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Boosting Digital Entrepreneurial Career Intention of Higher Education Students from the BBA Perspectives

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Abstract

This study aimed to develop a causal relationship model for the antecedents that boosted digital entrepreneurial career intention among BBA students in Thailand. Quantitative research was conducted using a self-administered questionnaire with validity from 0.67 to 1.00 and reliability 0.760 to 0.895. The study sample of 400 business management students was determined according to the sample size criterion in the structural equation model (SEM) analysis of Hair et al. (2014) and selected by nonprobability and purposive random sampling. The collected data were analysed for demographic information by descriptive statistics and partial least squares structural equation modeling (PLS-SEM) was used to test and validate the hypotheses. Findings revealed that conscientiousness through intrinsic motivation to become an entrepreneur was the most influential antecedent for digital entrepreneurial career intention. Implications of this study are significant for educational institutions, business incubators and other stakeholders. Areas for future research are also highlighted.

Keywords: Digital Entrepreneurial Career Intention; Higher Education; BBA Student

Introduction

Entrepreneurs are of great importance in today's globalised and knowledge-based economy (Mok & Lee, 2003). The surge of globalisation has spurred fierce rivalry, sparking innovation and entrepreneurial fervour. Thailand is rapidly modernising and experiencing unprecedented levels of political unpredictability, technological innovation and social change. In this scenario, entrepreneurial

education is becoming increasingly important to prepare citizens to deal with the effects of globalisation and the accompanying shifts in education and society (Mei et al., 2020).

Schumpeter (1976) defined entrepreneurship as "the market launch of a technological or organisational novelty, not only its creation". As a result, economic prosperity is inextricably linked to people's power to innovate. Schumpeter advocated the entrepreneur as the arbitrator of economic growth by causing "creative destruction". The word 'entrepreneur' originates from the French verb, entrepredre, meaning 'to do something' or to 'undertake'. Entrepreneurs leverage a combination of abilities at a certain time, location and market to achieve something new or in a novel way (Bruyat & Julien, 2001). Entrepreneurs, particularly micro, small and medium-sized enterprises (MSMEs) are significantly responsible for driving economic and social progress in Thailand (Bosma et al., 2011). Government data in 2020 recorded the number of MSMEs in Thailand as 3,134,442, accounting for 0.95% of all companies (The Office of SMEs Promotion, 2021). In 2020, MSMEs created 12,714,916 jobs, or 71.70% of all jobs in Thailand (Ibid, 2021). Moreover, Thai MSMEs created THB 5.38 trillion in GDP, or 34.23% of the country's revenue. However, this decreased by 9.1%, in the first quarter of 2020 due to the COVID-19 pandemic (Ibid, 2021). Entrepreneurs have received numerous incentives through government policies due to their importance to the Thai economy. The Thailand 4.0 policy aims to transform the nation into a value-based economy, with removal from the long-standing OEM status (Yoo et al., 2012).

Recently, the spread of digital technology has enabled fast product and service creation. The terms 'digitisation' and 'digital innovation' are commonly used to describe this process. Digital innovation products and services are reimagined via the use of digital tools. Digital entrepreneurs who use digital technology as the principal means of producing and delivering service offerings have emerged as a result of this shift (Kraus et al., 2019; Nambisan, 2017). Kraus et al. (2019) viewed digital entrepreneurship as a new subfield of more traditional forms and important in startup business models (von Briel et al., 2018; Zaheer et al., 2019). This subfield uses an explicit technology dimension by highlighting how entrepreneurial companies incorporate disruptive technology into products to gain a competitive advantage by using technology to reduce transactional costs and deploy products to fill market gaps (Ratinho et al., 2015). Digital entrepreneurs are pioneers who take risks, seek out investors, create and carry out strategies and deal with uncertainty. Therefore, entrepreneurs have specific personality qualities and belong to specific demographic groupings (Chae & Goh, 2020). Digital

entrepreneurs have also been defined based on their potential to interact effectively with specific customer sectors, particularly when offering their goods and services through online channels (McCollough et al., 2016). During higher education, the following skills must be acquired to encourage digital entrepreneurship (a) clear and visual communication, (b) teamwork and connection and (c) digital communication (Jardim, 2021).

