

# Exploring the nexus between entrepreneur orientation, entrepreneur education, entrepreneur self-efficacy and entrepreneur intention among university students in Thailand

\*Sudawan Somjai<sup>a</sup>, Nuanluk Sangperm<sup>b</sup>, <sup>a</sup>Graduate School, Suan Sunandha Rajabhat University, Bangkok, Thailand, <sup>b</sup>Faculty of Management Science, Kasetsart University Si Racha Campus, Chonburi, Thailand, E-mail: \*Corresponding Author Email: [sudawan.so@ssru.ac.th](mailto:sudawan.so@ssru.ac.th), [nuanluk.sp@hotmail.com](mailto:nuanluk.sp@hotmail.com)

The prime objective of the current study is to explore the nexus between entrepreneur orientation, entrepreneur education, entrepreneur self-efficacy, and entrepreneur intention among university students in Thailand. In order to encourage greater involvement in entrepreneurial activities, policymakers, researchers, and educators need to highlight the factors influencing behaviour and ways to energize entrepreneurial intentions. The results of the study indicate that the issue of entrepreneurship movement in Thailand could be attributed to instability within a political setting and poor execution of socioeconomic policies of consecutive governments, which has contributed to the problem of high levels of unemployment in Thailand. The study is among the first to examine these issues. Therefore, SEM-PLS has been used as a statistical tool to address the research questions and research objectives raised in the current study. The findings of the current study have provided support of the hypothesized results. Therefore, the findings contribute to the existing literature regarding entrepreneurial intention by introducing individual entrepreneurial orientation into the model. (ii) Most of the studies of entrepreneurial intention were conducted outside of the African continent. Specifically, the studies were conducted in developed countries in Europe, America, and Asia. The findings of the current study could practically contribute to government and policy makers as well as to University management in creating policies.

**Key words:** *Entrepreneur Orientation, Entrepreneur Education, Entrepreneur Self-efficacy, Entrepreneur Intention.*

## Introduction

During the last few decades, entrepreneurship as a field of research has attracted researchers, agencies, and policy makers (Chienwattanasook, & Jermisittiparsert, 2019). The primary reason for this interest is the increasing need for entrepreneurs whose efforts in creating novel ideas and turning such ideas into lucrative businesses could boost their country's economic development (Turker & Sonmez Selçuk, 2009; Carter & Goldie, 2018). Other reasons for the increasing interest in the issue of entrepreneurship include the rising rate of unemployment and poverty that became evident during the post-economic slump era of the early 1980's, the slowdown or decline of the agricultural market activities, and the recognition of the capacity of small and medium sized businesses to provide widespread employment and job opportunities to prevent unemployment and eradicate poverty.

Moreover, governments, academics, and researchers believe that entrepreneurship is a significant avenue for economic improvement for both developed and developing countries. Therefore, most policymakers focus on inspiring and motivating entrepreneurship as it is closely associated with innovation and contributes to economic growth through job and wealth creation (Thongrawd, Mee-ngoan, & Jermisittiparsert, 2019). Today's small businesses, specifically newer businesses, are the drivers for entrepreneurship activities, providing not only employment, social and political stability, but also creative and competitive power (Turker & Selçuk, 2009; Nobanee, 2018).

However, one of the challenges facing many developing countries today is how to engage their high numbers of youths in gainful employment. The rising rate of unemployment among graduate youths as a result of an inability to obtain jobs that match their profession and expectations has accordingly become a main focus for both academics and managers. Furthermore, an asymmetry that exists between the ratio of demand for labour and that of the total number of graduates seeking employment also strongly contributes to the rate of unemployed youth. Therefore, this becomes a major challenge facing developing nations. For example, in Thailand, every year a myriad of youths are graduating from various colleges and universities without corresponding job opportunities for them (Akanbi, 2013; Tripopsakul, 2018).

The rising rate of unemployed youths is a major cause of loss in human capital. Human capital is related to the amount of time a person has worked. The longer an individual stays unemployed, the lower the human capital of that person. This means that human capital diminishes when someone is unemployed (Awogbenle & Iwuamadi, 2010). Possibly the main challenge facing unemployed youths is their use of political and military goals (Awogbenle & Iwuamadi, 2010). These youths become goons in the society by engaging in anti-social and hidden political activities.

