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Promoting Entrepreneurial Intention of Vocational College Students Through the Assessment of Influencing Factors in Hangzhou, China

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Abstract

Purpose: This study aims to examine the factors influencing entrepreneurial intention of vocational college students in Hangzhou, China. Eight variables were selected for analysis, including entrepreneurship education programs, entrepreneurial motivations, attitude towards behavior, subjective norms, attitude towards entrepreneurship, perceived behavioral control, entrepreneurial self-efficacy, and entrepreneurial intention. **Research design, data, and methodology:** The researcher conducted a quantitative study with a sample size of 500 students from five colleges of a vocational institution in Hangzhou, China. The sampling strategies were conducted through judgmental, stratified random, and convenience sampling. The questionnaires were distributed online and offline to complete the data collection. The researcher then analyzed the data using Structural Equation Modeling (SEM) and Confirmatory Factor Analysis (CFA) to assess the model fit, reliability, and validity. **Results:** Entrepreneurship education programs significantly affected entrepreneurial intention through attitude towards behavior and subjective norms. Furthermore, entrepreneurial motivations affected entrepreneurial intention through attitude towards behavior and perceived behavioral control. Entrepreneurial self-efficacy significantly influences entrepreneurial intention. **Conclusions:** Nine hypotheses were proven to achieve the research objectives. Therefore, significant attention is given to developing and designing entrepreneurship education programs to stimulate students' entrepreneurial motivation and enhance their entrepreneurial self-efficacy and perception of entrepreneurship. This, in turn, contributes to enhancing the entrepreneurial intentions of university students.

Keywords: Attitude, Perceived Behavioral Control, Self-Efficacy, Entrepreneurial Intention, Higher Education

JEL Classification Code: E44, F31, F37, G15

1. Introduction

The world has entered the era of the digital economy, where the technological and industrial revolution coincides with the transformation of economic development. Technologies like artificial intelligence and the Internet of Things are continuously reshaping living, working, and learning environments, while the concept of 'equality' is gradually becoming integral to globalization. Entrepreneurship is increasingly acknowledged as a crucial catalyst for productivity, innovation, job creation, and economic and social development (Audretsch, 2012; Shane

& Venkataraman, 2000; Wennekers et al., 2008).

Entrepreneurship has the potential to promote economic and social development and alleviate employment pressure. Since the international financial crisis in 2008, the global economy has contracted, and the employment situation could improve. In response, governments have implemented innovation and entrepreneurship policies and guidelines to encourage national willingness to innovate and engage in entrepreneurial activities to address the pressing employment situation. Many countries view entrepreneurship as a fundamental solution to their economic problems, including rising unemployment, many university

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graduates, and insufficient employment opportunities provided by the public and private sectors (Karimi et al., 2010).

China introduced the concept of 'mass entrepreneurship and innovation' in 2014, making entrepreneurship a national strategy and implementing supportive policies. As a result, entrepreneurship in China has gained momentum, with 'mass entrepreneurship' and 'innovation for all' becoming prominent in economic development. The China Student Entrepreneurship Report 2021 reveals that over 89.8% of college students are interested in starting a business. Additionally, data from the National Development and Reform Commission (NDRC) shows a consistent increase in college students initiating their ventures in China between 2015 and 2021. This indicates the enduring enthusiasm of Chinese university students towards entrepreneurial endeavors.

Relevant policies guide the development of entrepreneurial practice activities and stimulate scholars' theoretical research on entrepreneurship. The concept of entrepreneurial intention has gained significant attention in recent years and has become a crucial study area within entrepreneurship. Numerous studies have adopted entrepreneurial intention as a robust theoretical framework (Fayolle & Liñán, 2014). Understanding the factors that influence the generation of entrepreneurial intentions is essential. Entrepreneurship is a complex and long-term behavioral process influenced by multiple factors. The desired outcome is successful entrepreneurial activity, which depends on the individual's subjective intention. Only individuals with entrepreneurial intentions can eventually engage in entrepreneurial activities. Therefore, promoting the generation of individual entrepreneurial intention is key to encouraging entrepreneurial activities. This study focuses on individual entrepreneurial intention.

2. Literature Review

2.1 Entrepreneurial Intention

Bird (1988) was the pioneer in conceptualizing the notion of "entrepreneurial intention." He defined entrepreneurial intention as "a mental state that steers entrepreneurs towards pursuing a goal with significant attention, effort, and action." Entrepreneurial intent plays a crucial role in shaping decision-making processes regarding the structure and trajectory of a nascent business. It serves as a gateway to explore relationships, resources, and change and emerges from a combination of rational, analytical, and causal thinking alongside perceptual and holistic cognition. Expanding on this, Boyd and Vozikis (1994) incorporated the element of self-efficacy as a determinant in forming

entrepreneurial intentions, shedding light on how these intentions transition from mere contemplation to concrete action. They contended that entrepreneurial self-efficacy exerts influence on the emergence of entrepreneurial intentions.

According to Krueger et al. (2000), entrepreneurial intention is a subjective attitude of potential entrepreneurs towards engaging in entrepreneurial activities. It is considered a prerequisite for entrepreneurs to start a business, as only with a certain degree of entrepreneurial intention can potential entrepreneurs engage in entrepreneurial activities. Thompson (2009) also presents a similar concept, defining entrepreneurial intention as the belief that an individual intends to start a new business and will consciously put this belief into practice. Additionally, Thompson (2009) suggests that entrepreneurial intention reflects a person's willingness, determination, and passion to become an entrepreneur. Echchabi et al. (2020) further emphasize that entrepreneurial intention is a person's commitment and a strong desire to start their own business.

After conducting an extensive literature review, it has been observed that the determinants of entrepreneurial intention among college students are currently the central and trending research areas in the entrepreneurial intention field. Moreover, numerous research outcomes have been accomplished in this domain. In theory, using entrepreneurial intention as a predictive tool for entrepreneurial behavior is more advantageous than other factors. Several intention-based models have been developed, with the Theory of Planned Behaviour model (TPB) and the Social Cognitive Career Theory model (SCCT) being two of the most extensively utilized ones. This investigation is grounded on these two prominent theoretical frameworks.

2.2 Entrepreneurship Education Programs

Several research findings have identified Entrepreneurship education programs (EEP) as a curriculum that enhances entrepreneurial knowledge and skills (Fayolle et al., 2006; Solesvik et al., 2013). These findings suggest that EEP is strongly associated with the development of entrepreneurial awareness and the ability to cultivate future entrepreneurs (Fayolle & Gailly, 2008). Additionally, Samwel Mwasalwiba (2010) states that EEP is closely linked to creating new businesses, positively impacting society, and acquiring entrepreneurial skills.

Entrepreneurship education programs include lectures, business plan conceptualization, biographical surveys of successful entrepreneurs, teamwork, games and competitions, role models and guest speakers, seminars, and video broadcasts (Fulgence, 2015; Mwasalwiba, 2010). Research has demonstrated that the format of entrepreneurship education programs significantly influences students' development of entrepreneurial

awareness, acquisition of necessary skills, and potential to become entrepreneurs (Fulgence, 2015).