Previous research indicated that digital entrepreneurial drive is influenced by an individual's personality and tenacity (Dan et al., 2021). The Big Five personality model is the most widely accepted and frequently used to describe unique personalities as the five primary personality traits: agreeableness, openness, extraversion, neuroticism and conscientiousness (Abdellaoui et al., 2019; Dholariya & Jansari, 2019; Teh et al., 2021). The Big Five personality model has been shown to have a good correlation with a wide variety of human actions (Keefer et al., 2018). For example, an entrepreneurial personality has a strong desire to innovate change, is open to taking risks and shows persistence when seeking new business prospects. Previous research indicated that a person's desire to become an entrepreneur was most influenced by personality traits (Leutner et al., 2014). Determining personality traits that influence an individual's entrepreneurial goals is a common goal of many research projects. The five–factor model of Costa and McCrae (1992) is frequently used in personality research (Brandstätter, 2011; Envick & Langford, 2000), with extroversion, agreeableness, conscientiousness, emotional stability and openness to new things all identified as traits. Zhao et al. (2005) demonstrated that conscientiousness, openness to new things, emotional stability and agreeableness were associated with entrepreneurial intention. Motivation is another well–known personality trait that is frequently employed for predicting entrepreneurial behaviour. Motivation is a psychologically constructed force that plays a significant role in an individual's capacity to mobilise in pursuit of goals (Estay et al., 2013). Osiyevskyy and Dewald (2015) suggested that the entrepreneurial process entailed a purpose as well as a sequence of activities and was inextricably linked with a person's drive to explore and capitalise on recognised market opportunities. Aside from personal attributes, intrinsic and extrinsic motivation are vital causal variables of entrepreneurial intention. Kautonen et al. (2013) and Shirokova et al. (2016) highlighted the effects of intrinsic and extrinsic motivation on increasing entrepreneurial intention and participation in activities that were associated with launching one's own business. They suggested that personality and motivation positively relate to the desire to be a business owner. This association might

be due to the link between personal attributes and the capacity to identify new opportunities, start a new business and obtain investment (Vasalampi et al., 2014).

However, limited studies have assessed the impacts of personality traits and motivation factors on digital entrepreneurial career intention in Thailand, especially among Bachelor of Business Administration (BBA) students. Increasing the awareness of psychological characteristics of the young adult population is critical because they represent the driving force that will propel the country forward. Statistics indicate that only a few Thai business management students desire to become entrepreneurs after graduation (Planning Division, 2020) although their institutions provide programmes and activities to prepare them with the necessary skills for launching businesses. Therefore, this study fills a research lacuna by developing a causal relationship model for the antecedents of digital entrepreneurial career intention among BBA students in Thailand. The findings will be beneficial to relevant government authorities and can be used to improve and promote digital entrepreneurs with the required personality, motivation and aspiration to become business owners.

Research Objective

To develop a causal relationship model for the antecedents of digital entrepreneurial career intention among BBA students in Thailand.

Research Hypotheses

The following research hypotheses were proposed.

Hypothesis 1 (H1). Extroversion is directly and positively related to intrinsic motivation to become an entrepreneur.

Hypothesis 2 (H2). Extroversion is directly and positively related to extrinsic motivation to become an entrepreneur.

Hypothesis 3 (H3). Conscientiousness is directly and positively related to intrinsic motivation to become an entrepreneur.

Hypothesis 4 (H4). Conscientiousness is directly and positively related to extrinsic motivation to become an entrepreneur.

Hypothesis 5 (H5). Openness to experience is directly and positively related to intrinsic motivation to become an entrepreneur.

Hypothesis 6 (H6). Agreeableness is directly and positively related to intrinsic motivation to become an entrepreneur.

Hypothesis 7 (H7). Emotional stability is directly and positively related to extrinsic motivation to become an entrepreneur.

Hypothesis 8 (H8). Intrinsic motivation to become an entrepreneur is directly and positively related to extrinsic motivation to become an entrepreneur.

Hypothesis 9 (H9). Intrinsic motivation to become an entrepreneur is directly and positively related to digital entrepreneurial career intention.

Hypothesis 10 (H10). Extrinsic motivation to become an entrepreneur is directly and positively related to digital entrepreneurial career intention.

Conceptual Framework

From the literature review, a conceptual framework was presented based on personality traits, motivation factors and digital entrepreneurial career intention, as shown in Figure 1.

