adequate, moderate, and good global fits (Wetzels, Odekerken-Schröder, & Van Oppen, 2009). The thresholds for SRMR and RMR values are 0.08 and 0.12.

Dillon Goldstein's rho indices were used to assess the composite reliability of the blocks. It's recommended that the reliability of identified dimensions should be above 0.7, and most factor loadings should exceed 0.7 (J. F. Hair et al., 2021). R-squared values were used to gauge the quality of the structural model. As per Cohen, values of 0.02, 0.15, and 0.35 are considered to have small, medium, or significant effects, respectively. The discriminant validity of the model was evaluated using the Fornell and Larcker criterion (1981). The Average Variance Extracted (AVE) of an LV should always be greater than the variance in another latent construct that this LV contributes to explaining. All calculations were performed using R 3.4.4 software ("R. Core Team," 2022) with the PLS PM or Partial Least Squares Path Modelling package, along with the "Gifi" and "older" packages for calculating VIF indices (Sanchez, 2013).

The dataset has 399 respondents, which satisfied the sample size requirements for partial least squares analysis suggested by eminent authors (J. F. Hair et al., 2021; Sanchez, 2013; Vinzi, Trinchera, & Amato, 2010). A five-point Likert scale was used to evaluate the study's blocks, which included variables such as DEI (five items), ATE (five items), SN (three items), PBC (four items), DL (nine items), PES (six items), PCD (four items), PBD (three items), RT (four items), LC (four items), I (four items), and NA (five items). For every latent variable, the composite reliability, as determined by Dillon Goldstein's Rho value, was more significant than 0.7, signifying composite solid reliability. Only items with loadings close to or higher than 0.7 were kept. As a result, the final model omitted DEI1, ATE1, DL1, DL6-9, PES4, RT3, or LC1 (refer to Table 22).

TABLE 19: COMPOSITE RELIABILITY OF THE STUDIED ITEMS AND MODEL BUILDING I.

Item	Latent variable	Manifest variables	Loading before exclusion	Loading after exclusion	VIF (DEI) *	DG Rho/ AVE**
Online venture	Digital Entrepreneurial Intention (DEI)	DEI1	0.676		0.805	0.861 (60.4%)
Become a digital entrepreneur		DEI2	0.746	0.747	0.828	
Doubts		DEI3	0.681	0.697	0.873	
Digital company		DEI4	0.855	0.859	0.702	
Professional goal		DEI5	0.760	0.799	0.722	
More benefits	Attitude toward entrepreneurship (ATE)	ATE1	0.644		1.71	0.852 (59.9%)
Career		ATE2	0.767	0.749	2.06	
Start a firm		ATE3	0.714	0.744	1.70	
Great satisfaction		ATE4	0.808	0.838	2.14	
A good option		ATE5	0.742	0.763	1.86	
Approval of family	Subjective Norms (SN)	SN1	0.857	0.855	1.61	0.848 (70.6%)
Approval of friends		SN2	0.849	0.844	1.87	
Approval of peers		SN3	0.819	0.822	1.71	
Practical details	Perceived Behaviour Control (PBC)	PBC1	0.755	0.759	2.08	0.859 (60.7%)
Control of the process		PBC2	0.808	0.813	2.09	
Ease of operating a firm		PBC3	0.802	0.803	2.25	
High probability of success		PBC4	0.748	0.742	1.64	
Technical problems	Digital Literacy (DL)	DL1	0.505		1.67	0.854 (56.3%)
Different technologies		DL2	0.703	0.769	2.37	
Latest technologies		DL3	0.655	0.751	2.09	
Learn new technologies		DL4	0.669	0.743	1.75	
Technical skills		DL5	0.711	0.738	1.94	

Obtaining information from the Web-based activities	DL6	0.648	1.64
ICT collaboration	DL7	0.569	1.64
Obtain help	DL8	0.560	1.72
	DL9	-0.168	1.26

Note: *: Variance Inflation Factor (VIF) values should be lower than 5 to avoid multicollinearity; DEI: Digital Entrepreneurial Intention. **: Dillon Goldstein's Rho value and Average Variance Extracted. *Note.* The table was created by the author, Mohammad Younis Al Khalaileh, 2023.

The model-building process and composite reliability assessment, including loadings, Dillon Goldstein's Rho, and Variance Inflation Factor (VIF), are detailed in Table 23.

TABLE 20: COMPOSITE RELIABILITY OF THE STUDIED ITEMS AND MODEL BUILDING II.

Item	Latent variable	Manifest variables	Loading before exclusion	Loading after exclusion	VIF* (ATE)	VIF* (PBC)	VIF* (DEI)	DG Rho/AVE**
Elective courses	Perceived Educational Support (PES)	PES1	0.775	0.794			1.94	0.897 (60.0%)
Project work		PES2	0.772	0.807			2.50	
Internship		PES3	0.725	0.747			2.54	
Bachelor/master study		PES4	0.663				1.58	
Conferences/Workshops		PES5	0.769	0.748			2.09	
Contact with other students		PES6	0.761	0.774			3.10	
Career choice awareness	Perceived Concept Development (PCD)	PCD1	0.799	0.796			2.96	0.923 (72.2%)
Motivation for a new		PCD2	0.882	0.886			3.17	
Ideas to start a firm		PCD3	0.863	0.862			3.47	
Knowledge to start a firm		PCD4	0.851	0.854			3.73	
Financial means	Business Development Support (BDS)	BDS1	0.853	0.850			2.65	0.913 (69.0%)
Reputation support		BDS2	0.763	0.755			2.98	
Lead customer		BDS3	0.869	0.881			2.97	
Higher risks for higher	Risk-Taking propensity (RT)	RT1	0.774	0.799	1.58	1.58	1.78	0.836 (64.3%)
New riskier experiences		RT2	0.831	0.844	1.79	1.79	2.00	
Risk of failure is not a		RT3	0.634		1.38	1.38	1.57	
High returns over		RT4	0.735	0.760	1.40	1.40	1.64	
Behaviour control	Locus of Control (LC)	LC1	0.631		1.33	1.33	1.49	0.771 (57.2%)
Plans will be realized		LC2	0.742	0.766	1.51	1.51	1.62	
Self-awareness		LC3	0.732	0.762	1.33	1.33	1.54	
Personal commitment		LC4	0.709	0.741	1.24	1.24	1.45	
Novel ideas		I1	0.703	0.700	1.61	1.61	1.79	

Creative thinking	Innovativeness (I)	I2	0.778	0.783	1.86	1.86	2.26	0.855 (59.9%)
Help in creative		I3	0.790	0.790	1.62	1.62	2.00	
Original ideas		I4	0.821	0.820	1.69	1.69	1.92	
Success in work	Need for Achievement (NA)	NA1	0.753	0.752	1.87	1.87	2.29	0.898 (66.1%)
Master of things		NA2	0.858	0.857	1.94	1.94	2.20	
Do the very best		NA3	0.787	0.786	1.88	1.88	2.10	
More successful than		NA4	0.830	0.828	2.00	2.00	2.22	
Targets above standards		NA5	0.833	0.837	2.37	2.37	2.62	
<i>Note:</i> *: Variance Inflation Factor (VIF) values should be lower than 5 to avoid multicollinearity; ATE: Attitude Toward Entrepreneurship; PBC: Perceived Behaviour Control; DEI: Digital Entrepreneurial Intention. **: Dillon Goldstein's Rho value and Average Variance Extracted. (in %). The table was created by the author, Mohammad Younis Al Khalaileh, 2023.								