According to the literature, intention is a predictor of executing a specific behaviour. The Theory of Planned Behaviour (TPB) indicates that individual intention is the best way to predict a behaviour; hence, entrepreneurial intention is the best way to understand the process of entrepreneurship (Kickul & Krueger, 2004). Therefore, this study will investigate some antecedents of students' entrepreneurial intention by measuring three independent variables and one dependent variable; the study will investigate the relationship between students' entrepreneurial orientation, self-efficacy, education, and entrepreneurial intention.

### **Hypothesis Development**

#### ***Entrepreneurial Intention***

Intention is a predictor of individuals' action. Intention encompasses motivational factors which stimulate individuals' behaviour, demonstrating the individuals' effort in planning to convert his/her behaviour into action/practice (Liñán & Santos, 2007). Thus, the chances of performing any particular behaviour depend upon the intention to perform such behaviour. According to Krueger, Reilly, and Carsrud (2000), intentions are the most important predictor of any planned behaviour; entrepreneurial behaviour included. This means that having knowledge about the antecedents of intentions would lead to an understanding of any intended behaviour. Entrepreneurial intention refers to the willingness of a person to execute entrepreneurial behaviour, to involve in entrepreneurial activities, or to be self-reliant (Dohse & Walter, 2010).

This means that without intention someone may not be likely to engage in self-employment. Other variables such as personal and situational factors are generally believed to have an indirect effect on entrepreneurship by affecting attitudes as well as motivation to behave (Krueger et al., 2000). For example, the influence of role models to entrepreneurial intentions would only be effective if beliefs and attitudes (perceived self-efficacy) led to a change in behaviour (Krueger et al., 2000). It takes guts, inner courage, and ambition for someone to start his or her own business. An individual may possess certain qualities or have the potential to be an entrepreneur, but this may not translate to entrepreneurial activities unless he/ she has such intention (Setamanit, 2018).

According to Bird (1989), intention to become an entrepreneur refers to a state of mind of an individual with the purpose of establishing a new firm or adding more value to the existing firm. This indicates that intention is a vital determinant of successful venture creation as well as sustainable firm growth. Bird (1989) further argued that entrepreneurship intention frequently starts from personal needs and wants, as well as the values and beliefs of an entrepreneur. Similarly, people do not embark upon a new venture as a reflex, but they intentionally enter into it (Krueger et al., 2000).

Therefore, investigating individuals' intention to be self-employed would offer a worthwhile means for researchers to understand entrepreneurial stages and forecast entrepreneurship activities in a successful way by taking into account indicators of entrepreneurship intention (Kolvereid & Isaksen, 2006; Zainudin, Ibrahim, Hussain & Hadi, 2017).

To date, various studies have been conducted on entrepreneurial intentions. However, the debate still continues as to which, among the theories, is comprehensive due to the variation in study aims and characteristics. For example, the psychological approach concentrates on various personality attributes/traits as determining factors of intention to be self-employed, these include: risk taking, goal orientation, high need of achievement, internal locus of control, etc. (Ferreira, Raposo, Gouveia Rodrigues, Dinis, & do Paço, 2012). This approach argued that to be an entrepreneur an individual must possess certain psychological attributes. However, the behavioural approach, on the other hand, focusses on certain behaviour by joining intention with the following action (Ajzen, 1991). They argue that personal attitude, perceived behavioural control, as well as perceived feasibility are the determinants of intention to be self-employed (Kolvereid, 1996).

### ***Entrepreneurship Orientation and Entrepreneurial Intention***

Development of the concept of entrepreneurial orientation has been associated with the work of Miller (1983) where he defined it at the firm level. According to Miller, a firm that is called entrepreneurial must employ market and product innovation, and make moderately risky investments. He used three dimensions to identify a firm which is entrepreneurial, these include: innovation, taking risks, and being proactive. Rauch, Wiklund, Lumpkin, and Frese (2009) defined entrepreneurial orientation as "the strategy-making processes that provide organizations with a basis for entrepreneurial decisions and actions". Furthermore, entrepreneurial orientation has become a vital construct that has been widely used in literature related to entrepreneurship. Studies note that at the firm level, entrepreneurial orientation has some influence on the performance of the firm, their profitability, level of growth, as well as product innovations.