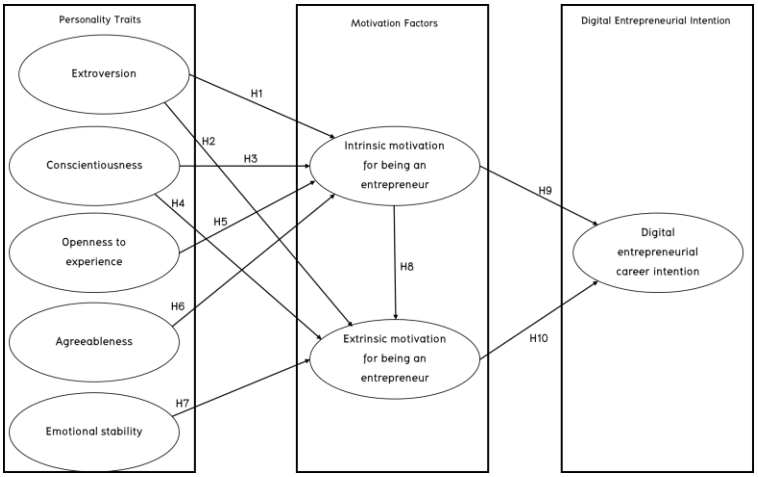

Figure 1 Conceptual framework developed by the researcher

Research Scope

Content

A causal relationship model was developed for the antecedents of digital entrepreneurial career intention among Thai BBA students. Descriptive statistics were used to characterise the respondents' demographic information, while partial least squares structural equation modeling (PLS–SEM) was used to investigate correlations between the causative elements impacting the digital entrepreneurial goals of the participants.

Population

Primary data were collected using a questionnaire distributed to Thai BBA students in the Phetchaburi and Prachuap Khiri Khan areas during September and October 2020. The Bachelor of Business Administration (BBA) degree is awarded by colleges and universities after completion of undergraduate study covering the fundamentals of business management. The BBA syllabus includes advanced courses in accounting, economics, finance, management, marketing, strategic management and supply chain management.

Research Method

This research used a quantitative– driven approach that focused on numerical data to measure every concept or variable as a number, which was then used to confirm the findings and conclusions.

Population Sample

This quantitative research study used Thai BBA students as the sample group. Several criteria were used to determine the sample size. Hair et al. (2014) recommended the appropriate sample size as at least five to ten times greater than the number of measured variables and at least 100– 200 to be able to utilise partial least squares structural equation modeling (PLS–SEM)(Hair et al., 2014; Sarstedt et al., 2014). The questionnaire contained 27 items. Therefore, the least allowable sample size was 270. In this study, the sample size was set at 400 to eliminate statistical computational challenges imposed by sample size determination (Henseler et al., 2016). Nonprobability sampling and purposive random sampling approaches were used to select the participants.

Questionnaire Design

The questionnaire contained three sections as (1) demographic information comprising six questions, (2) an evaluation of personality characteristics comprising 17 questions based on studies by McCrae et al. (2005), Bozionelos (2004) and Rossberger (2014) and (3) motivation comprising five questions related to the influencing reasons for becoming an entrepreneur, adapted from Wang et al. (2016) and six questions related to digital entrepreneurial career intention, adapted from a study by Srivastava and Misra (2017). All questions in sections (2) and (3) employed a five-point Likert scale.

Questionnaire Validity and Reliability Testing

The questionnaire was validated by 10 trial individuals who analysed the comprehensibility of the questions. Subsequently, three experts used the item-objective congruence (IOC) technique to assess content validity. Following Rovinelli and Hambleton (1977), the lowest required score for congruence between the questionnaire items and the study goals was set at 0.50. The expert assessment showed that all questions met the set of criteria with scores ranging from 0.67 to 1.00. The questionnaire was then piloted on an additional 30 non-study respondents to ascertain Cronbach's alpha coefficient. Hair et al. (2014) suggested that the lowest value required to demonstrate dependability should be 0.70. Results revealed that the eight questionnaire parameters had coefficients ranging from 0.760 to 0.895 that met the criteria.

Data Collection and Analysis

Following these final adjustments, the questionnaire was provided to 400 individuals from September to October 2020. All research subjects consented to participate and remained anonymous. The link and QR code of the online questionnaire were distributed through the institution networks and via personal contact with professors who worked at the institutions of targeted samples. Screening questions were used to distribute the samples in each grade year. If the respondents choose to answer other questions that do not match the conditions set, the system will screen and end the survey immediately. Five hundred questionnaires were sent to students and 403 were returned (80.60%). From these, the 400 most completed questionnaires were selected for data analysis. This number corresponded to the sample size criterion in the (SEM analysis (Hair et al., 2014). The completeness of the answers was verified and data were coded and stored as computer files before processing. Descriptive statistics were used to characterise demographic information, while partial least squares

structural equation modeling (PLS–SEM) was used to investigate correlations between the causative elements impacting the digital entrepreneurial goals of the participants.

Results

Results were summarised as follows:

1. Sample Profiles

Results demonstrated that 78.0% of the 400 participants were female. Most (93.75%) used a smartphone to connect to the internet and 91.25% used the internet more than five times a week. Instagram was the favourite social media platform for 41.75% of the participants, while 54.00% came from a business family and 73.50% were particularly interested in digital business in the communication industry.