Digital Entrepreneurial Intention was most accurately captured by the intention to start a digital company (0.859). Attitude toward Entrepreneurship was found to have the highest representation of great satisfaction (0.838), and the central item for Perceived Behavioral Control was identified as the control of the process (0.813). Notably, technology-related items within Digital Literacy were particularly influential. Perceived Educational Support (PES) was most effectively described by elective courses (0.794) and project work (0.807). At the same time, Business Development Support (BDS) was strongly associated with financial means (0.850) and the university's lead customer status (0.881). Risk-taking (RT) pertained to embracing new, riskier experiences (0.844), and Innovativeness was primarily linked to original ideas (0.821). The need for better achievement was clearly defined by the desire to master all things (0.858) and surpass standards in reaching targets (0.833).

Regarding discriminant validity, constructs must demonstrate a high degree of uniqueness relative to one another. Discriminant validity signifies that these constructs should exhibit a clear demarcation and account for phenomena that are not redundantly explained by other constructs. Scholars typically employ a methodical assessment of discriminant validity, often involving the examination of indicators' cross-loadings and adherence to the Fornell-Larcker criterion, as proposed by Wilson (2010).

In assessing discriminant validity, the researcher employs the Fornell-Larcker framework's first criterion, which is relatively lenient. It demands that any indicator linked to a particular construct has outer loadings greater than those of the identical indicators linked to other constructs. These criteria, which align with Hair et al. (2010), highlight the need for each reflectively assessed construct's square root of the average variance extracted (AVE) to be greater than its maximum correlation with any other construct. This concept guarantees that a construct's variance is shared more by its component items than by items associated with other

constructs. Table 24 displays the AVE values on the diagonal and the squared intervariable correlations below the main diagonal, while p-values are shown above the diagonal. Adhering to the Fornell and Larcker (1981) criterion, all AVE values for the latent variables (LVs) exceeded the squared intervariable correlations, confirming discriminant validity. Additionally, all AVE values were above 0.5, indicating strong model adequacy.

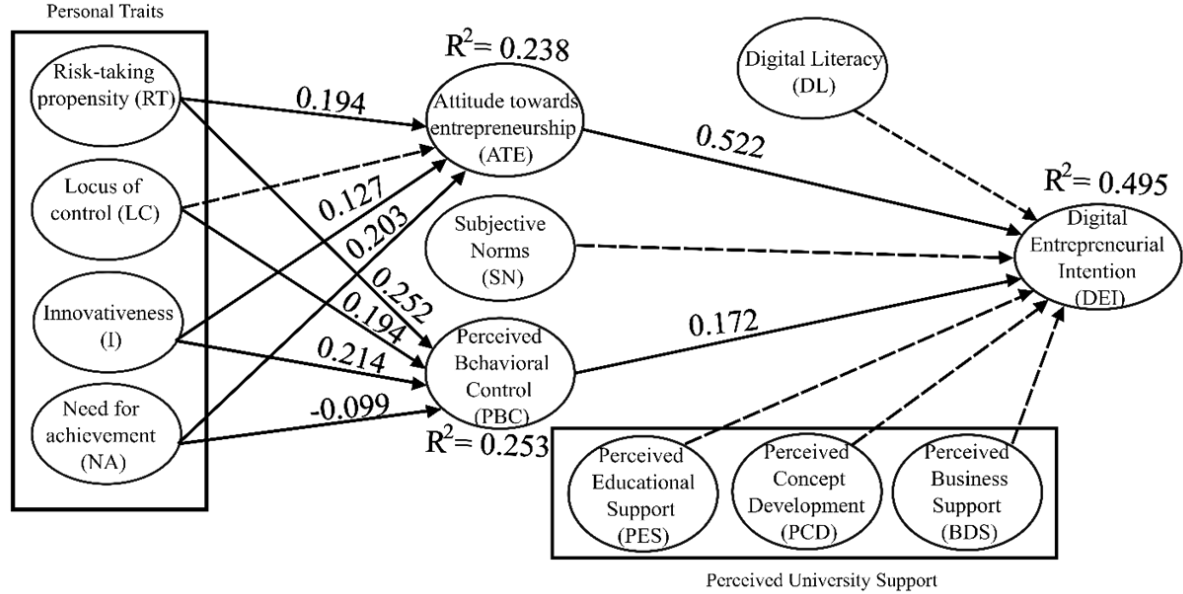
TABLE 21: RESULTS OF FORNELL-LARCKER CRITERION OF DISCRIMINANT VALIDITY

Latent variable	RT	LC	I	NA	ATE	SN	PBC	PES	PCD	BDS	DL	DEI
RT	0.64	<0.00	<0.00	<0.00	<0.00	<0.00	<0.00	<0.00	<0.00	<0.00	<0.00	<0.00
LC	0.19	0.572	<0.00	<0.00	<0.00	<0.00	<0.00	<0.00	<0.00	<0.00	<0.00	<0.00
I	0.19	0.306	0.599	<0.00	<0.00	<0.00	<0.00	<0.00	<0.00	<0.00	<0.00	<0.00
NA	0.11	0.228	0.323	0.661	<0.00	<0.00	<0.00	<0.00	<0.00	0.008	<0.00	<0.00
ATE	0.11	0.103	0.132	0.133	0.599	<0.00	<0.00	<0.00	<0.00	<0.00	<0.00	<0.00
SN	0.04	0.054	0.078	0.089	0.135	0.706	<0.00	<0.00	<0.00	<0.00	<0.00	<0.00
PBC	0.14	0.130	0.131	0.032	0.097	0.050	0.607	<0.00	<0.00	<0.00	<0.00	<0.00
PES	0.06	0.107	0.091	0.065	0.056	0.041	0.091	0.600	<0.00	<0.00	<0.00	<0.00
PCD	0.06	0.074	0.082	0.147	0.061	0.047	0.104	0.599	0.722	<0.00	<0.00	<0.00
BDS	0.05	0.062	0.048	0.017	0.038	0.042	0.090	0.433	0.585	0.690	<0.00	<0.00
DL	0.13	0.072	0.125	0.071	0.089	0.061	0.190	0.091	0.063	0.081	0.563	<0.00
DEI	0.09	0.078	0.145	0.107	0.398	0.083	0.166	0.064	0.066	0.042	0.108	0.604

Note: RT: Risk-taking propensity; LC: Locus of Control; I: Innovativeness; NA: Need for Achievement; ATE: Attitude Toward Entrepreneurship; SN: Subjective Norms; PBC: Perceived Behaviour Control; DEI: Digital Entrepreneurial Intention; DL: Digital Literacy; PCD: Perceived Concept Development; PES: Perceived Educational Support; BDS: Perceived Development Support. AVE: Average Variance Extracted. The table was created by the author, Mohammad Younis Al Khalaileh, 2023.

Figure 5 below illustrates the graphical model, presenting parameter estimates and R-squared values obtained through bootstrap validation in the Partial Least Squares Structural Equation Modeling (PLS-SEM) framework. As an iterative and explanatory technique, PLS-SEM excels in discerning relevant relationships while excluding insignificant ones. Only statistically significant path coefficients are depicted to enhance interpretability, with non-significant paths denoted by dashed lines. All provided values bear statistical significance at a 5 percent threshold, underscoring the robustness and reliability of our findings.

FIGURE 5: THE PLS-SEM MODEL



Note:: The figure was created by the author, Mohammad Younis Al Khalaileh, 2022.