However, Lumpkin and Dess (1996) argued that entrepreneurial orientation is considered to have five dimensions which have been used for identifying attributes as well as identifying the primary processes of entrepreneurship orientation. According to Lumpkin and Dess, these dimensions are risk taking, being innovative, proactive, competitive aggressiveness, and autonomy. Rauch et al. (2009) specifically defined these five behaviours as follows: autonomy refers to taking action independently by entrepreneurial leaders and making sure it reaches fruition, whereas competitive aggressiveness refers to the firm's strong effort to be more successful than its rivals. Innovativeness refers to the firms' tendency to be creative

through new products and/or service innovation as well as being leaders in technology through research and development. Proactive behaviour, on the other hand, is specifically defined as “an opportunity-seeking, forward-looking perspective characterized by new products and services ahead of the competition and acting in anticipation of future demand”. Lastly, risk-taking refers to being bold enough to venture into new business, to borrow a large amount of money and/or commit many resources into a new business venture in an environment that is not certain.

Researchers have found that, in general, the entrepreneurial orientation construct including these five dimensions can be considered collectively (Lumpkin & Dess, 1996) or depending on context (Lumpkin & Dess, 1996, 2001). Furthermore, the above dimensions were used to measure firms’ entrepreneurial performance whereby the firms with high scores in these dimensions would be considered as entrepreneurial (Bolton & Lane, 2012). However, since an individual’s attitude or behaviour is used to define a small entrepreneurial organization, the entrepreneurial orientation aspects or dimensions could be applied to an individual (Bolton & Lane, 2012). For example, when investigating students’ intention to become entrepreneurs, applying these five dimensions to them would not only be reasonable, but useful when designing an efficient method for them (Bolton & Lane, 2012). Therefore, an individual entrepreneurial orientation is considered as an individuals’ personal qualities and/or attitudes that will enable him to be self-employed.

Studies show that particular individual personal attributes or traits increase a person’s probability of being an entrepreneur. Because individual traits are stable across time and are not subject to frequent changes, they are commonly associated with person’s entrepreneurial intention. A study conducted in the health sector examined 367 health care professionals (HCP). The study investigated their entrepreneurial orientation and their motivations to become entrepreneurs, thereby comparing cognitive and psychological features of entrepreneurial HCP’s with non- entrepreneurial HCP’s. They found that those who start-up businesses possess certain psychological attributes that assist their entrepreneurial activities. Specifically, health care professionals with an intention to be self-employed in the near future have certain qualities such as creativity, innovation, self-achievement, autonomy, and social status. Moreover, the present research will look at entrepreneurial orientation at the individual level, thereby investigating certain characteristics of students in relation to their intention to start businesses.

H1: Entrepreneurial orientation has a significant impact on entrepreneurial intention.

### ***Entrepreneurial Education and Entrepreneurial Intentions***

Entrepreneurial education refers to the training given to an individual's regarding entrepreneurship; it is the skills and/or knowledge an individual obtains in a given field over a period of time. According to Ediagbonya (2013), an entrepreneurship program is a type of training which helps participants to develop their entrepreneurial attributes by supporting them with services to be able to successfully embark on new ventures. Thus, entrepreneurship education goes beyond guiding someone on how to start and run a venture, by inspiring students' creativity, critical thinking, and advancing their sense of self-worth and accountability. However, there are several views regarding the meaning of entrepreneurial education which, as a result, means the teaching of entrepreneurship is subject to different approaches. According to Heinonen (2007), the aims of entrepreneurship education fall under three categories: learning for the purpose of having knowledge of entrepreneurship, learning for the objective of acting or behaving as an entrepreneur, and learning for the purpose of becoming an entrepreneur.