Entrepreneurship education programs are a curriculum designed to enhance students' entrepreneurial willingness and ability through various pedagogical tools and formats. Relevant studies have emphasized that EEP positively impacts shaping the attitudes, skills, and potential of entrepreneurs, thereby establishing a strong foundation for future entrepreneurial success.

Prior research has underscored the importance of EEP in equipping students with essential entrepreneurial skills, as Jones and English (2004) noted. Additionally, in previous research conducted by Fayolle et al. (2006), it was discovered that having a favorable perception of EEP among students could improve their ATB. These findings align with similar observations made in various other settings. The primary aim of EEP is to foster the development of entrepreneurial skills, competencies, attitudes, and innovative thinking among Iranian students, as elucidated by Hosseini Fard and Mirarab (2016). The importance of EEP lies in its pivotal role in reshaping mindsets and actions. This program holds significant sway in nurturing a mindset attuned to entrepreneurship, refining the aptitude for entrepreneurial endeavors, boosting the viability of entrepreneurial ventures, and igniting a fervor for entrepreneurship (Ahmed et al., 2017; Sansone et al., 2021). Therefore, the following hypothesis is proposed:

Through elective or required courses, students acquire the necessary tools and skills to support their entrepreneurial endeavors. This improves their perception of receiving direct support from their environment and positively influences their beliefs (Karimi et al., 2016). To encourage entrepreneurial actions among students, addressing and reducing any unfounded fears or threats associated with entrepreneurship is essential, motivating and inspiring them to embrace the potential rewards (Souitaris et al., 2007). Programs focusing on entrepreneurship education have positively impacted subjective beliefs, indicating an increase in social support for entrepreneurship from close-knit reference groups. This was accomplished by fostering a sense of unity within the community (Smith & Louis, 2008) and boosting students' confidence in their entrepreneurial abilities within their immediate surroundings (Karimi et al., 2016). Therefore, the following hypotheses are proposed:

H1: Entrepreneurship education programs have a significant influence on attitudes toward behavior.

H2: Entrepreneurship education programs have a significant influence on subjective norms.

2.3 Entrepreneurial Motivations

Entrepreneurial motivation encompasses the drivers and factors that prompt an individual to initiate a business

(Hessels et al., 2008). It entails individuals actively participating in the entrepreneurial procedure to recognize, generate, and capitalize on business prospects (Dunkelberg et al., 2013). Solesvik (2013) proposes that entrepreneurial motivation entails an inclination or desire to organize, manipulate, or dominate an organization proficiently. Nevertheless, the institutional framework within the organizational domain can limit entrepreneurial motivation (Stenholm et al., 2013). Institutions simultaneously enable and restrict the pursuit of business opportunities (Reuber et al., 2018), and individuals who perceive the existence of supportive institutions that facilitate the exploitation of extensive business prospects are more inclined to exhibit heightened motivation driven by opportunities (García-Cabrera et al., 2016).

The gradual process of attitude development is often influenced by personal motivation and social and environmental factors (Krueger et al., 2000). Previous research has identified factors that contribute to the formation of entrepreneurial attitudes. One of these factors is entrepreneurial motivation, which shapes an individual's attitude toward entrepreneurship. Motivation is expansive and includes the desire for independence, passion, drive, and the need for achievement, which can impact how attitudes are formed (Solesvik, 2013). Entrepreneurial motivation refers to the inclination or inclination to efficiently, independently, and effectively organize, manipulate, or master entrepreneurial organizations, individuals, or ideas (Perugini & Bagozzi, 2001). Despite potential negative influences from geographical factors, entrepreneurial motivation generally positively impacts the formation of an individual's entrepreneurial attitudes. Thus, we propose the following hypothesis:

H3: Entrepreneurial motivations have a significant influence on attitudes toward entrepreneurship.

2.4 Subjective Norms

Subjective norms, also known as SN, pertain to an individual's perception of whether they should engage in a particular behavior due to social pressure from their immediate surroundings (Krueger et al., 2000). This social pressure can be influenced in two ways: through close opinions regarding the appropriate course of action or by observing others' behaviors (Manning, 2009). The prevailing circumstances that an individual finds themselves in can influence their decision to embark on an entrepreneurial journey (Ahmed et al., 2020), and recent assessments of entrepreneurship can either foster or impede attitudes toward pursuing a career in entrepreneurship (Martins & Perez, 2020).

The study conducted by Ahmed et al. (2020) and Liñán and Chen (2009) discovered that positive perceptions

regarding the social pressures associated with entrepreneurship exert a beneficial influence on attitudes towards behavior (ATB) and perceived behavioral control (PBC). Hence, it becomes crucial to investigate the interconnections within the entrepreneurial intention (TBP) framework, specifically focusing on the correlation between social norms (SN) and the remaining dimensions. Keeping this in mind, the following hypotheses are put forward:

The relationship between entrepreneurial intentions and subjective norms is established by The Theory of Planned Behaviour, which asserts that entrepreneurial intentions can be predicted by subjective norms (Ajzen, 1991, 2012). Discrepancies in the perception of entrepreneurial activities by different individuals partly explain variations in levels of entrepreneurial intentions (Kautonen et al., 2015). Considering the subjective norms of others concerning entrepreneurship has a more significant positive effect on entrepreneurial intentions when compared to the perception of approval or disapproval. Previous research has demonstrated that the most influential factor in entrepreneurial intentions is subjective norms (Kautonen et al., 2015). Based on these findings, we put forth the following hypotheses:

H4: Subjective norms have a significant influence on attitude towards behavior.

H6: Subjective norms have a significant influence on entrepreneurial intention.

2.5 Attitude Towards Behavior

In the research conducted by Carr and Sequeira (2007), the essence of attitude was defined as the predisposition to respond positively or negatively to various objects, establishments, or occurrences. A pivotal determinant in shaping individuals' intentions and conduct is the attitude towards behavior (ATB). Substantive evidence underscores that individuals exhibiting a favorable attitude towards a specific behavior display an elevated likelihood of participating in said behavior (Acheampong & Tweneboah-Koduah, 2018). Two fundamental factors influence the construction of one's attitude towards behavior. First, it is shaped by an individual's prominent convictions concerning the behavior. Second, it is molded by the appraisal of the potential outcomes stemming from engagement in said behavior (Chang, 1998).

Ajzen's TPB proposes that individuals' Attitude towards Behaviour (AtB) refers to their positive or negative sentiments regarding a specific behavior (Ajzen & Fishbein, 1980). This attitude is derived from evaluations of the said behavior. The individual's attitude toward a particular behavior is influenced by their beliefs about that behavior, where beliefs are defined as the subjective likelihood that engaging in a specific behavior will result in a certain

outcome. Consequently, the linkage between ATB and entrepreneurship can be defined as the degree to which an individual possesses a favorable or unfavorable personal assessment of participating in entrepreneurial activities (Fayolle et al., 2006).