The overall model exhibited a good fit, with a GOF of 0.428, a standardized root mean square residual of 0.053 (below the 0.08 threshold), and a root mean square residual covariance of 0.118 (just below the 0.12 threshold). The primary variable, DEI, showed the highest R2 value (0.495, SE=0.049; t=11.17; p<0.001). Additionally, the prediction of secondary outcomes, PBC and ATE, demonstrated substantial R2 values (0.253; SE=0.032; t=6.63; p<0.001 and 0.238; SE=0.037; t=6.63; p<0.001).

4.3 Hypotheses Testing

The study used structural equation modeling to examine relationships between the constructs. The standardized beta coefficient and statistical significance were the determinants of accepting or rejecting the hypotheses outlined in Chapter Two.

4.3.1 Theory of Planned Behaviour Constructs

The results for H1a reveal a highly significant and positive relationship between attitude towards entrepreneurship (ATE) and digital entrepreneurial intention (DEI) among undergraduate students in Jordan. The standardized beta coefficient of 0.522 indicates that ATE has a substantial and positive impact on DEI, and this relationship is statistically significant (t-Value = 11.35, p < 0.001). Therefore, H1a is supported. In the case of H1b, the relationship between subjective norm (SN) and digital entrepreneurial intention (DEI) is not statistically significant. The standardized beta coefficient of 0.046 is small, and the t-value of 0.90 is insignificant at the chosen confidence level. As a result, H1b is rejected. The results for H1c

indicate a statistically significant and positive relationship between perceived behavioral control (PBC) and digital entrepreneurial intention (DEI) among undergraduate students in Jordan. The standardized beta coefficient of 0.172 suggests that PBC has a moderate positive impact on DEI, and this relationship is statistically significant (t-Value = 2.73, $p < 0.01$). Thus, H1c is supported (See Table 25.)

TABLE 22: THEORY OF PLANNED BEHAVIOR HYPOTHESES TESTING RESULTS

Hypothesis	Relationship	Std. Beta	Std. Error	t-Value	Decision
H1a: Attitude towards entrepreneurship (ATE) positively relates to the digital entrepreneurial intention (DEI) of undergraduate students in Jordan.	ATE -> DEI	0.522	0.046	11.35 *	Supported
H1b: Subjective norm (SN) positively relates to the digital entrepreneurial intention (DEI) of undergraduate students in Jordan.	SN -> DEI	0.046	0.051	0.90	Rejected
H1c: Perceived Behavioral Control (PBC) positively relates to the digital entrepreneurial intention (DEI) of undergraduate students in Jordan.	PBC -> DEI	0.172	0.063	2.73**	Supported
<i>Note.</i> * $p < 0.001$, ** $p < 0.01$, *** $p < 0.05$					
The table was created by the author, Mohammad Younis Al Khalaileh, 2023.					

4.3.2 Digital Literacy

The results for H2 indicate that there is no statistically significant relationship between Digital Literacy (DL) and Digital Entrepreneurial Intentions (DEI) among undergraduate students in Jordan. The standardized beta coefficient of 0.087 is small, and the t-value of 1.89 does not reach statistical significance at the chosen confidence level. Consequently, H2 is rejected (See Table 26.)

TABLE 23: DIGITAL LITERACY HYPOTHESES TESTING RESULTS

Hypothesis	Relationship	Std. Beta	Std. Error	t-Value	Decision
H2: Digital Literacy positively influences the digital entrepreneurial intentions (DEI) of undergraduate students in Jordan	DL -> DEI	0.087	0.046	1.89	Rejected
<i>Note.</i> * $p < 0.001$, ** $p < 0.01$, *** $p < 0.05$.					
The table was created by the author, Mohammad Younis Al Khalaileh, 2023.					

4.3.3 Perceived University Support

The results for H3a reveal no statistically significant relationship between perceived educational support (PES) and digital entrepreneurial intention (DEI) among undergraduate students in Jordan. The standardized beta coefficient of 0.064 is relatively small, and the t-value of 1.25 is insignificant at the chosen confidence level. Therefore, H3a is rejected. In the case of H3b, the relationship between perceived concept development (PCD) and digital entrepreneurial intention (DEI) is not statistically significant. The standardized beta coefficient of 0.033 is small, and the t-value of 0.46 is insignificant at the chosen confidence level. As a result, H3b is rejected. The results for H3c suggest no statistically significant relationship between business development support (BDS) and digital entrepreneurial intention (DEI) among undergraduate students in Jordan. The standardized beta coefficient of -0.015 is small, and the t-value of -0.26 is insignificant at the chosen confidence level. Consequently, H3c is rejected (See Table 27.)

TABLE 24: PERCEIVED UNIVERSITY SUPPORT HYPOTHESES TESTING RESULTS

Hypothesis	Relationship	Std. Beta	Std. Error	t-Value	Decision
H3a: Perceived educational support (PES) positively relates to the digital entrepreneurial intention (DEI) of undergraduate students in Jordan.	PES -> DEI	0.064	0.051	1.25	Rejected
H3b: Perceived concept development (PCD) positively relates to the digital entrepreneurial intention (DEI) of undergraduate students in Jordan.	PCD -> DEI	0.033	0.072	0.46	Rejected
H3c: Business development support (BDS) positively relates to the digital entrepreneurial intention (DEI) of undergraduate students in Jordan.	BDS -> DEI	-0.015	0.058	-0.26	Rejected
<i>Note.</i> *p < 0.001, **p < 0.01, ***p < 0.05					
The table was created by the author, Mohammad Younis Al Khalaileh, 2023.					

4.3.4 Personality Traits

The results for H4a suggest a statistically significant positive relationship between Risk-taking Propensity (RT) and students' Attitude toward entrepreneurship (ATE). The standardized beta coefficient of 0.194 indicates that RT has a moderate positive impact on ATE, and this relationship is highly significant (t-Value = 3.40, p < 0.001). Therefore, H4a is supported. In the case of H4b, the results show a statistically significant and positive relationship between Risk-taking Propensity (RT) and students' Perceived Behavioral Control (PBC). The

standardized beta coefficient of 0.252 indicates that RT substantially positively impacts PBC, and this relationship is highly significant (t-Value = 4.42, $p < 0.001$). Thus, H4b is supported. The results for H5a indicate no statistically significant relationship between Locus of Control (LC) and students' Attitude toward entrepreneurship (ATE). The standardized beta coefficient of 0.099 is small, and the t-value of 1.87 is insignificant at the chosen confidence level. Consequently, H5a is rejected. In the case of H5b, the results reveal a statistically significant and positive relationship between Locus of Control (LC) and students' Perceived Behavioral Control (PBC). The standardized beta coefficient of 0.203 suggests that LC has a moderate positive impact on PBC, and this relationship is statistically significant (t-Value = 2.86, $p < 0.01$). Therefore, H5b is supported. The results for H6a suggest a statistically significant positive relationship between Innovativeness (I) and students' Attitude toward entrepreneurship (ATE). The standardized beta coefficient of 0.127 indicates that Innovativeness (I) has a moderate positive impact on ATE, and this relationship is statistically significant (t-Value = 2.15, $p < 0.05$). Therefore, H6a is supported. In the case of H6b, the results indicate a statistically significant and positive relationship between Innovativeness (I) and students' Perceived Behavioral Control (PBC). The standardized beta coefficient of 0.214 suggests that Innovativeness (I) has a substantial positive impact on PBC, and this relationship is highly significant (t-Value = 3.51, $p < 0.001$). Thus, H6b is supported. The results for H7a demonstrate a statistically significant positive relationship between Need for Achievement (NA) and students' Attitude toward entrepreneurship (ATE). The standardized beta coefficient of 0.203 suggests that NA has a moderate positive impact on ATE, and this relationship is highly significant (t-Value = 3.63, $p < 0.001$). Therefore, H7a is supported. H7b's results reveal a statistically significant and negative relationship between the Need for Achievement (NA) and students' Perceived Behavioral Control (PBC). The standardized beta coefficient of -0.099 suggests that NA has a slight a significant and negative impact on PBC (t-Value = -2.11, $p < 0.05$). Thus, H7b is rejected (See Table 28.)