2. Research Objective: To develop a causal relationship model for the antecedents of digital entrepreneurial career intention among BBA students in Thailand

Outliers, Multicollinearity and Normality

First, the multivariate outliers were checked out and those with a significance level of more than 0.001 were deleted, following Lynch (2013). Given the single source of the data, both procedural and statistical remedies were applied to avoid potential common method variance (Podsakoff et al., 2012). Variable measurements were placed randomly in different places, such as corporate social responsibility, green human resource management, inclusive leadership and proactive pro–environmental behaviour (Podsakoff et al., 2012). Harman's single factor test was also applied, with results indicating that a single factor explained only 10.709% of the total variance of 39.662%. Since this value was less than 50%, the data did not have a common method variance (Podsakoff and Organ, 1986). The analysis showed that absolute value of skewness in all observed items are ranging from −0.898 to 0.058, which ranging from −2 to 2. The absolute values of kurtosis are ranging from −0.776 to 0.961, which ranging from −2 to 2. Therefore, all observed variables of digital entrepreneurial career intention in this study are basically subject to a normal distribution. Moreover, a structural model meets the criteria of no statistically significant internal associations between forecasted parameters and the VIF values being less than 5.0 (Hair et al., 2014). As can be seen from the Variance inflation factor (VIF) values ranged from 1.379 to 2.277, which confirmed no multicollinearity in the variables, as reported in Table 1.

Table 1 Collinearity diagnosis of the eight variable parameters

Latent variables	1	2	3	4	5	6	7	8
1. Agreeableness							2.228	
2. Conscientiousness					2.122		2.277	
3. Digital entrepreneurial career intention								
4. Emotional stability					1.487			
5. Extrinsic motivation for becoming an entrepreneur			1.916					
6. Extroversion					1.817		1.988	
7. Intrinsic motivation for becoming an entrepreneur			1.916		1.379			
8. Openness to experience							1.626	

Measurement Model

The results of the measurement model are shown in Table 2. All the latent parameters in the model exhibited composite reliability values greater than 0.70 and Cronbach's alpha coefficients greater than 0.70 in the aspects of internal consistency reliability (Hair et al., 2014). Moreover, they all had average variance extracted (AVE) values greater than 0.50, indicating adequate convergent validity amongst manifest parameters under the same latent parameters (Hair et al., 2014). Finally, all manifest parameters in the model had an outer loading coefficient > 0.70, showing their dependability (Hair et al., 2014).

Table 2 Summary of the measurement scales

Latent Variables	Factor Loading	Cronbach's Alpha	Composite Reliability	AVE
Agreeableness				
AGR1: You are kind and gentle with your teachers, parents and friends.	0.818	0.860	0.899	0.641
AGR2: You accept and obey the opinions of others.	0.839			
AGR3: You like to help others willingly.	0.814			

Latent Variables	Factor Loading	Cronbach's Alpha	Composite Reliability	AVE
AGR4: You are patient and flexible at work.	0.778			
AGR5: You get along well with other people.	0.752			
Conscientiousness				
CON1: You are responsible for the tasks that are assigned to you.	0.876	0.770	0.896	0.811
CON2: You are a rationalist, persistent and success oriented.	0.925			
Digital entrepreneurial career intention				
EIDB1: You are ready to put everything into becoming a technology–driven entrepreneur.	0.780			
EIDB2: You are committed to becoming a professional entrepreneur.	0.852			
EIDB3: You will put a lot of effort into starting and building your own online business.	0.847	0.903	0.925	0.674
EIDB4: You have the intention and determination to build an online business in the future.	0.877			
EIDB5: You have a serious idea to build an online business.	0.810			
EIDB6: You will build your own online business if you have the opportunity.	0.754			
Emotional stability				
EMO1: Under pressure, you can well control your emotions.	0.843			
EMO2: You are emotionally stable.	0.852	0.773	0.869	0.689
EMO3: You are a good–hearted and calm person with a good mood.	0.793			
Extrinsic motivation for becoming an entrepreneur				