The literature presents evidence supporting the connection between Attitude towards behavior (ATB) and entrepreneurial intention. Otache (2019) have demonstrated that ATB is a significant predictor of entrepreneurial intention. The importance of an individual's attitude towards entrepreneurship in the entrepreneurial process cannot be overstated. Additionally, research findings by Kautonen et al. (2015) suggest a notable positive correlation between individuals' attitudes toward entrepreneurial behavior and their intentions to engage in entrepreneurship. Therefore, the following hypothesis is raised:

H5: Attitude towards behavior has a significant influence on entrepreneurial intention.

2.6 Entrepreneurial Self-Efficacy

The notion of entrepreneurial self-efficacy traces its roots back to the realm of social psychology and was first integrated into the realm of entrepreneurship during the 1990s. Entrepreneurial self-efficacy, as defined by Scherer et al. (1989), pertains to the level of assurance an aspiring entrepreneur possesses in their capacity to carry out entrepreneurial ventures and fulfill entrepreneurial responsibilities effectively. Luthans and Ibrayeva (2006) further elaborate that entrepreneurial self-efficacy encapsulates an individual's trust in their competence and confidence in positively influencing their surroundings to attain entrepreneurial triumph through their proactive endeavors. De Noble et al. (1999) identified six key dimensions of entrepreneurial self-efficacy: identification of entrepreneurial prospects, acquisition of entrepreneurial resources, product advancement, interpersonal relationships, innovative atmosphere, and risk administration.

The role of entrepreneurial self-efficacy in predicting entrepreneurial behavior has been proven in various studies (Chen et al., 1998; Krueger et al., 2000). Based on self-efficacy theory, behavior and responses to different situations are directly influenced by perceived self-efficacy (Bandura, 1977). When individuals have strong beliefs and confidence in their ability to engage in entrepreneurial activities, they are more likely to have intentions to participate in entrepreneurship, even when faced with a high risk of failure. Numerous prior studies have consistently demonstrated that individuals with higher entrepreneurial self-efficacy display greater intentions toward entrepreneurship (Krueger et al., 2000; Naktiyok et al., 2010). Thus, it can be deduced that there is a positive association between entrepreneurial self-efficacy and entrepreneurial

intention. The study, based on the information above, presents the following hypothesis:

H7: Entrepreneurial self-efficacy has a significant influence on entrepreneurial intention.

2.7 Perceived Behavioral Control

Perceived behavioral control, as defined by Ajzen (1991), refers to an individual's perception of the difficulty or ease of performing a specific behavior. In the context of TPB theory, perceived behavioral control plays a significant role in the formation of intentions. It encompasses two key aspects: the perception of self-control, which reflects an individual's confidence in their ability to carry out a given task, and the perception of task difficulty (Kitcharoen & Vongurai, 2021). It relates to how easy or challenging an individual perceives the task. In entrepreneurship research, perceived behavioral control pertains to an individual's perception of the extent and strength of factors that either facilitate or hinder the establishment of a new business, specifically the ease or difficulty of starting a business (Souitaris et al., 2007).

In entrepreneurship research, the notion of Perceived Behavioral Control (PBC) pertains to an individual's perception of the feasibility of engaging in and executing entrepreneurial actions (Ahmed et al., 2020). Krueger et al. (2000) investigation divulged that subjective norms do not significantly impact entrepreneurial intentions, while attitudes and perceived behavioral control substantially influence willingness. Karimi et al. (2016) scrutinized entrepreneurial willingness in six Iranian universities via an examination of the Theory of Planned Behavior (TPB), and the outcomes indicated a positive influence of perceived behavioral control on entrepreneurial willingness. Liñán et al. (2011a), in their analyses conducted in two regions of Spain, exhibited that the positive influence of perceived behavioral control on entrepreneurial intentions remains constant across diverse settings. Likewise, Naushad et al. (2018) conducted a study in Saudi Arabia and discovered a constructive effect of perceived behavioral control on entrepreneurial intentions. Consequently, we put forth the following hypothesis.

H8: Perceived behavioral control has a significant influence on entrepreneurial intention.

2.8 Attitudes Toward Entrepreneurship

Phan et al. (2002) proposed that entrepreneurial attitudes refer to individuals' evaluations of the positive or negative outcomes of entrepreneurial behavior, such as independence and challenges. These attitudes are crucial for developing entrepreneurial intentions. Individuals' beliefs and expectations, particularly regarding entrepreneurship outcomes, shape their entrepreneurial attitudes. Positive

perceptions result in positive attitudes, which, in turn, strengthen entrepreneurial intentions. Ajzen (2001) emphasizes that assessments of outcomes influence these beliefs.

In the study by Krueger et al. (2000), an analysis was performed on 97 business students from the United States to examine their intentions toward entrepreneurship. The results showed a significant correlation between positive attitudes toward entrepreneurship and the likelihood of pursuing entrepreneurial endeavors. Similarly, Kumar and Das (2019) proposed that engineering students' attitudes towards innovation attempts also played a crucial role in determining their inclination towards entrepreneurship. This connection between attitude towards innovation attempts and entrepreneurial intentions was further supported by a study conducted in an Indian setting, which indicated a deviation of 41%. Prior investigations by Kautonen et al. (2015) validated this relationship, with its strength falling within 30% to 45%.

Furthermore, the study emphasized the direct influence of ATE among university students on their decision-making regarding entrepreneurship. Additionally, it underscored that different entrepreneurial attitudes impact the attention devoted to the entrepreneurial process. Individuals with a strong commitment to entrepreneurship are more likely to employ diverse strategies to launch a business and achieve their objectives. Based on these findings, the present study proposes the following hypothesis:

H9: Attitudes toward entrepreneurship has a significant influence on entrepreneurial intention.

3. Research Methods and Materials

3.1 Research Framework

The conceptual framework of this study was constructed based on existing research results, and three theoretical models were referred to in making improvements. The first model, proposed by Lopez et al. (2021), focuses on assessing and testing the correlation between EEP, TPB, and EI. The second model, proposed by Kumar and Das (2019), optimizes the theoretical model of planned behavior by examining the impact of peer effects, institutional infrastructure, and gender discrimination on entrepreneurial intentions in emerging economies. The third model, proposed by Karimi et al. (2010), focuses on the impact of entrepreneurship on entrepreneurial intention and its antecedents by introducing two factors: gender and entrepreneurial role models based on TPB. The conceptual framework of the research is shown in Figure 1.

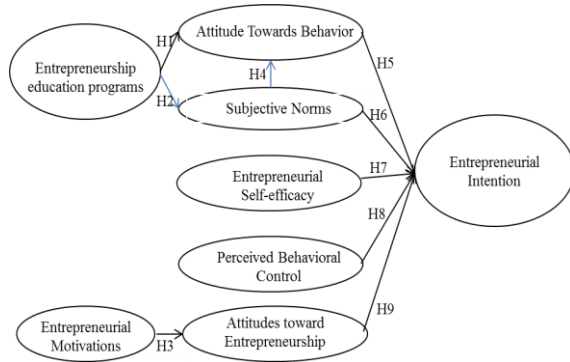


Figure 1: Conceptual Framework

H1: Entrepreneurship education programs have a significant influence on attitudes toward behavior.