TABLE 25: PERSONALITY TRAITS HYPOTHESES TESTING RESULTS

Hypothesis	Relationship	Std. Beta	Std. Error	t-Value	Decision
H4a: Risk-taking propensity positively influences students' Attitude toward entrepreneurship (ATE).	RT -> ATE	0.194	0.057	3.40 *	Supported

H4b: Risk-taking propensity positively influences students' Perceived Behavioral Control (PBC).	RT -> PBC	0.252	0.057	4.42 *	Supported
H5a: Locus of control positively influences students' Attitude toward entrepreneurship (ATE).	LC -> ATE	0.099	0.053	1.87	Rejected
H5b: Locus of control positively influences students' Perceived Behavioral Control (PBC).	LC -> PBC	0.203	0.071	2.86 **	Supported
H6a: Innovativeness positively influences students' Attitude toward entrepreneurship (ATE).	I -> ATE	0.127	0.059	2.15 ***	Supported
H6b: Innovativeness positively influences students' Perceived Behavioral Control (PBC).	I -> PBC	0.214	0.061	3.51 *	Supported
H7a: Need for Achievement positively influences students' Attitude toward entrepreneurship (ATE).	NA -> ATE	0.203	0.056	3.63 *	Supported
H7b: Need for Achievement positively influences students' Perceived Behavioral Control (PBC).	NA -> PBC	-0.099	0.047	-2.11***	Rejected
<i>Note.</i> *p < 0.001, **p < 0.01, ***p < 0.05.					
The table was created by the author, Mohammad Younis Al Khalailah, 2023.					

4.4 Direct and Indirect Effects on DEI

The PLS-PM method offers a notable advantage by allowing us to distinguish between direct, indirect, and total effects on the outcome variable DEI (Table 29). The table provides a detailed overview of how latent variables impact Digital Entrepreneurial Intention (DEI), specifying direct, indirect, and total effects, along with the explained variance ratio. Each row corresponds to a specific relationship between two latent variables, where the direct effect represents the immediate impact, and the indirect effect considers the influence through other variables. Effect percentages indicate the proportion of variance in DEI attributed to each latent variable, and bootstrap standard errors provide insights into the precision of estimated effects.

TABLE 26: TOTAL, DIRECT, AND INDIRECT EFFECTS AND THE RATIO OF THE EXPLAINED VARIANCE IN DEI

Relationship	Effects*		
	Direct	Indirect	Total
RT → ATE	0.194 (0.057)		0.194 (0.057)
RT → PBC	0.252 (0.057)		0.252 (0.057)
RT → DEI		0.143 (0.034) (34%)	0.143 (0.034) (13%)
LC → PBC	0.203 (0.071)		0.203 (0.071)
LC → DEI		0.085 (0.037) (20%)	0.085 (0.037) (8%)
I → ATE	0.127 (0.059)		0.127 (0.059)
I → PBC	0.214 (0.061)		0.214 (0.061)
I → DEI		0.104 (0.040) (25%)	0.104 (0.040) (9%)
NA → ATE	0.203 (0.056)		0.203 (0.056)
NA → DEI		0.091 (0.035) (22%)	0.091 (0.035) (8%)
ATE → DEI	0.522 (0.046) (75%)		0.522 (0.046) (47%)
PBC → DEI	0.172 (0.063) (25%)		0.172 (0.063) (15%)
Total on DEI (%)	0.694 (0.051) (62%)	0.423 (0.036) (38%)	1.117 (0.046) (100%)

Note: RT: Risk-taking propensity; LC: Locus of Control; I: Innovativeness; NA: Need for Achievement; ATE: Attitude Toward Entrepreneurship; SN: Subjective Norms; PBC: Perceived Behaviour Control; DEI: Digital Entrepreneurial Intention. *: effect percentages in a column for DEI sum up to 100% and are given as the ratio of explained variance in DEI, bootstrap standard errors can be seen in parentheses.
The table was created by the author, Mohammad Younis Al Khalaileh, 2023.

Total effects on Digital Entrepreneurial Intention could be divided into direct (62%; $t=13.61$; $p<0.001$) and indirect effects (38%; $t=11.75$; $p<0.001$). In terms of direct effects, ATE emerged as the most impactful variable, accounting for 75% ($t=11.35$; $p<0.001$) of the direct effects. In contrast, PBC contributed only 25% ($t=2.73$; $p=0.007$) of the direct effects. When considering indirect effects, RT had the most substantial impact on DEI, contributing to 34% ($t=4.21$; $p<0.001$), followed by Innovativeness (I) and the Need for Achievement (NA) with 25% ($t=2.60$; $p=0.010$) and 22% ($t=2.60$; $p=0.010$), respectively. Analyzing the total effects, we observed that ATE, PBC, and RT constituted 75% (47%, 15%, and 13%) of the total explained variance in DEI. The other factors, such as I, NA, and LC, had only a little (under 10%) but still significantly affected DEI. These results were consistent with the previous findings (Fatoki, 2020; Roy et al., 2017).

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

This study examined the variables influencing the intention of 399 Jordanian undergraduate business students to pursue digital entrepreneurship. The findings revealed several significant relationships and shed light on the critical determinants of DEI in this context.

The results indicated that the intention to start a digital company (DEI) was the primary outcome variable with the highest R-squared value (0.495), suggesting that it was strongly influenced by the factors examined in the study. TPB's applicability to Jordan's context reveals that Ajzen's model does not perfectly explain students' entrepreneurial intentions. Only Two antecedents of TPB, namely attitudes toward entrepreneurship and perceived behavioral control, influence entrepreneurial intention significantly.

Attitude Toward Entrepreneurship (ATE), which refers to one's positive or negative evaluation of entrepreneurship, was identified as significantly and positively correlating with the entrepreneurial intention of university students in Jordan. Notably, it emerged as the most influential predictor of entrepreneurial intention, aligning with findings from studies (Aleidi & Chandran, 2019; Anwar et al., 2021). That suggests that university students in Jordan view entrepreneurship positively, which significantly boosts their intention to pursue it.

The second key predictor of entrepreneurial intention among students in Jordan is perceived behavioral control (PBC), which refers to an individual's belief in their ability to perform a specific behavior. That implies that students in Jordan feel confident in possessing the necessary skills and resources to start a digital business. The study's findings highlight a positive relationship between PBC and entrepreneurial intention, consistent with previous research (Hassan, 2020; Karimi et al., 2017).

In line with previous research, the entrepreneurial intentions of Jordanian students are not strongly influenced by societal perceptions around them (Al Saiqal et al., 2019; Su et al., 2021; Younis et al., 2020). In this context, subjective norms made a weak and insignificant contribution to entrepreneurial intention. However, this finding contrasts with other studies (Anwar et al., 2021; Choukir et al., 2019; Lai & To, 2020; Ridha & Burhanuddin, 2017). The study's results suggest that internal factors have a more pronounced impact on students' entrepreneurial intentions than external influences (Yaghoubi Farani et al., 2017).