Latent Variables	Factor Loading	Cronbach's Alpha	Composite Reliability	AVE
EPE1: You expect that you can earn a substantial amount if you succeed in your own business online.	0.903	0.776	0.899	0.817
EPE2: Overall, you think that running your own business online using digital technology is very beneficial and can well serve your future career goals.	0.905			
Extroversion				
EXT1: You are cheerful, talkative and sociable.	0.756	0.801	0.870	0.626
EXT2: You are active and agile.	0.797			
EXT3: You are a determined and hard-working person.	0.814			
EXT4: You can mentor your friends at work or in class.	0.797			
Intrinsic motivation for becoming an entrepreneur				
IPE1: You find it fun to start your own business online using digital technology.	0.875	0.855	0.912	0.776
IPE2: You think that the process of starting your own business online using digital technology is amazing.	0.885			
IPE3: You always have fun whenever you think you must start your own business online using digital technology.	0.881			
Openness to experience				
OPE1: You are always curious and like to learn new things.	0.906	0.706	0.870	0.771
OPE2: You are an imaginative person.	0.849			

For discriminant validity, the square root of the AVE value of each latent parameter was larger than the correlation coefficient between them. This was defined as the cross–loading relationship between a manifest parameter and its corresponding latent parameter. Thus, the discriminant validity of all latent parameters in the model was adequate and was tested utilising genuine manifest parameters (Fornell & Larcker, 1981). Results are shown in Table 3.

Table 3 Discriminant validity using the Fornell–Larcker criterion

Latent Variables	1	2	3	4	5	6	7	8
1. Agreeableness	***0.801***							
2. Conscientiousness	0.685	***0.901***						
3. Digital entrepreneurial career intention	0.375	0.418	***0.821***					
4. Emotional stability	0.601	0.544	0.374	***0.830***				
5. Extrinsic motivation for becoming an entrepreneur	0.455	0.467	0.672	0.414	***0.904***			
6. Extroversion	0.620	0.644	0.393	0.478	0.417	***0.791***		
7. Intrinsic motivation for becoming an entrepreneur	0.476	0.501	0.698	0.349	0.691	0.429	***0.881***	
8. Openness to experience	0.559	0.539	0.401	0.496	0.438	0.530	0.412	***0.878***

*Values in **bold** denote that one of the discriminant validity criteria was met (such as the AVE values > the correlations with other constructs).*

Structural Model and Hypotheses Testing

A structural model assessment was performed to validate the conceptual model. Following the measurement model, the structural model was tested using 5000 bootstrap replicates to assess path coefficient significance (Hair et al., 2014; Henseler et al., 2016). At a significance level of 1%, three pathways exhibited a direct positive correlation, whereas four pathways had a direct positive association at a significance level of 5%.

In terms of effect size (f^2) (Hair et al., 2014), intrinsic motivation for becoming an entrepreneur substantially affected the model's predictions of extrinsic motivation for becoming an entrepreneur, while both intrinsic and extrinsic motivation had a moderate effect on predicting digital entrepreneurial career intention. Similar to emotional stability, agreeableness and conscientiousness demonstrated only a minor impact on the precision of forecasting a participant's intrinsic motivation for becoming an entrepreneur. Extroversion, conscientiousness, openness to experience and agreeableness had a moderate level of predictive relevance (Q^2) to a participant's intrinsic motivation for becoming an entrepreneur (Hair et al.,

2014). By contrast, extroversion, conscientiousness, emotional stability and intrinsic motivation for becoming an entrepreneur were highly predictive of a participant's extrinsic motivation for becoming an entrepreneur. Overall, intrinsic and extrinsic motivation for becoming an entrepreneur were somewhat predictive of a participant's digital entrepreneurial career intention. In terms of the coefficient of determination (R^2) (Hair et al., 2014), the model showed moderate predictive power for participants' digital entrepreneurial career intentions (R^2 = 0.556) and extrinsic motivation for becoming an entrepreneur (R^2 = 0.518) but poor predictive power for their intrinsic motivation for becoming an entrepreneur (R^2 = 0.302). The test results of the hypotheses are summarised in Table 4.

Table 4 Hypotheses testing results of the path coefficient test of the causal relationship model for antecedents of digital entrepreneurial career intention among BBA students in Thailand

Hypotheses	β Value	*T* Statistics	Results	f^2	Q^2	R^2
H1. Extroversion --> Intrinsic motivation to become an entrepreneur	0.087	1.107	Reject	0.000	0.218	0.302
H2. Extroversion --> Extrinsic motivation to become an entrepreneur	0.059	0.838	Reject	0.000	0.395	0.518
H3. Conscientiousness --> Intrinsic motivation to become an entrepreneur	0.255 **	2.796	Accept	0.041	0.218	0.302
H4. Conscientiousness --> Extrinsic motivation to become an entrepreneur	0.051	0.734	Reject	0.000	0.395	0.518
H5. Openness to experience --> Intrinsic motivation to become an entrepreneur	0.131 *	1.978	Accept	0.000	0.218	0.302
H6. Agreeableness --> Intrinsic motivation to become an entrepreneur	0.174 **	2.072	Accept	0.020	0.218	0.302
H7. Emotional stability --> Extrinsic motivation to become an entrepreneur	0.153 *	2.457	Accept	0.033	0.395	0.518