H2: Entrepreneurship education programs have a significant influence on subjective norms.

H3: Entrepreneurial motivations have a significant influence on attitudes toward entrepreneurship.

H4: Subjective norms have a significant influence on attitude towards behavior.

H5: Attitude towards behavior has a significant influence on entrepreneurial intention.

H6: Subjective norms have a significant influence on entrepreneurial intention.

H7: Entrepreneurial self-efficacy has a significant influence on entrepreneurial intention.

H8: Perceived behavioral control has a significant influence on entrepreneurial intention.

H9: Attitudes toward entrepreneurship has a significant influence on entrepreneurial intention.

3.2 Research Methodology

Using a non-probability sampling method, the researchers surveyed college students in higher vocational colleges in Hangzhou, China. The survey used paper and online questionnaires to collect data and analyze factors associated with college students' entrepreneurial intentions. The questionnaire consisted of three parts: screening questions to determine the eligibility of respondents, demographic questions to gather basic personal information, and measurement questions based on eight variables to explore the relationship between these variables. The researcher employed a 5-point Likert scale to measure these questions.

Once the questionnaire design was completed, the researcher tested it for reliability and validity. Three experts were invited to score and assess the validity of the questionnaire using Item Objective Congruence (IOC). The reliability test was conducted using Cronbach's alpha research technique. The researcher randomly selected 30 respondents for the pilot test and collected the data. The IOC results

exceeded the 0.6 threshold. Furthermore, to meet the established criteria set by Nunnally and Bernstein in 1994, a threshold of Cronbach's alpha values surpassing 0.7 was employed as the benchmark for acceptability.

After confirming the reliability and consistency of the questionnaire, the researcher distributed it to 500 respondents through online and offline methods, and the data were collected and counted. Subsequently, statistical analyses, including validated factor analysis (CFA), model fit measures, and structural equation modeling (SEM), were performed using statistical software to test and analyze the data. The researcher made necessary corrections and drew appropriate conclusions based on the relevant results.

3.3 Population and Sample Size

The study focused on students enrolled in Zhejiang College of Commerce and Vocational Technology in Hangzhou, Zhejiang, China. The researcher selected five colleges within the school as the sampling unit. Using a sample size calculator, the researcher determined that a minimum sample size of 444 people was required. Therefore, a sample size of 500 people was chosen. 500 questionnaires were distributed, and 500 valid questionnaires were successfully collected.

3.4 Sampling Technique

The researcher used judgmental sampling to determine students from five colleges of a vocational institution in Hangzhou, China. Stratified random sampling aims to sample students from five secondary colleges in Zhejiang College of Commerce and Vocational Technology. The researcher calculated the sample size for each secondary college based on the number and proportion of students in each college. The details of the sample size for each college are shown in Table 1. Sample number of students in each secondary college. Convenience sampling was employed to distribute online and offline questionnaire.

Table 1: Sample Units and Sample Size

Five colleges	Percentage of the total number of students	Proportional Sample Size
Students of Electronic Commerce College	20.64%	103
Students of Accounting and Finance College	18.12%	91
Students of Economics and Management College	16.82%	84
Students of Applied Engineering College	15.74%	79
Students of Art and Design College	12.46%	62
Students of Culinary Tourism College	16.22%	81

Five colleges	Percentage of the total number of students	Proportional Sample Size
Total	100%	500

Source: Constructed by author

4. Results and Discussion

4.1 Demographic Information

The researcher surveyed 500 participants, and the demographic data is presented in Table 2. The survey results show that in terms of gender structure, 45.4% of the respondents were male, and 54.6% were female. Regarding age level, the largest percentage of respondents was 20-22 years old at 40.60%, 18-19 years old at 35.20%, and 22 years old and above at 24.20%.

Table 2: Demographic Profile

Demographic and General Data (N=500)		Frequency	Percentage
Gender	Male	227	45.4%
	Female	273	54.6%
Age	18-19 years old	176	35.2%
	20-22 years old	203	40.6%
	More than 22 years old	121	24.2%

Source: Constructed by author

4.2 Confirmatory Factor Analysis (CFA)

This study utilized a validated factor analysis (CFA) with the parameter estimation method of 'maximum fit estimation.' Hair et al. (1998) suggest that factor loadings should be 0.5 or higher. Table 3 shows all individual factor loadings were above 0.50, with CR values of 0.7 or higher considered acceptable and AVE values of 0.4 or higher (Fornell & Larcker, 1981). Furthermore, all CRs in Table 3 exceeded the critical point of 0.7, and AVEs were greater than the critical point of 0.4. Additionally, a threshold of Cronbach's alpha values surpassing 0.7 was employed as the benchmark for acceptability (Nunnally & Bernstein, 1994).

Table 3: Confirmatory Factor Analysis Result, Composite Reliability (CR) and Average Variance Extracted (AVE)

Variables	Source of Questionnaire (Measurement Indicator)	No. of Item	Cronbach's Alpha	Factors Loading	CR	AVE
Entrepreneurship education programs (EEP)	Souitaris et al. (2007)	5	0.89	0.760-0.822	0.89	0.619
Attitude towards behavior (ATB)	Lopez et al. (2021)	5	0.891	0.768-0.81	0.891	0.622
Entrepreneurial motivations (EM)	Kumar and Das (2019)	5	0.898	0.783-0.814	0.898	0.638
Subjective norms (SN)	Kumar and Das (2019)	3	0.834	0.794-0.795	0.834	0.627
Entrepreneurial self-efficacy (ES)	Lopez et al. (2021)	6	0.900	0.745-0.797	0.900	0.600
Perceived behavioral control (PBC)	Liñán and Chen (2009)	4	0.855	0.746-0.790	0.855	0.595
Attitudes toward entrepreneurship (ATE)	Kolvereid and Isaksen (2006)	5	0.901	0.771-0.827	0.902	0.647
Entrepreneurial intention (EI)	Liñán and Chen (2009)	5	0.878	0.735-0.799	0.878	0.591

In Table 4, the square root of AVEs for each structure on the diagonal was greater than the corresponding value, confirming the validity of the judgment. The CFA test used the GFI, AGFI, NFI, CFI, TLI, and RMSEA as model fit indicators.

Table 4: Goodness of Fit for Measurement Model

Fit Index	Acceptable Criteria	Statistical Values
CMIN/DF	< 3.00 Hair et al. (2006)	1.076
GFI	≥ 0.90 (Hair et al., 2006)	0.934
AGFI	≥ 0.85 (Schermelleh-Engel et al., 2003)	0.923
NFI	≥ 0.90 Hair et al. (2006)	0.938
CFI	≥ 0.90 Hair et al. (2006)	0.995
TLI	≥ 0.90 Hair et al. (2006)	0.995
RMSEA	< 0.08 (Pedroso et al., 2016)	0.012
Model Summary		In harmony with empirical data

Remark: CMIN/DF = The ratio of the chi-square value to degree of freedom, GFI = Goodness-of-fit index, AGFI = Adjusted goodness-of-fit index, NFI = Normed fit index, CFI = Comparative fit index, TLI = Tucker-Lewis index, and RMSEA = Root mean square error of approximation.