Surprisingly, the study found that digital literacy (DL) did not significantly impact DEI, indicating that a student's DL level does not determine their choice to pursue digital

entrepreneurship. That contradicts prior research that showed a positive connection between entrepreneurship intention and digital literacy (Bayrakdaroglu & Bayrakdaroglu, 2017; Mudasih et al., 2021). The explanation might be that more than half of Jordanians aged 24 or younger have grown up amidst a significant technological revolution, making them highly connected, educated, and globally aware, positioning them as digitally adept (Innovative Jordan, 2017). This generation, which includes university students often seen as digital natives, may already possess solid technological skills (Kulikowski, Przytuła, Sułkowski, & Rašticová, 2022). However, these findings do not imply that DL is irrelevant to digital entrepreneurship. Although it may not directly influence the intention to engage in digital entrepreneurship, it can still be crucial in helping individuals effectively navigate and leverage digital resources once they decide to pursue entrepreneurial activities (Suparno et al., 2020).

While the university plays a crucial role in promoting students' entrepreneurial endeavors, the study revealed that perceived university support did not significantly impact digital entrepreneurship intention, consistent with previous research (Hassan, 2020; Shen et al., 2017; Yusoff et al., 2016). The results imply that students' interactions with university support services have not fueled their interest in starting a business. Consequently, entrepreneurship support in Jordanian universities may not effectively guide students toward entrepreneurship as a viable career option, nor does it equip them with the necessary skills or assistance for the initial stages of their entrepreneurial journey.

Previous studies have shown that personality traits can affect entrepreneurial actions and intentions, either directly or indirectly (Biswas & Verma, 2021; Munir et al., 2019). In compliance with TPB presented here, personality traits indirectly and positively impact DEI through motivational factors like ATE and PBC (Liñán & Chen, 2009).

This study examined four personality traits. The first trait, Risk-taking propensity (RT), reflects the inclination to take risks in entrepreneurship. The results indicated that RT directly and significantly impacted ATE and PBC. That implies that students in the study were highly willing to take risks, seeing themselves as more capable of engaging in uncertain entrepreneurial activities. These findings are consistent with earlier research (Anwar et al., 2021; Karimi et al., 2017). Additionally, RT had the most substantial indirect effect on Digital Entrepreneurial Intention (Anwar et al., 2021; Karimi et al., 2017).

The second personality trait is Locus of control (LC), which reflects an individual's belief in their ability to control their destiny. The results showed that LC did not significantly affect ATE, aligning with the findings of (Younis et al., 2020). However, it positively and

significantly impacted PBC (Karimi et al., 2017; Shimoli et al., 2020). Students in the study exhibited a high locus of control on perceived behavioral control, indicating they feel empowered and capable of influencing their life events. That suggests they are more likely to take initiative, set ambitious goals, and persist in facing challenges (Munir et al., 2019).

Conversely, Innovativeness positively and significantly influenced the ATE and PBC. That aligns with the idea that individuals with high levels of Innovativeness are more inclined to participate in entrepreneurial activities, consistent with previous studies' findings (Ahmed et al., 2021; Biswas & Verma, 2021).

The fourth personality trait, the Need for Achievement (NA), reflects the desire to excel, accomplish challenging tasks, and outperform others. The study's results revealed that NA positively impacted ATE, similar to the findings of (Karimi et al., 2017; Younis et al., 2020). That suggests that students with a high NA often find entrepreneurship attractive. However, the Need for achievement negatively affected perceived behavioral control, indicating that students with a high need for achievement may not perceive entrepreneurship as easy. This finding aligns with a previous study (Shimoli et al., 2020).

This study provides valuable insights for academia and policymakers, offering a more nuanced understanding of the factors influencing digital entrepreneurial intention among Jordanian students. The theoretical insights and policy implications converge to lay the groundwork for a dynamic, supportive, and transformative educational environment. This environment aims to nurture the next generation of digital entrepreneurs, contributing to innovation and economic growth within the nation.

5.2 Recommendations

The government of Jordan has actively promoted digital entrepreneurship through various initiatives, such as establishing technology parks, incubators, accelerators, and the Ministry for Digital Economy and Entrepreneurship to create a favorable environment for digital entrepreneurs. Despite these attempts, Jordanian universities have slowly embraced and incorporated digital entrepreneurship into their educational programs and offerings. Therefore, several recommendations are proposed.

1. Integrate digital entrepreneurship into universities' educational programs to better prepare students for the digital entrepreneurship landscape.

2. Add skill development programs within universities to increase students' confidence in their abilities and provide the necessary skills and resources for succeeding in digital entrepreneurship.
3. Provide hands-on guidance, mentorship, and resources that empower students to actualize their digital entrepreneurial aspirations.
4. University support programs should address students' needs and challenges when pursuing entrepreneurial endeavors. That involves reevaluating existing support mechanisms to ensure they effectively inform and assist students in establishing themselves during the early stages of their entrepreneurial careers.
5. Promoting a positive entrepreneurial image is essential, achieved through awareness campaigns and programs that showcase entrepreneurship as an attractive and rewarding career choice.
6. Highlighting the impact of personality traits on digital entrepreneurial intention underscores the need for specific personality development programs. Such programs can address these traits, fostering the development of well-rounded, self-assured, and innovative digital entrepreneurs equipped to navigate the complexities of the modern business landscape.

5.3 Research Limitations

Despite the valuable insights gained from this study, several limitations should be acknowledged:

First, the study focused solely on undergraduate business students in Jordan, limiting the generalizability of the findings to other contexts or student populations. Future research could consider including students from different disciplines, educational levels, and regions to provide a more comprehensive understanding of the intention of digital entrepreneurship. Second, the study primarily relied on self-reported data obtained through a questionnaire, introducing the potential for response and social desirability biases. Participants might have provided answers they perceived as socially acceptable rather than reflecting their genuine attitudes and intentions.

Third, the study's use of a cross-sectional approach makes it challenging to establish causal relationships between the factors investigated and digital entrepreneurship intention. Longitudinal studies could offer more robust evidence of causality and provide insights into how these relationships evolve. Fourthly, employing a quota sampling method may introduce

bias during participant selection, leading to a sample that may only partly mirror the wider population of the students in Jordan.

Additionally, the study's dependence on a modest sample size of 399 students may impact the analysis's statistical power, limiting the results' accuracy and reliability. Hence, prudence is recommended when explaining and implementing the study's findings, and more extensive and varied sample sizes should be considered in future research to validate and expand on the current findings. Moreover, the study's examination of personality traits covers only a subset of potential individual characteristics influencing entrepreneurial intentions. Future research could explore a broader array of personality traits and their interconnections.

Lastly, further research could examine how universities could better support the development of the students' personality traits by considering their interactions with perceived support factors in influencing entrepreneurial attitudes and intentions. By acknowledging these limitations, the study contributes valuable insights to entrepreneurial intention research, providing a foundation for future studies to build upon and refine our understanding of the factors shaping digital entrepreneurship intentions among university students.

6. MAIN CONCLUSIONS AND NOVEL FINDINGS OF THE DISSERTATION

The dissertation has yielded significant conclusions and novel findings that contribute to understanding digital entrepreneurship intentions among university students in Jordan.