The work of Fayolle and Gailly (2008) proposed similar categories regarding the processes of learning entrepreneurship and they specifically suggested three categories. The first category is learning with the aim of becoming an entrepreneurial person and having expectations of attitude and intention changes to become an entrepreneur. The second category is learning to be an entrepreneur by obtaining skills and knowledge as well as focusing on technical or professional aspects. The final category is learning for the purpose of being an academic; here the focus is on research. However, irrespective of the purpose of acquiring entrepreneurial knowledge, the importance of such knowledge to entrepreneurial activities should not be overlooked. Dohse and Walter (2010) argued that entrepreneurial courses have a positive relationship with the intention to be self-employed. They further provide three reasons as to why entrepreneurial courses become antecedents of entrepreneurial intention. First, students who participated in entrepreneurial classes, learnt techniques to generate ideas on how to start a business, (e.g. innovative technique) and analysed whether such ideas are worthwhile (e.g. business analyses). Another reason is that the participants contemplate the degree of departments' consideration of self-reliance as an authorized career choice.

Lastly, entrepreneurship education offers students a way to improve business ideas and make opportunities more lucrative than they otherwise would have been. Accordingly, entrepreneurial education and experience could help an individual to get higher returns from entrepreneurial businesses. Studies have revealed that, when compared with developed countries, entrepreneurs in less developed nations (women in particular) have less experience in terms of conducting business. Similarly, entrepreneurs in developed countries are more highly educated than those in underdeveloped nations. For example, in the USA, the interest in entrepreneurship as a field of study began during the early 1980s, and this contributed to

the introduction of several courses as well as degrees at different levels (Iacobucci & Micozzi, 2012). This trend was later followed by most of the European countries (Iacobucci & Micozzi, 2012). More recently, studies have demonstrated the vital role played by entrepreneurship education in encouraging the entrepreneurial spirit among students (Iacobucci & Micozzi, 2012). Indeed, those students who participated in entrepreneurship programs or courses had a higher probability of engaging in self-employment after graduation than those who did not attend. According to Menzies and Paradi (2003), entrepreneurial education, specifically in the area of science and technology, is significant for the enhancement of students' innovation skills.

Furthermore, the literature states that experience in business plays an important role in successful entrepreneurship, and studies have found that a minimum of three years of business training or experience is enough to improve an individual's entrepreneurship. Other studies have found that education and skills acquired at a tertiary level have a positive effect on an individual's performance in entrepreneurship. Similarly, another study found that education can influence students' attitude towards entrepreneurship and their entrepreneurial self-efficacy. Thus, the absence of entrepreneurship education is associated with a low level of students' entrepreneurial intentions (Gieure, Benavides-Espinosa, & Roig-Dobón, 2019).

H2: Entrepreneurial education has significant impact on entrepreneurial intention.

### ***Entrepreneurial education, Entrepreneurial orientation, Entrepreneurial self-efficacy and Entrepreneurial Intention***

Self-efficacy plays a significant role in goal setting by influencing goal commitment and performance. According to the literature, self-efficacy is the belief that one can successfully execute. It becomes an important concept for explaining changes in evaluation procedures and decisions that increase the intention of becoming an entrepreneur, as well as the decisions that follow to convert such intention into action or behaviour. The term self-efficacy came from the work of the Theory of Social Learning, and it refers to an individual's belief regarding his or her ability or capacity to execute a particular task. Similarly, scholars have defined the term self-efficacy as a task-specific construct, which means that individuals can only have self-efficacy in certain field or area. For example, the self-efficacy of a particular individual can be high in a specific area/field but could be low in another domain. Furthermore, the concept of self-efficacy is related to self-perception. According to the literature, self-perception of an individual's capacity/capability has an influence on their intention. Likewise, self-efficacy has an impact on an individual's belief in themselves regarding the attainment of a particular goal (Boyd & Vozikis, 1994). People's abilities

regarding selection, ambition, exertion, and perseverance when facing difficulties is influenced by their self-perception (Margahana & Negara, 2019). This means that if a particular person believes that he or she cannot perform some task or perceives a task as beyond his or her capability, that person will not perform the behaviour or task even though perceived social demand regarding such behaviour may be present (Boyd & Vozikis, 1994).