According to the data in Table 5, this study's convergent validity and discriminant validity exceeded acceptable values, indicating their validity. Additionally, these model measurements validated the discriminant validity and subsequent structural model estimation validity.

Table 5: Discriminant Validity

	EEP	EM	ES	PBC	ATE	ATB	SN	EI
EEP	0.787							
EM	0.156	0.799						
ES	0.248	0.123	0.775					
PBC	0.199	0.143	0.188	0.771				
ATE	0.297	0.321	0.280	0.223	0.804			
ATB	0.378	0.203	0.271	0.235	0.388	0.789		
SN	0.368	0.168	0.282	0.192	0.309	0.344	0.792	
EI	0.298	0.262	0.318	0.345	0.398	0.428	0.396	0.769

Note: The diagonally listed value is the AVE square roots of the variables
Source: Created by the author.

4.3 Structural Equation Model (SEM)

According to Wanichbancha (2014), structural equation modeling can be used to test the causal relationship between variables. Table 6 shows the goodness-of-fit metrics for structural equation modeling (SEM). In this case, the chi-square/degree of freedom (CMIN/DF) ratio of the model fit measure should not exceed 3, GFI, NFI, CFI, and TLI should be greater than or equal to 0.9, AGFI should be greater than or equal to 0.85, and RMSEA should be less than 0.08. The researcher analyzed the SEM model using the SPSS AMOS version 26, and the results of the goodness of fit indicators obtained were: CMIN/DF=1.428, GFI=0.908, AGFI= 0.896, NFI=0.915, CFI=0.973, TLI=0.971, RMSEA=0.029. all these results are within acceptable limits, indicating that the model is well-fitted.

Table 6: Goodness of Fit for Structural Model

Index	Acceptable	Statistical Values Before Adjustment
CMIN/DF	< 3.00 Hair et al. (2006)	1.428
GFI	≥ 0.90 (Hair et al., 2006)	0.908
AGFI	≥ 0.85 (Schermmelleh-Engel et al., 2003)	0.896
NFI	≥ 0.90 Hair et al. (2006)	0.915
CFI	≥ 0.90 Hair et al. (2006)	0.973
TLI	≥ 0.90 Hair et al. (2006)	0.971
RMSEA	< 0.08 (Pedroso et al., 2016)	0.029
Model Summary		In harmony with Empirical data

Remark: CMIN/DF = The ratio of the chi-square value to degree of freedom, GFI = Goodness-of-fit index, AGFI = Adjusted goodness-of-fit index, NFI = Normed fit index, CFI = Comparative fit index, TLI = Tucker-Lewis index, and RMSEA = Root mean square error of approximation.

4.4 Research Hypothesis Testing Result

Based on the standardized path coefficient and t-value, the researcher calculated the significance of each variable. From the results in Table 7, this study supports all the hypotheses with a p-value of 0.05. EEP has the greatest effect on SN with a $\beta = 0.428$, and ATB has the greatest effect on EI with a $\beta = 0.255$. the β value of the effect of EEP on ATB is 0.313, the β value of the effect of EM on ATE is 0.363, and the effect of SN on ATB is 0.265. while the β values of the effects of β -values for the effects of SN, ES, PBC, and ATE on EI were 0.246, 0.142, 0.246, and 0.217, respectively.

Table 7: Hypothesis Results of the Structural Equation Modeling

Hypothesis	(β)	t-Value	Result
H1: EEP→ATB	0.313	5.791*	Supported
H2: EEP→SN	0.428	8.063*	Supported
H3: EM→ATE	0.363	7.229*	Supported
H4: SN→ATB	0.265	4.835*	Supported

Hypothesis	(β)	t-Value	Result
H5: ATB→EI	0.255	4.877*	Supported
H6: SN→EI	0.246	4.582*	Supported
H7: ES→EI	0.142	2.127*	Supported
H8: PBC→EI	0.246	5.134*	Supported
H9: ATE→EI	0.217	4.710*	Supported

Note: * p<0.05

Source: Created by the author

Table 7 shows the estimation results of the proposed model, and the statistical results confirm most of the proposed relationships.

H1 showed a significant effect of EEP on ATB ($B=0.313$, $p<0.05$). **H2** also showed a very significant effect of EEP on SN ($B=0.428$, $p<0.05$). The results of H1 and H2 effectively confirmed the results of previous related studies (Ahmed et al., 2020; Fayolle et al., 2006; Souitaris et al., 2007). **H3** showed a positive correlation between EM and ATE ($B=0.363$, $p<0.05$). This result is consistent with other studies (Collins et al., 2004; Solesvik, 2013).

H4 demonstrated a significant positive effect of social entrepreneurial stress (SN) on entrepreneurial behaviors (ATB) ($B=0.265$, $p<0.05$), indicating that perceiving social entrepreneurial stress positively can lead to favorable evaluations of entrepreneurial behaviors. **H5** revealed a positive effect of ATB on entrepreneurial intentions (EI) ($B=0.255$, $p<0.05$), while **H6** indicated a positive correlation between SN and EI ($B=0.246$, $p<0.05$). The results of H4, H5, and H6 are consistent with previous studies (Liñán & Chen, 2009; Liñán & Santos, 2007), supporting the notion that the positive impact of SN on EI is mediated by its effect on ATB. In other words, SN amplifies the positive influence of positive evaluations of ATB, and this relationship is statistically significant.

The results of **H7** indicated a positive correlation between ES and EI ($B=0.142$, $p<0.05$). As an individual's competence improves, they become more inclined to initiate a new venture and are ready to confront the obstacles and challenges of entrepreneurial success. This finding aligns with previous studies that suggest individuals rely on their abilities when embarking on an entrepreneurial career in emerging countries (Liñán & Chen, 2009; Shook & Bratianu, 2010).

H8 demonstrated a positive effect of PBC on EI ($B=0.246$, $p<0.05$), which is consistent with previous studies conducted in Latin America (Lopez et al., 2021) as well as other regions (Naushad et al., 2018; Paray & Kumar, 2020; Souitaris et al., 2007).

Study **H9** demonstrated a significant positive effect of ATE on EI ($B=0.217$, $p<0.05$). Previous research has consistently reported a similar relationship, with effect sizes ranging from 30% to 45% (Kautonen et al., 2015; Liñán & Chen, 2009; Van Gelderen et al., 2008).