1. While previous studies examined internal psychological factors (e.g., locus of control) and external environmental factors (e.g., university support) separately, this study simultaneously focused on internal and external factors.
2. Subjective Norms exhibit a weak and insignificant contribution to entrepreneurial intention among Jordanian students, indicating that internal factors influence students' entrepreneurial intentions more than external ones.
3. Although digital literacy does not directly impact digital entrepreneurship intention, it was found to be a crucial enabling factor. While it may not influence the decision to pursue digital entrepreneurship, it plays a significant role in equipping individuals to navigate and leverage digital resources effectively once they engage in entrepreneurial activities.
4. Contrary to conventional belief, perceived university support showed no tangible effect on DEI among Jordanian students.
5. The discovery of the limited effect of university support on DEI highlights the need for a more robust, tailored, and proactive approach.
6. Personality traits (Risk-taking propensity, Locus of control, Innovativeness, and Need for achievement) emerged as a strong influencer, directly impacting attitudes toward entrepreneurship and perceived behavioral control. They also indirectly and positively impact digital entrepreneurial intention through motivational factors like attitudes toward entrepreneurship and perceived behavioral control.

This study is a unique and pioneering exploration of digital entrepreneurship intentions among university students in Jordan. While various studies have investigated entrepreneurial intentions globally, there is a notable dearth of research explicitly focusing on the context of Jordan.

These findings underscore the complex interplay of internal psychological factors, external factors, and digital literacy in shaping entrepreneurial intentions among Jordanian university students.

SUMMARY

The study addressed the literature gaps by investigating how internal and external factors and digital literacy impact the students' intention to become digital entrepreneurs. In addition, the study examined the intricate interplay between students' personality traits, specifically their impact on shaping attitudes toward entrepreneurship and perceived behavioral control within the context of Jordan.

The final sample, meticulously chosen, comprised 399 undergraduate business students from eight universities in Jordan. A non-probability sampling method, specifically quota sampling, was employed, ensuring a diverse and representative sample. The study analyzed the data using two pieces of software: IBM SPSS (version 21) software to clean the data, find the sample frequency distribution, and conduct the descriptive analysis, and R 3.4.4 software to examine the relationships between the study's constructs (Employing the Partial Least Squares Structural Equation Modeling—PLS-SEM).

The findings demonstrate that the factors under investigation significantly impact digital entrepreneurship intention (DEI). More specifically, attitudes toward entrepreneurship and perceived behavioral control positively and significantly impacted DEI. On the other hand, subjective norms had no noticeable impact on DEI. Interestingly, contrary to prior research, digital literacy did not show a significant impact on DEI.

Surprisingly, the perceived influence of university support on Digital Entrepreneurial Intention appears insignificant among Jordanian students. Moreover, the intricate interplay of personality traits—risk-taking propensity, locus of control, innovativeness, and need for achievement—manifests varied effects on Attitude Toward Entrepreneurship and Perceived Behavioral Control, accentuating their indirect impact on DEI. In conclusion, this dissertation advances our understanding of the factors influencing digital entrepreneurship intentions in the Jordanian context, offering valuable insights for policymakers, educators, and support organizations aiming to nurture a vibrant culture of digital entrepreneurship among university students.

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ANNEXES

Questionnaire English Version

The questionnaire was divided into eight sections:

Section One: Demographic characteristics, personal and family background. (Questions 1-10).

Section Two: Digital Entrepreneurial Intention (Questions 11-15)

Section Three: Attitudes Towards Entrepreneurship (Questions 16-20)

Section Four: Subjective Norms (Questions 21-23)

Section Five: Perceived Behavioral Control (Questions 24-27)

Section Six: Digital Literacy (Questions 28-36)

Section Seven: Perceived University Support: I- Perceived educational support (Questions 37-42), II- Perceived concept development support (Questions 43-46), and III- Perceived business development support (Questions 47-49).

Section Eight: Personality Traits: (Risk-Taking Propensity (Questions 50-53), Locus of Control (Questions 54-57), Innovativeness (Questions 58-61), Need for Achievement (Questions 62-66).

Construct/Variable	Questionnaire Questions	Empirical Support
Digital Entrepreneurial Intention (DEI). Indicate your level of agreement with the following sentences from 1 (total disagreement) to 5 (total agreement).	DEI 1 – It is very likely that I will start an online venture one day DEI 2 - I am ready to do anything to be a digital entrepreneur. DEI 3 - I have serious doubts whether I will ever start an digital business DEI 4 – I have a firm intention to start a digital company someday. DEI 5 - My professional goal is to become a digital entrepreneur.	(Liñán & Chen, 2009)
Attitude Towards Entrepreneurship (ATE)	ATE1- Being a digital entrepreneur implies more advantages than disadvantages to me ATE2- A career as a digital entrepreneur is attractive for me. ATE3 - If I had the opportunity and resources, I'd like to start a digital firm	(Liñán & Chen, 2009)

	<p>ATE4 - Being a digital entrepreneur would entail great satisfactions for me</p> <p>ATE5 - Among various options, I would rather be a digital entrepreneur</p>	
Subjective Norms (SN)	<p>If you decided to create a digital firm, would people in your close environment approve of that decision? Indicate from 1 (total disapproval) to 5 (total approval). a- Your close family. b- Your friends 13.c- Your peers</p>	(Liñán & Chen, 2009)
Perceived Behavioral Control (PBC)	<p>PBC 1- I know the necessary practical details to start a digital firm</p> <p>PBC 2- I can control the creation process of a new digital firm</p> <p>PBC 3- To start a digital firm and keep it working would be easy for me</p> <p>PBC 4- If I tried to start a digital firm, I would have a high probability of succeeding</p>	(Liñán & Chen, 2009)
<p>Digital Literacy (DL)</p> <p>Indicate your level of agreement with the following sentences from 1 (total disagreement) to 5 (total agreement).</p>	<p>DL1- I know how to solve my own technical problems.</p> <p>DL2- I know about a lot of different technologies.</p> <p>DL3- I keep up with important new technologies.</p> <p>DL4- I can learn new technologies easily.</p> <p>DL5- I have the technical skills I need to use ICT for learning and to create artefacts (e.g. presentations) that demonstrate my understanding of what I have learnt.</p> <p>DL6- I am confident with my search and evaluate skills in regard to obtaining information from the Web.</p> <p>DL7- I am familiar with issues related to web-based activities e.g. cyber safety, search issues, plagiarism.</p>	(Wan Ng, 2012)

	<p>DL8- ICT enables me to collaborate better with my peers on project work and other learning activities.</p> <p>DL9- I frequently obtain help with my university work from my friends over the Internet e.g. through Skype, Facebook, Blogs</p>	
<p>Perceived University Support (PUS)</p> <p>Indicate your level of agreement with the following sentences from 1 (total disagreement) to 5 (total agreement).</p>	<p>I) Perceived Educational Support (PES)</p> <p>PES 1. My university offers elective courses on entrepreneurship.</p> <p>PES 2. My university offers project work focused on entrepreneurship.</p> <p>PES 3. My university offers internship focused on entrepreneurship.</p> <p>PES 4. My university offers a bachelor or master study on entrepreneurship</p> <p>PES 5. My university arranges conferences /workshops on entrepreneurship.</p> <p>PES 6. My university brings entrepreneurial students in contact with each other.</p> <p>II) Perceived Concept Development Support (PCD)</p> <p>PCD 1. My university creates awareness of entrepreneurship as a possible career choice.</p> <p>PCD 2. My university motivates students to start a new business</p> <p>PCD 3. My university provides students with ideas to start a new business from.</p> <p>PCD 4. My university provides students with the knowledge needed to start a new business.</p>	<p>(Kraaijenbrink et al., 2010)</p>