People having self-belief regarding their competencies as well as their ability to employ/apply those competencies in carrying out a particular task is connected with self-efficacy. These beliefs may be precise or may be an estimation on how to recruit cognitive, physical, as well as their emotional resources to execute a particular task. Therefore, the concept of self-efficacy is wide and all-encompassing. This is because it is related to an individual's feelings and beliefs regarding carrying out and easily accomplishing certain tasks to achieve their desired results. Some researchers use self-efficacy and the concept of locus of control interchangeably. Self-efficacy differs from the concept of locus of control; while locus of control can be generalized and covers several situations, self-efficacy can be attributed to task-specific concepts. Thus, a person's internal locus of control may be high and strong, but his self-efficacy regarding a particular task may be low or poor. Moreover, some researchers believe that an individual's self-efficacy belief can be increased and strengthened through different means. For example, Wood and Bandura (1989) discovered that self-efficacy belief can be increased through four different ways. The first way is through mastery experience. Secondly, a person may develop their self-efficacy belief by modelling which is learning by observation. The third way of increasing self-efficacy belief is through social persuasion. Lastly, self-efficacy may be increased through judgments based on one's physiological status.

In some literature, 'self-efficacy' is regarded as the ability or power to produce a desired effect, and it is believed to be one of the essential factors in entrepreneurial intention. Liñán, Rodríguez-Cohard, and Rueda-Cantuche (2011) state that one of the vital determinants of successful entrepreneurial behaviours is self-efficacy. Some researchers are of the view that entrepreneurial self-efficacy helps entrepreneurs to manage precariousness as well as difficulties in the process of entrepreneurship (Wilson, Kickul, & Marlino, 2007). This indicates that those with entrepreneurial self-efficacy have potential and are capable of engaging in entrepreneurial activities (Bagheri & Pihie, 2011; Boyd & Vozikis, 1994). In further analysis regarding the influence of self-efficacy on intention to become entrepreneurial, Gatewood and associates discovered that self-efficacy positively affects the ability of budding entrepreneurs to come up with new ventures. According to the literature, self-efficacy is related to the concept of perceived feasibility as well as entrepreneurship intention formation. Through the use of meta-analytic methodology, Rauch and Frese (2007) discovered that entrepreneurial self-efficacy regarding beginning a new business is an important factor in increasing the probability of actually starting business activities.

A similar study conducted earlier by Akanbi (2013), which used a sample of 470 students who were vocationally-based in public colleges of education in Nigeria, found similar results with a P value at the 0.05 significance level. This shows that entrepreneurial self-efficacy among students has a positive effect on their intention to be self-employed. However, some studies regarding entrepreneurial self-efficacy in relation to business start-up have examined the effect of gender. For instance, Chen, Greene, and Crick (1998) discovered that the likelihood of having high entrepreneurial self-efficacy was greater among male students compared to their female counterparts. This finding is consistent with more recent studies (Wilson et al., 2007). Further research in regards to gender differences has shown that past experience significantly increases individual self-efficacy among males, but with regards to intention to become self-employed, females have a higher intention to become entrepreneurs than their male counterparts. Therefore, to summarise, entrepreneurial self-efficacy plays a major role in individuals' intention to become an entrepreneur.

H3: Entrepreneurial self-efficacy has a significant impact on entrepreneurial intention.

H4: Entrepreneurial education has a significant impact on entrepreneurial self-efficacy.

H5: Entrepreneurial orientation has a significant impact on entrepreneurial self-efficacy.

H6: Entrepreneurial self-efficacy mediates the relationship between entrepreneurial education and entrepreneurial intention.

H7: Entrepreneurial self-efficacy mediates the relationship between entrepreneurial orientation and entrepreneurial intention.

## **Methodology**

Researchers adopt several tools and procedures for analysing data, testing hypotheses, and refining theories, which are referred to as research methodology. In this research study, inferential and descriptive statistics were used for data analysis. The method of PLS-SEM (Partial Least Squares Structural Equation Modelling) was used to analyse the data. The questionnaire was coded after collection of data and entered to SPSS v18 (Statistical Package for the Social Sciences). This was followed by the steps to analyse the data. In the initial step, the data was screened to identify errors. The frequency test was run for every variable to assess the expected missing value through use of means. Demographics were described and compared through descriptive statistics. The final step was the use of PLS-SEM; this is regarded as the second-generation approach of SEM. It has become an efficient and effective approach for analysing the cause and effect association among unobserved constructs (Hair, Ringle, & Sarstedt, 2011). Complicated modelling based on multiple variable analysis of associations between observed and unobserved variables is involved in the PLS-SEM approach (Vinzi, Chin, Henseler, & Wang, 2010). It is a flexible technique with superior features over other techniques. It is strong in building statistical models, estimation, and

theory prediction (Lowry & Gaskin, 2014). Through use of PLS-SEM modelling, a valid and reliable confirmatory factor analysis can be achieved. Questionnaires were distributed with the help of area stratified random sampling. The response rate is given in Table 1.