Hypotheses	β Value	*T* Statistics	Results	f^2	Q^2	R^2
H8. Intrinsic motivation to become an entrepreneur--> Extrinsic motivation to become an entrepreneur	0.587 **	9.963	Accept	0.518	0.395	0.518
H9. Intrinsic motivation to become an entrepreneur --> Digital entrepreneurial career intention	0.447 **	6.355	Accept	0.234	0.342	0.556
H10. Extrinsic motivation to become an entrepreneur --> Digital entrepreneurial career intention	0.363 **	4.650	Accept	0.155	0.342	0.556

** denotes statistical significance at p < 0.05 and t–value ≥ 1.96, ** denotes statistical significance at p < 0.01 and t–value ≥ 2.58* (Hair et al., 2014). *f^2 ≥ 0.02 demonstrates a low degree of impact, f^2 ≥ 0.15 demonstrates a moderate degree of impact and f^2 ≥ 0.35 demonstrates a high degree of impact* (Hair et al., 2014). *Q^2 ≥ 0.02 indicates a low extent of predictive relevance, Q^2 ≥ 0.15 indicates a moderate extent of predictive relevance and Q^2 ≥ 0.35 demonstrates a high extent of predictive relevance* (Hair et al., 2014).

Results in Table 4 showed the path coefficient test results of the causal relationship model for the antecedents of digital entrepreneurial career intention among BBA students in Thailand.

Hypothesis 1 (H1). Extroversion is directly and positively related to intrinsic motivation to become an entrepreneur. Results showed that direct and positive extroversion related to intrinsic motivation to become an entrepreneur was not significant. Therefore, the hypothesis was rejected.

Hypothesis 2 (H2). Extroversion is directly and positively related to extrinsic motivation to become an entrepreneur. Results showed that direct and positive extroversion related to extrinsic motivation to become an entrepreneur was not significant. Therefore, the hypothesis was rejected.

Hypothesis 3 (H3). Conscientiousness is directly and positively related to intrinsic motivation to become an entrepreneur. Results showed that direct and positive conscientiousness related to intrinsic

motivation to become an entrepreneur was statistically significant at 0.01 ($p < 0.01$), with a path coefficient of 0.255 ($\beta = 0.255$) and t–value of 2.796. Therefore, the hypothesis was accepted.

Hypothesis 4 (H4). Conscientiousness is directly and positively related to extrinsic motivation to become an entrepreneur. Results showed that direct and positive conscientiousness related to extrinsic motivation to become an entrepreneur was not significant. Therefore, the hypothesis was rejected.

Hypothesis 5 (H5). Openness to experience is directly and positively related to intrinsic motivation to become an entrepreneur. Results showed that direct and positive openness related to intrinsic motivation to become an entrepreneur was statistically significant at 0.05 ($p < 0.05$), with a path coefficient of 0.255 ($\beta = 0.131$) and t–value of 1.978. Therefore, the hypothesis was accepted.

Hypothesis 6 (H6). Agreeableness is directly and positively related to intrinsic motivation to become an entrepreneur. Results showed that direct and positive agreeableness related to intrinsic motivation to become an entrepreneur was statistically significant at 0.01 ($p < 0.01$), with a path coefficient of 0.174 ($\beta = 0.174$) and t–value of 2.072. Therefore, the hypothesis was accepted.

Hypothesis 7 (H7). Emotional stability is directly and positively related to extrinsic motivation to become an entrepreneur. Results showed that direct and positive emotional stability related to extrinsic motivation to become an entrepreneur was statistically significant at 0.05 ($p < 0.05$), with a path coefficient of 0.153 ($\beta = 0.153$) and t–value of 2.457. Therefore, the hypothesis was accepted.

Hypothesis 8 (H8). Intrinsic motivation to become an entrepreneur is directly and positively related to extrinsic motivation to become an entrepreneur. Results showed that direct and positive intrinsic motivation to become an entrepreneur related to extrinsic motivation to become an entrepreneur was statistically significant at 0.01 ($p < 0.01$), with a path coefficient of 0.587 ($\beta = 0.587$) and t–value of 9.963. Therefore, the hypothesis was accepted.

Hypothesis 9 (H9). Intrinsic motivation to become an entrepreneur is directly and positively related to digital entrepreneurial career intention. Results showed that direct and positive intrinsic motivation to become an entrepreneur related to digital entrepreneurial career intention was statistically significant at 0.01 ($p < 0.01$), with a path coefficient of 0.447 ($\beta = 0.447$) and t– value of 6.355. Therefore, the hypothesis was accepted.