	<p>III) Perceived Business Development Support (PBD)</p> <p>PBD 1. My university provide students with the financial means to start a new business.</p> <p>PBD 2. My university use its reputation to support students that start a new business.</p> <p>PBD 3. My university serve as a lead customer of students that start a new business.</p>	
<p>Personality Traits: Risk-taking propensity (RTP)</p> <p>Indicate your level of agreement with the following statements from 1 (total disagreement) to 5 (total agreement).</p>	<p>RTP 1- I am willing to take higher risks for higher returns</p> <p>RTP 2- I'm looking for new experiences even if their results are risky</p> <p>RTP 3- The risk of failure is not a main concern for me.</p> <p>RTP 4- I prefer a business that offers high returns with high risks over a secured job with a steady salary</p>	(Anwar et al., 2021)
<p>Personality Traits: Locus of Control (LC)</p>	<p>LC 1- Whether I reach a goal or not mainly depends on me and my behavior.</p> <p>LC 2- When I make a plan I am sure that the planned will become reality.</p> <p>LC 3- I myself can determine very much of what's going on in my life.</p> <p>LC 4- If I get what I want it is the result of my endeavor and personal commitment.</p>	(Zellweger et al., 2011)
<p>Personality Traits: Innovativeness (I):</p>	<p>I 1- I often surprise people with novel ideas</p> <p>I 2- I prefer to work in a field that requires excellent creative thinking.</p> <p>I 3- People often ask for my help in creative activities.</p> <p>I 4- Original ideas always occur to me</p>	(Jackson, 1976)

Personality Traits: Need for Achievement (NA)	NA1 - My desire to be successful in my work is very high. NA2 - I master whatever I am doing. NA3 – I would like to do the best I can at the task. NA4 - I give great importance to being more successful than others on a task. NA5 - I aim to reach targets above certain standards.	(Zovko et al., 2020)
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Note. The table was created by the author, Mohammad Younis Al Khalaileh, 2023.

Questionnaire Arabic Version

العوامل التي تؤثر على نية طلاب الجامعات الأردنية ليصبحوا رواد أعمال رقميين.

عزيزي الطالب /عزيزتي الطالبة:

إن هذه الدراسة هي جزء مهم لإنهاء أطروحة الدكتوراه في إدارة الأعمال في جامعة دبيرستن، هنجاريا، وتهدف هذه الإستبانة إلى دراسة العوامل التي تؤثر على نية الطالب ليصبح ريادي أعمال رقمي (الاستعداد لامتلاك مشروع تجاري على الانترنت).

كُنْ على يقين تام أن رأيك مهم جداً وأن مشاركتك بالغة القيمة وسُتُحدثُ فرقاً بالنسبة للبحث. علماً بأن المعلومات التي ستدلي بها ستُعامل بسرية تامة (لا يتوجب ادخال اي اسم او اية معلومات شخصية تشير اليك للمشاركة في الاستبانة) و لن تستخدم المعلومات المقدمة إلا لأغراض البحث العلمي فقط ولن يتم مشاركتها مع أي طرف آخر.

نود التأكيد على انه لا توجدُ اجابةً صحيحةً واخرى خاطئةً ، وأن لك مُطلقَ الحرية في اختيار الاجابة التي تراها متناسبةً مع رأيك واعتقادك.

ان هذه الإستبانة اختيارية ومن المتوقع أن تستغرق 10 دقائق لتعبئتها كحد اقصى.

"شاكـرين تعاونك ومقدرًا اهتمامك ووقتـك"

المقصود بزيادة الأعمال الرقمية في هذه الدراسة: إنشاء مشروع تجاري على الإنترنت يهدف إلى بيع السلع/الخدمات الرقمية، حيث تُحدث الأنشطة الأساسية للمشروع مثل التجارة والتواصل بين المستهلكين والموردين عبر الإنترنت فقط.

يُساعدني تلقي أي استفسارات أو تعليقات عن طريق البريد الإلكتروني

malkhalaileh3@gmail.com

محمد الخلايلة

باحث دكتوراة في مجال ريادة الأعمال الرقمية

القسم الأول: بيانات الخلفية الشخصية والاجتماعية

- 1- العمر: 20-17 سنة 24-21 سنة 25 سنة وأكثر
- 2- الجنس: ذكر أنثى
- 3- الحالة الاجتماعية: أعزب متزوج مطلق غير ذلك
- 4- المستوى الدراسي: بكالوريوس ماجستير دكتوراة
- 5- الجامعة: جامعة فيلادلفيا جامعة الأميرة سمية جامعة البتراء
- الجامعة الأردنية جامعة الشرق الأوسط جامعة آل البيت
- جامعة اليرموك جامعة عمان الأهلية
- 6- الكلية: إدارة الأعمال والاقتصاد غير ذلك
- 7- هل لديك وظيفة حالياً؟ نعم لا
- 8- هل قمتَ من قبل بعمل حرّ لنفسك أو كنت صاحب مشروع خاص؟ نعم لا
- 9- هل يوجد أحد من عائلتك يمتلك مشروع خاص؟ نعم لا

10- هل تعلمت مادة أو حضرت دورة تدريبية حول ريادة الأعمال من قبل؟ نعم لا

القسم الثاني: النية الريادية الرقمية (النية لإنشاء شركة تجارية على الإنترنت)

إلى أي مدى تتوافق مع العبارات التالية بما يخص استعدادك لإنشاء مشروعك الخاص على الإنترنت؟

الرقم	العبارات	المستوى				
		1	2	3	4	5
		غير موافق بشدة	غير موافق	محايد	موافق	موافق بشدة
11	من المحتمل جداً أن أبدأ مشروعاً على الإنترنت في يوم من الأيام					
12	إنني على استعداد لبذل كل جهدٍ ممكن لأصبح ريادي أعمال رقمي					
13	لديّ شكوك جدية فيما إذا كنت سأبدأ مشروعاً على الإنترنت					
14	أنا مُصمّم على بدء مشروع رقمي في المستقبل					
15	هدفي المهني هو أن أكون ريادي أعمال رقمي					

القسم الثالث: التوجُّه النفسي نحو السلوك الريادي

إلى أي مدى تتوافق مع العبارات التالية بما يخص تقييمك لكي تصبح ريادي أعمال رقمي؟

الرقم	العبارات	المستوى				
		1	2	3	4	5
		غير موافق بشدة	غير موافق	محايد	موافق	موافق بشدة
16	إن امتلاك مشروعٍ خاص على الإنترنت سوف يحقق لي مزايا أكثر من العيوب					
17	تُعتبر فكرة أن أكون ريادي أعمال رقمي جذابة					
18	إذا أُتيحت لي الفرصة وتوفرت لدي الموارد، سأقوم بإنشاء شركة على الإنترنت					
19	سأكون راضٍ كثيراً إذا أصبحت ريادي أعمال رقمي					
20	من بين كل الخيارات المختلفة، فإنّي أفضّل أن أكون ريادي أعمال رقمي					

القسم الرابع: الأعراف الإجتماعية للسلوك الريادي

إذا قَرَّرتَ إنشاء شركتك الخاصة على الإنترنت، ما مدى رضى المقربون منك على قرارك هذا؟