5. Conclusion and Recommendation

5.1. Conclusion and Discussion

This study aims to verify the significant influence of This study examines the factors influencing the entrepreneurial intention of college students in higher vocational colleges in Hangzhou, China. Drawing on existing research, the study formulates relevant hypotheses. It constructs a conceptual framework to explore the significant influence of entrepreneurship education programs, learning, attitude towards behavior, subjective norms, entrepreneurial motivations, attitude towards entrepreneurship, entrepreneurial self-efficacy and perceived behavioral control on entrepreneurial intention. To gather data, the researchers designed a survey questionnaire for college students enrolled in Zhejiang College of Commerce and Vocational Technology. The collected data were analyzed using Confirmatory Factor Analysis (CFA) to measure and test the validity and reliability of the conceptual model. Structural Equation Modeling (SEM) was then employed to analyze the influencing factors of college students' entrepreneurial intention.

The results of the statistical analysis of the data show that EEP has the most significant effect on EI. Also, EEP showed a significant correlation with ATB. The previous study (Lopez et al., 2021) also confirmed the above relationship, i.e., EEP significantly affected EI through SN and ATB. Second, EM had a highly significant effect on EI through ATE, a result also supported by the studies of Collins et al. (2004) and Solesvik (2013). Third, the positive effect of SN on EI was mainly presented through ATB, while the non-direct effect was much stronger. Fourth, ES and PBC were significantly and positively correlated with EI, but their correlations were weak relative to the other variables.

5.2 Recommendation

The study found that entrepreneurship education programs, attitude toward behavior, subjective norms, entrepreneurial motivations, attitude towards entrepreneurship, entrepreneurial self-efficacy, and perceived behavioral control are the major factors influencing college students' entrepreneurial intentions in higher education institutions. The impact of the Entrepreneurship Education Program (EEP) on Entrepreneurial Intention (EI) is mediated by ATB and SN. Additionally, EM affects EI through ATE, while both EEP and EM positively influence the formation of college students' entrepreneurial intentions. Therefore, higher education institutions must prioritize the development and

design of EEP. This can be achieved by incorporating entrepreneurship courses into the education system and creating opportunities for extracurricular entrepreneurial activities, which can enhance students' understanding of the feasibility of entrepreneurship (Stevenson et al., 2010). However, it is important to note that the EEP's primary focus and objectives should be more than just increasing students' EI in the short term. Instead, the EEP should motivate students to overcome fears and threats associated with entrepreneurship, encourage rational thinking, and foster a deep understanding of entrepreneurship-related knowledge and skills.

The study's results indicate that PBC and ES directly and significantly impact EI. This finding is consistent with the findings of Naushad et al. (2018) in the Saudi context, which also showed a positive effect of PBC on EI. Previous studies have established that higher self-efficacy is crucial in guiding behavior, determining behavioral strategies, and enhancing individuals' perseverance during difficult times and challenges (Bandura, 1997). Kolvereid and Isaksen (2006) have identified influential factors associated with an individual's EI, including coping with unforeseen challenges, initiating investor relationships, taking risks, and exploring new products and market opportunities.

Previous research has primarily focused on the TPB model's influence on EI, neglecting the potential moderating effects of other variables. This study aims to fill this gap by investigating the role of EEP and EM in entrepreneurship, thereby enhancing our understanding of EI and its antecedents. The findings of this study not only contribute to the existing knowledge on TPB theory and entrepreneurial intention and have practical implications for university entrepreneurship education and policy development.

5.3 Limitation and Further Study

This research project has some limitations. Firstly, due to the numerous variables involved, the main focus of this study is on exploring the correlations between these variables rather than conducting an extensive analysis of the variables themselves. Secondly, the questionnaire survey was administered exclusively online. While efforts were made to exclude faulty questionnaires, the overall quality of the questionnaire may have been influenced by uncontrollable factors such as respondents' attitudes towards answering the questions and potential subjective biases in their responses. Lastly, this study distributed questionnaires randomly among different institutions but did not adequately control for contextual information and lacked relevant data for thorough analysis.

Future research should delve deeper into the various dimensions of the Theory of Planned Behavior and the Social Cognitive Career Theory to reveal the distinct impacts of each variable on entrepreneurial intention. It is important to optimize the research methodology to enhance the accuracy of the findings. This can be achieved by expanding the distribution of the questionnaire to a wider and more diverse sample. Factors such as participants' number, professions, and grades should be considered. This will help gather more precise data and improve the overall quality of the research.