Hypothesis 10 (H10). Extrinsic motivation to become an entrepreneur is directly and positively related to digital entrepreneurial career intention. Results showed that direct and positive extrinsic

motivation to become an entrepreneur related to digital entrepreneurial career intention was statistically significant at 0.01 ($p < 0.01$), with a path coefficient of 0.363 ($\beta = 0.363$) and t-value of 4.650. Therefore, the hypothesis was accepted.

Discussion

The research objective was to develop a causal relationship model for the antecedents of digital entrepreneurial career intention among BBA students in Thailand. Results revealed that having a conscientious personality, which presented as intrinsic motivation to become an entrepreneur, was the most potent causative factor influencing BBA students' digital entrepreneurial career intention. This result supported the findings of Mardon et al. (2018) and Milanesi (2018). They claimed that a conscientious personality tended to have a favourable impact on a person's intrinsic motive to launch a business driven by digital technology and innovation and tended to have an indirect favourable impact on a person's intent to become a digital entrepreneur via extrinsic motivation (Yeh et al., 2020). Wang et al. (2016) introduced a similar interaction between intrinsic and extrinsic motivation in a more particular business environment, suggesting the favourable influence of conscientious personalities on digital entrepreneurial career intention. Furthermore, Lin et al. (2021) noted that higher conscientiousness scores related to increased intrinsic and extrinsic motivation to perform more live stream broadcasts, while Yeh et al. (2020) considered that conscientiousness and m-learning readiness were essential antecedents of intrinsic and extrinsic motivation, which significantly and favourably influenced the intent to utilise m-learning app systems.

Intrinsic and extrinsic motivation mediated the correlation between personal characteristics and digital entrepreneurial career intention for conscientious personalities. Thus, intrinsic and extrinsic motivation are both important and merit further consideration. This study demonstrated that both intrinsic and extrinsic motivation directly impacted digital entrepreneurial career intention for BBA students. A substantial corpus of studies on this issue returned similar results. Hau et al. (2013) verified the favourable causal impacts of intrinsic and extrinsic motivation on the degree of entrepreneurial intent and the interplay between emotional stability. Similarly, Bolger et al. (1989) argued that a person who could handle stress in a range of situations tended to be externally motivated to start a digital company, whereas Yoo et al. (2012) highlighted the favourable influence of intrinsic motivation on extrinsic

motivation. Furthermore, Törhönen et al. (2020) discovered that intrinsic motivation significantly and positively influenced the desire to generate content on video platforms. Extrinsic motivation was also associated with people who generated material on video platforms and these rewards were usually anticipated (Zhao et al., 2018), such as professional progress, increased income or renown (Törhönen et al., 2020). Interconnections between conscientiousness and intrinsic and extrinsic motivation, agreeableness and openness favourably enhanced the intrinsic motivation of BBA students to become digital entrepreneurs, while Jayawarna et al. (2013) provided empirical evidence of comparable connections.

Finally, the study findings contrasted with other personal characteristics identified by the Costa and McCrae (1992) five–factor model and indicated that extroversion barely impacted on intrinsic or extrinsic motivation of BBA students to become digital entrepreneurs, at least among Thai students. This outcome was unexpected and any definite conclusions should not be based only on this study. Previous research on this topic also presented conflicting findings. Wang et al. (2016) demonstrated an inverse association between extroverted BBA students and their intrinsic drive to become digital business entrepreneurs, with no correlation observed between the extrinsic motivation of students and the attributes of extroversion and conscientiousness. Likewise, Nyarko et al. (2016) discovered no association between extroverted personalities and extrinsic motivation to obtain popularity or riches, while Ariani (2013) observed that conscientiousness was inversely connected to the external desire to engage in challenging commercial endeavours to attain goals.

New Knowledge

This research developed a causal relationship model of the antecedents that boosted digital entrepreneurial career intention among Thai BBA students, as shown in Figure 2.