المستوى					الرقم	العبارات
1	2	3	4	5		
غير راضٍ بشدة	غير راضٍ	محايد	راضٍ	راضٍ بشدة	21	أفراد عائلتك المقربين
					22	أصدقاؤك
					23	زملاؤك في الجامعة

القسم الخامس: التحكم السلوكي المُدرَك

إلى أي مدى تتوافق مع العبارات التالية بما يخص صعوبة أو سهولة تصورك لكي تصبح ريادي أعمال رقمي؟

المستوى					الرقم	العبارات
1	2	3	4	5		
غير موافق بشدة	غير موافق	محايد	موافق	موافق بشدة	24	أنا على دراية تامة بالخطوات العملية اللازمة للبدء بإنشاء شركة على الإنترنت
					25	يُمكنني إنشاء شركة رقمية جديدة وإبقائها تحت السيطرة
					26	إن عملية إنشاء شركة على الإنترنت والحفاظ على استمراريتها، تُعتبر أمراً سهلاً بالنسبة لي
					27	إذا حاولتُ إنشاء شركة رقمية، فسيكون لدي احتمال كبير للنجاح

القسم السادس: المعرفة الرقمية

إلى أي مدى تتوافق مع العبارات التالية بما يخص إمامك ومعرفتك بالمهارات الرقمية؟

المستوى					الرقم	العبارات
1	2	3	4	5		
غير موافق بشدة	غير موافق	محايد	موافق	موافق بشدة		

28	إذا واجهتني مشكلة تقنية، سأقوم بنفسي بحلها
29	لدي المعرفة الكافية عن التكنولوجيات المختلفة
30	أنا أتابع باستمرار التكنولوجيات الجديدة الهامة
31	يُمكنني تعلم التكنولوجيات الجديدة بكل سهولة
32	لدي المهارات الفنية لاستخدام التكنولوجيا للتعلم وعرض المادة العلمية بشكل تفاعلي كإنشاء العروض التقديمية
33	لدي ثقة كبيرة بقدراتي في البحث عن المعلومات على الإنترنت وتقييمها
34	أنا على دراية بالمسائل المتعلقة بالأنشطة الإلكترونية مثل الأمن الإلكتروني، ومشاكل البحث، والسرقة الفكرية
35	يزيد استخدام التكنولوجيات المختلفة من فرص التعاون مع زملائي في إنجاز الأنشطة التعليمية
36	غالبًا ما أستخدم مواقع التواصل (مثل سكايب، فيسبوك،...) لطلب مساعدة زملائي للعمل على أي مشروع دراسي

القسم السابع: الدعم الجامعي لريادة الأعمال

إلى أي مدى تتوافق مع العبارات التالية بما يخص تقييمك لدور الجامعة في دعم ريادة الأعمال؟

الرقم	العبارات	المستوى				
		1	2	3	4	5
		غير موافق بشدة	غير موافق	محايد	موافق	موافق بشدة
37	تُوفّر جامعتي مساقات دراسية اختيارية عن ريادة الأعمال					
38	تُنظّم جامعتي مشاريع أعمال تُركّز على ريادة الأعمال					
39	تُقَدّم جامعتي فترة تدريب عملي في مجال ريادة الأعمال					
40	تُقَدّم جامعتي درجة البكالوريوس أو الماجستير في ريادة الأعمال					
41	تُنظّم جامعتي مؤتمرات وحلقات تدريبية حول ريادة الأعمال					
42	تُسَهّل جامعتي عملية التواصل بين الطلاب المهتمين بريادة الأعمال					
43	تعمل جامعتي على نشر الوعي بريادة الأعمال كخيار مهني محتمل					
44	تقوم جامعتي بتشجيعي على إنشاء مشروع خاص					

45	تُرَوِّد جامعتي الطلاب بأفكار لمشاريع جديدة				
46	توفّر لي جامعتي المعرفة اللازمة للبدء بإنشاء مشروع خاص				
47	تقوم جامعتي بتوفير الموارد المالية اللازمة لِذَعْم الطلاب الذين يبدؤون عملاً تجاريًا جديدًا				
48	تستخدم جامعتي سمعتها وشهرتها لدعم الطلاب الذين يبدؤون مشروعًا جديدًا				
49	تعمل جامعتي كعميل رئيسي للطلاب الذين يبدؤون نشاطًا تجاريًا جديدًا				

القسم الثامن والأخير: السمات الشخصية

إلى أي مدى تتوافق مع العبارات التالية بما يخص سماتك الشخصية؟

الرقم	العبارات	المستوى				
		1	2	3	4	5
		غير موافق بشدة	غير موافق	محايد	موافق	موافق بشدة
50	للحصول على عوائد أكبر، أنا على استعداد لِتَحْمُل مخاطر أكبر					
51	أنا أبحث عن تجارب جديدة حتى لو كانت نتائجها محفوفة بالمخاطر					
52	الخوف من الفشل ليس مصدر قلق رئيسي بالنسبة لي					
53	أنا أَفْضِل الأعمال ذات الدخل العالي والمخاطر الكبيرة على وظيفة مضمونة و براتب ثابت					
54	إنَّ تَحْقِيقَ هدفٍ ما أو عدم تحقيقه، يَعتَمِد بشكل رئيسي على تصرفاتي					
55	عندما أقوم بوضع خطة ما، فإنني أحرص على تنفيذها لِتُصبح حقيقة واقعة					
56	أستطيع بنفسني تحديد ما سيحدث في حياتي					
57	إذا حصلت على ما أريد، فهذا ناتج عن جهودي والتزامي الفردي					
58	في كثير من الأحيان، أتوصّل إلى أفكار جديدة تُفاجئ من هم حولي					
59	أنا أَفْضِل العمل في مجال يتطلب تفكير ابداعي مُتميّز					
60	كثيرًا ما أساعد من هم حولي في القيام بالأنشطة التي تحتاج إلى إبتكار					
61	كثيرا ما تأتيني أفكار إبداعية جديدة					

62	رغبتي في أن أكون ناجحًا في عملي عالية جدًا
63	أنا أحرص دائما على الإتقان في عملي
64	أبدلُ فُصارى جهدي في القيام بالمهام الموكلة الي
65	أعطي أهمية كبرى لأكون أكثر تفوقاً في عملي من الآخرين
66	أنا أسعى دائما للوصول لأهدافي بأفضل المعايير

نهاية الإستبيان

أنا أقدر بصدق وقتك وتعاونك. يرجى التأكد من أنك لم تُفوّت أي أسئلة عن طريق الصدفة.
شكراً جزيلاً لك!

DECLARATION

I, the undersigned **Mohammad Younis Mohammad Alkhalaileh**, date of birth: April 27th, 1987, declare under penalty of perjury and certify with my signature that the dissertation I submitted in order to obtain doctoral (PhD) degree is entirely my own work.

Furthermore, I declare the following:

- I examined the code of the Károly Ihrig Doctoral School of Management and Business and I acknowledge the points laid down in the code as mandatory.
- I handled the technical literature sources used in my dissertation fairly and I conformed to the provisions and stipulations related to the dissertation.
- I indicated the original source of other authors' unpublished thoughts and data in the references section in a complete and correct way, considering the prevailing copyright protection rules.
- No dissertation which is fully or partly identical to the present dissertation was submitted to any other university or doctoral school for the purpose of obtaining a PhD degree.

Debrecen, December 2023.

Mohammad Younis Mohammad Alkhalaileh

[Signature]



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