References

- Acheampong, G., & Tweneboah-Koduah, E. Y. (2018). Does past failure inhibit future entrepreneurial intent? Evidence from Ghana. *Journal of Small Business and Enterprise Development*, 25(5), 849-863. <https://doi.org/10.1108/jsbed-03-2017-0128>
- Ahmed, T., Chandran, V. G. R., & Klobas, J. (2017). Specialized entrepreneurship education: does it really matter? Fresh evidence from Pakistan. *International Journal of Entrepreneurial Behavior & Research*, 23(1), 4-19. <https://doi.org/10.1108/ijeb-01-2016-0005>
- Ahmed, T., Chandran, V. G. R., Klobas, J. E., Liñán, F., & Kokkalis, P. (2020). Entrepreneurship education programmes: How learning, inspiration and resources affect intentions for new venture creation in a developing economy. *The International Journal of Management Education*, 18(1), 100327. <https://doi.org/10.1016/j.ijme.2019.100327>
- Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, 50(2), 179-211. [https://doi.org/10.1016/0749-5978\(91\)90020-t](https://doi.org/10.1016/0749-5978(91)90020-t)
- Ajzen, I. (2001). Nature and operation of attitudes. *Annual Review of Psychology*, 52, 27-58. <https://doi.org/10.1146/annurev.psych.52.1.27>
- Ajzen, I. (2012). The theory of planned behavior. In P.A.M. Van Lange, A.W. Kruglanski, & E.T. Higgins (Eds.), *The Handbook of Theories of Social Psychology* (pp. 438-459). SAGE Publications.
- Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior* (1st ed.). Prentice-Hall
- Audretsch, D. (2012). Entrepreneurship research. *Management Decision*, 50(5), 755-764. <https://doi.org/10.1108/00251741211227384>
- Bandura, A. (1977). Self-efficacy: toward a unifying theory of behavioral change. *Psychological review*, 84(2), 191-215. <https://doi.org/10.1037/0033-295x.84.2.191>
- Bandura, A. (1997). *Self-efficacy: The exercise of control* (1st ed.). W.H. Freeman and Company.
- Bird, B. (1988). Implementing entrepreneurial ideas: The case for intention. *Academy of management Review*, 13(3), 442-453. <https://doi.org/10.5465/amr.1988.4306970>
- Boyd, N. G., & Vozikis, G. S. (1994). The influence of self-efficacy on the development of entrepreneurial intentions and actions. *Entrepreneurship theory and practice*, 18(4), 63-77. <https://doi.org/10.1177/104225879401800404>
- Carr, J. C., & Sequeira, J. M. (2007). Prior family business exposure as intergenerational influence and entrepreneurial intent: A theory of planned behavior approach. *Journal of business research*, 60(10), 1090-1098. <https://doi.org/10.1016/j.jbusres.2006.12.016>
- Chang, M. K. (1998). Predicting unethical behavior: a comparison of the theory of reasoned action and the theory of planned behavior. *Journal of business ethics*, 17, 1825-1834. https://doi.org/10.1007/978-94-007-4126-3_21
- Chen, C. C., Greene, P. G., & Crick, A. (1998). Does entrepreneurial self-efficacy distinguish entrepreneurs from managers?. *Journal of business venturing*, 13(4), 295-316. [https://doi.org/10.1016/s0883-9026\(97\)00029-3](https://doi.org/10.1016/s0883-9026(97)00029-3)
- Collins, C. H., Grange, J. M., & Locke, E. A. (2004). *Microbiological Methods* (1st ed.). Hodder & Stoughton Ltd.
- De Noble, A. F., Jung, D., & Ehrlich, S. B. (1999). Entrepreneurial Self-Efficacy: The Development of a Measure and Its Relationship to Entrepreneurial Action. In *Frontiers for Entrepreneurship Research* (pp. 73-78). P&R Publication Inc.
- Dunkelberg, W., Moore, C., Scott, J., & Stull, W. (2013). Do entrepreneurial goals matter? Resource allocation in new owner-managed firms. *Journal of Business Venturing*, 28(2), 225-240. <https://doi.org/10.1016/j.jbusvent.2012.07.004>
- Echchabi, A., Omar, M. M. S., & Ayedh, A. M. (2020). Entrepreneurial intention among female university students in Oman. *Journal for International Business and Entrepreneurship Development*, 12(4), 280-297. <https://doi.org/10.1504/jibed.2020.110251>
- Fayolle, A., & Gailly, B. (2008). From craft to science: Teaching models and learning processes in entrepreneurship education. *Journal of European industrial training*, 32(7), 569-593. <https://doi.org/10.1108/03090590810899838>
- Fayolle, A., Gailly, B., & Lassas - Clerc, N. (2006). Assessing the impact of entrepreneurship education programmes: a new methodology. *Journal of European industrial training*, 30(9), 701-720. <https://doi.org/10.1108/03090590610715022>
- Fayolle, A., & Liñán, F. (2014). The future of research on entrepreneurial intentions. *Journal of Business Research*, 67(5), 663-666. <https://doi.org/10.1016/j.jbusres.2013.11.024>
- Fornell, C., & Larcker, D. F. (1981). Structural Equation Models with Unobservable Variables and Measurement Error: Algebra and Statistics. *Journal of Marketing Research*, 18, 382-388. <http://dx.doi.org/10.2307/3150980>
- Fulgence, K. (2015). Assessing the status of entrepreneurship education courses in higher learning institutions: The case of Tanzania education schools. *Education+ Training*, 57(2), 239-258. <https://doi.org/10.1108/et-05-2013-0063>
- García-Cabrera, A. M., García-Soto, M. G., & Durán-Herrera, J. J. (2016). Opportunity motivation and SME internationalization in emerging countries: Evidence from entrepreneurs' perception of institutions. *International Entrepreneurship and Management Journal*, 12, 879-910. <https://doi.org/10.1007/s11365-016-0386-7>
- Hair, J., Anderson, R., Tatham, R., & Black, W. (1998). *Multivariate data analysis* (5th ed.). Prentice Hall.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis* (6th ed.). Pearson Prentice Hall.

- Hessels, J., Van Gelderen, M., & Thurik, R. (2008). Drivers of entrepreneurial aspirations at the country level: the role of start-up motivations and social security. *International Entrepreneurship and Management Journal*, 4, 401-417. <https://doi.org/10.1007/s11365-008-0083-2>
- Hosseini Fard, T., & Mirarab, R. (2016). *Investigating the role of entrepreneurship training in promoting quality of entrepreneurship, paper presented at the 2nd National Conference on New Issues in Accounting, Management and Entrepreneurship*, Islamic Azad University of Minoodasht Branch.
- Jones, C., & English, J. (2004). A contemporary approach to entrepreneurship education. *Education+ training*, 46(8/9), 416-423. <https://doi.org/10.1108/00400910410569533>
- Karimi, S., Biemans, H. J. A., Lans, T., Chizari, M., & Mulder, M. (2016). The impact of entrepreneurship education: a study of Iranian students' entrepreneurial intentions and opportunity identification. *Journal of Small Business Management*, 54(1), 187-209. <https://doi.org/10.1111/jsbm.12137>
- Karimi, S., Chizari, M., Biemans, H. J. A., & Mulder, M. (2010). Entrepreneurship education in Iranian higher education: the current state and challenges. *European Journal of Scientific Research*, 48(1), 35-50.
- Kautonen, T., Van Gelderen, M., & Fink, M. (2015). Robustness of the theory of planned behavior in predicting entrepreneurial intentions and actions. *Entrepreneurship theory and practice*, 39(3), 655-674. <https://doi.org/10.1111/etap.12056>
- Kitcharoen, K., & Vongurai, R. (2021). Factors Influencing Customer Attitude and Behavioral Intention Towards Consuming Dietary Supplements. *AU-GSB E-JOURNAL*, 13(2), 94-109.
- Kolvereid, L., & Isaksen, E. (2006). New business start-up and subsequent entry into self-employment. *Journal of business venturing*, 21(6), 866-885. <https://doi.org/10.1016/j.jbusvent.2005.06.008>
- Krueger, J. N. F., Reilly, M. D., & Carsrud, A. L. (2000). Competing models of entrepreneurial intentions. *Journal of business venturing*, 15(5-6), 411-432. [https://doi.org/10.1016/S0883-9026\(98\)00033-0](https://doi.org/10.1016/S0883-9026(98)00033-0)
- Kumar, S., & Das, S. (2019). An extended model of theory of planned behavior: Entrepreneurial intention, regional institutional infrastructure, and perceived gender discrimination in India. *Journal of Entrepreneurship in Emerging Economies*, 11(3), 369-391.
- Liñán, F., & Chen, Y. W. (2009). Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions. *Entrepreneurship theory and practice*, 33(3), 593-617. <https://doi.org/10.1111/j.1540-6520.2009.00318.x>
- Liñán, F., Rodríguez-Cohard, J. C., & Rueda-Cantuche, J. M. (2011). Factors affecting entrepreneurial intention levels: a role for education. *International entrepreneurship and management Journal*, 7, 195-218. <https://doi.org/10.1007/s11365-010-0154-z>
- Liñán, F., & Santos, F. J. (2007). Does social capital affect entrepreneurial intentions?. *International Advances in Economic Research*, 13, 443-453. <https://doi.org/10.1007/s11294-007-9109-8>
- Lopez, T., Alvarez, C., Martins, I., Perez, J. P., & Román-Calderón, J. P. (2021). Students' perception of learning from entrepreneurship education programs and entrepreneurial intention in Latin America. *Academia Revista Latinoamericana de Administración*, 34(3), 419-444. <https://doi.org/10.1108/arla-07-2020-0169>
- Luthans, F., & Ibrayeva, E. S. (2006). Entrepreneurial self-efficacy in Central Asian transition economies: quantitative and qualitative analyses. *Journal of International Business Studies*, 37(1), 92-110. <https://doi.org/10.1057/palgrave.jibs.8400173>
- Manning, M. (2009). The effects of subjective norms on behavior in the theory of planned behavior: A meta - analysis. *British journal of social psychology*, 48(4), 649-705. <https://doi.org/10.1348/014466608x393136>
- Martins, I., & Perez, J. P. (2020). Testing mediating effects of individual entrepreneurial orientation on the relation between close environmental factors and entrepreneurial intention. *International Journal of Entrepreneurial Behavior & Research*, 26(4), 771-791. <https://doi.org/10.1108/ijebr-08-2019-0505>
- Mwasalwiba, E. S. (2010). Entrepreneurship education: a review of its objectives, teaching methods, and impact indicators. *Education+ training*, 52(1), 20-47. <https://doi.org/10.1108/00400911011017663>
- Naktiyok, A., Nur Karabey, C., & Caglar Gulluce, A. (2010). Entrepreneurial self-efficacy and entrepreneurial intention: the Turkish case. *International Entrepreneurship and Management Journal*, 6, 419-435. <https://doi.org/10.1007/s11365-009-0123-6>
- Naushad, M., Faridi, M. R., & Malik, S. A. (2018). Economic development of community by entrepreneurship: an investigation of the entrepreneurial intent and the institutional support to the local community in Al-Kharj region. *Entrepreneurship and Sustainability Issues*, 5(4), 899-913. <https://doi.org/10.9770/jesi.2018.5.4>
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). McGraw-Hill.
- Otache, I. (2019). Entrepreneurship education and undergraduate students' self-and paid-employment intentions: A conceptual framework. *Education+ Training*, 61(1), 46-64.
- Paray, Z. A., & Kumar, S. (2020). Does entrepreneurship education influence entrepreneurial intention among students in HEIs? The role of age, gender, and degree background. *Journal of International Education in Business*, 13(1), 55-72. <https://doi.org/10.1108/JIEB-02-2019-0009>
- Pedroso, C. B., Silva, A. L., & Tate, W. L. (2016). Sales and Operations Planning (S&OP): insights from a multi-case study of Brazilian organizations. *International Journal of Production Economics*, 182, 213-229. <http://dx.doi.org/10.1016/j.ijpe.2016.08.035>
- Perugini, M., & Bagozzi, R. P. (2001). The role of desires and anticipated emotions in goal-directed behaviors: Broadening and deepening the theory of planned behaviour. *British journal of social psychology*, 40(1), 79-98. <https://doi.org/10.1348/014466601164704>