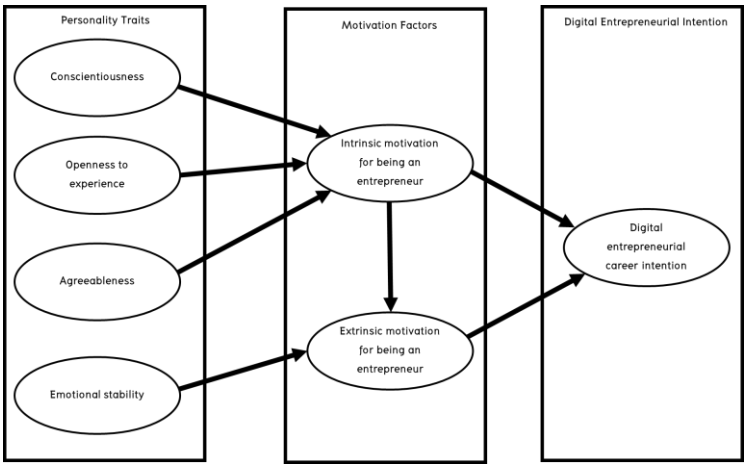

Figure 2 Personality traits and motivational factors as the antecedents of digital entrepreneurial career intention among Thai BBA students.

This research contributes knowledge to theoretical implications. From a theoretical point of view, no empirical examination has been undertaken concerning the factors that influence digital entrepreneurial career intention in developing countries, especially among Bachelor of Business Administration (BBA) students, by combining personality traits, motivation factors and digital entrepreneurial career intention concepts. Results indicated that the proposed model was valid for understanding the antecedents of digital entrepreneurial career intention among Thai BBA students. Moreover, the findings fill this research lacuna by verifying the impacts of personality traits and motivation factors on digital entrepreneurial career intention in Thailand, especially among BBA students. Furthermore, this research resulted in a causal model of the antecedents of digital entrepreneurial career intention among Thai BBA students and also contributed to digital entrepreneurial career intention. Results revealed that conscientiousness, openness to experience and agreeableness through intrinsic motivation were the most influential antecedents for digital entrepreneurial career intention, whereas emotional stability to become an entrepreneur was the most influential antecedent through extrinsic motivation. Moreover, conscientiousness through intrinsic motivation was the most influential antecedent for digital entrepreneurial career intention.

Conclusions

The study results demonstrated that personality traits including conscientiousness, openness to experience and agreeableness were influential antecedents for digital entrepreneurial career intention, while emotional stability to become an entrepreneur was the most influential antecedent through extrinsic motivation. In addition, conscientiousness through intrinsic motivation was the most influential antecedent for digital entrepreneurial career intention, while extroversion was not an influential antecedent for intrinsic motivation to become an entrepreneur. Furthermore, the antecedents of extroversion and conscientiousness did not influence digital entrepreneurial career intention through extrinsic motivation.

Research Implications

The following recommendations are made from the research results. Educational institutions and business development organisations should develop personality attributes in this demographic through coursework, extracurricular activities and training programmes. Case studies should also be designed and managed in collaboration with business organisations to ensure that students improved these desirable attributes and gained hands–on experience and opportunities to sharpen their business skills in realistic and challenging settings. External drive was revealed as a key causative factor that encouraged more students to pursue digital entrepreneurial careers. Therefore, developing catalysts to promote this external drive might be beneficial. To better inform students of their success as digital entrepreneurs, programmes could be established to assist in securing funding sources to support networks of more experienced entrepreneurs in the digital industry to encourage and mentor the students. External drive, although an outside source, may encourage students to develop their potential and desire to become digital entrepreneurs and produce goods and services that exceed consumer expectations if appropriately reinforced. Finally, results showed a lack of positive connection between extroversion and conscientiousness of BBA students, while their intrinsic and extrinsic motivation to become entrepreneurs had various consequences. Educational institutions and related business promotion organisations should take steps to persuade students of the economic advantages of digital enterprises and the critical role played by digital entrepreneurs in economic advancement. They should also emphasise activities in which students used their knowledge and abilities to operate commercial ventures or assist the common good, such as organising seminars to teach not–for–profit companies

and MSMEs how to use digital technology to create value. This would create an educational environment that holistically increased intrinsic and extrinsic motivation.

Suggestions for Future Research

This research had some limitations. Future studies should employ a hybrid strategy combining quantitative and qualitative methodologies. The quantitative methodology will give a strong scientific foundation, while the qualitative methodology will complement these outcomes and expand comprehension of the phenomena. Moreover, future studies might also focus on other aspects that may have a direct impact on digital entrepreneurial career intention such as attitudes towards entrepreneur success, ambition and inventive capabilities. Furthermore, moderating or intervening parameters, e.g., digital entrepreneurs' technological acumen and business environment volatility are also worth investigating. Additional studies might investigate students' digital entrepreneurial goals in other fields or geographies. The outcomes of such studies will contribute to a better understanding of the psychological factors that underpin digital entrepreneurial goals. Results will assist relevant government officials to create ways to boost the number of future digital entrepreneurs, thereby promoting growth and increasing the possibilities for digital MSMEs in Thailand.

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