- Phan, P. H., Wong, P. K., & Wang, C. K. (2002). Antecedents to entrepreneurship among university students in Singapore: beliefs, attitudes, and background. *Journal of Enterprising Culture*, 10(02), 151-174.
<https://doi.org/10.1142/s0218495802000189>
- Reuber, A. R., Knight, G. A., Liesch, P. W., & Zhou, L. (2018). International entrepreneurship: The pursuit of entrepreneurial opportunities across national borders. *Journal of International Business Studies*, 49(4), 395-406.
<https://doi.org/10.1057/s41267-018-0149-5>
- Sansone, G., Battaglia, D., Landoni, P., & Paolucci, E. (2021). Academic spinoffs: The role of entrepreneurship education. *International Entrepreneurship and Management Journal*, 17(1), 369-399.
<https://doi.org/10.1007/s11365-019-00601-9>
- Scherer, R. F., Adams, J. S., Carley, S. S., & Wiebe, F. A. (1989). Role model performance effects on development of entrepreneurial career preference. *Entrepreneurship theory and practice*, 13(3), 53-72.
<https://doi.org/10.1177/104225878901300306>
- Schermelleh-Engel, K., Moosbrugger, H., & Müller, H. (2003). Evaluating the Fit of Structural Equation Models: Tests of Significance and Descriptive Goodness-of-Fit Measures. *Methods of Psychological Research*, 8(2), 23-74.
- Shane, S. A., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review*, 25(1), 217-226.
<https://doi.org/10.5465/amr.2000.2791611>
- Shook, C. L., & Bratianu, C. (2010). Entrepreneurial intent in a transitional economy: an application of the theory of planned behavior to Romanian students. *International entrepreneurship and management journal*, 6(3), 231-247.
<https://doi.org/10.1007/s11365-008-0091-2>
- Smith, J. R., & Louis, W. R. (2008). Do as we say and as we do: The interplay of descriptive and injunctive group norms in the attitude-behaviour relationship. *British Journal of Social Psychology*, 47(4), 647-666.
<https://doi.org/10.1348/014466607x269748>
- Solesvik, M. Z. (2013). Entrepreneurial motivations and intentions: investigating the role of education major. *Education+ Training*, 55(3), 253-271.
<https://doi.org/10.1108/00400911311309314>
- Solesvik, M. Z., Westhead, P., Matlay, H., & Parsyak, V. N. (2013). Entrepreneurial assets and mindsets: benefit from university entrepreneurship education investment. *Education+ Training*, 55(8-9), 748-762.
<https://doi.org/10.1108/et-06-2013-0075>
- Souitaris, V., Zerbinati, S., & Al-Laham, A. (2007). Do entrepreneurship programmed raise entrepreneurial intention of science and engineering students? the effect of learning, inspiration, and resources. *Journal of Business Venturing*, 22(4), 566-591. <https://doi.org/10.1016/j.jbusvent.2006.05.002>
- Stenholm, P., Acs, Z. J., & Wuebker, R. (2013). Exploring country-level institutional arrangements on the rate and type of entrepreneurial activity. *Journal of business venturing*, 28(1), 176-193. <https://doi.org/10.1016/j.jbusvent.2011.11.002>
- Stevenson, L., Daoud, Y., Sadeq, T., & Tartir, A. (2010). *Global entrepreneurship monitor: GEM-MENA regional report 2009 (Middle East and North Africa)*. International Development Research Centre.
- Thompson, E. R. (2009). Individual entrepreneurial intent: Construct clarification and development of an internationally reliable metric. *Entrepreneurship theory and practice*, 33(3), 669-694. <https://doi.org/10.1111/j.1540-6520.2009.00321.x>
- Van Gelderen, M., Brand, M., Van Praag, M., Bodewes, W., Poutsma, E., & Van Gils, A. (2008). Explaining entrepreneurial intentions by means of the theory of planned behaviour. *Career development international*, 13(6), 538-559.
<https://doi.org/10.1108/13620430810901688>
- Wanichbancha, K. (2014). *Structural Equation Modeling (SEM) with AMOS* (2nd ed.). Samlada.
- Wennekers, S., Stel, A. V., Thurik, R., & Reynolds, P. (2008). Erratum: Nascent entrepreneurship and the level of economic development. *Small Business Economics*, 24(3), 293-309.
<https://doi.org/10.1007/s11187-005-1994-8>