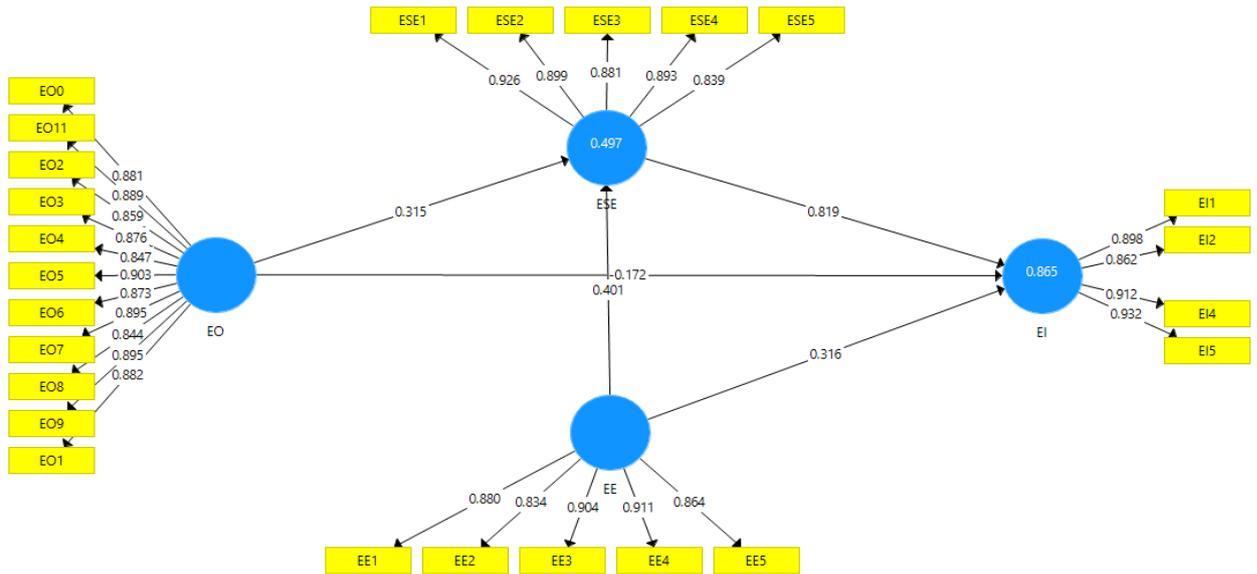
**Table 1:** Response Rate

Response	Frequency/Rate
Total questionnaires distributed among students	345
Total questionnaires received as completed	297
Total questionnaires identified as true responses	284
Total questionnaires excluded due to errors	35
Total rate of response	86%
Total rate of valid response	82.3 %

## Results

The choice of the PLS-SEM method was based on its ability to perform better estimation as compared with the first generation and regression models with respect to mediation effects and co-variance. This study has adopted the PLS-SEM approach based on the rationale of choosing a suitable approach for structural model assessment. The research model is complex, and PLS-SEM can estimate it efficiently. According to Haenlein and Kaplan (2004), it is a suitable approach when having a greater number of unobserved independent variables defining a smaller number of unobserved dependent variables. It can be referred to as a multivariate analysis, which can be executed in strategic management, marketing, and other areas of the social sciences. In PLS-SEM, there is no limitation regarding the interaction approach adopted to test moderation as compared with other techniques of measuring covariance. In this way, this approach is a suitable alternative for estimating the influence of moderation (Vinzi et al., 2010). Moreover, this approach allows for the incorporation of chains of effects including mediation and some other complicated relations (Lowry & Gaskin, 2014). In this research, SmartPLS v3.0 has been used for estimation of outer model (including convergent validity, reliability, and discriminant validity) and inner model (including effect size, coefficient of determination, path coefficient significance, and predictive relevance).

**Figure 1.** Measurement model



**Table 1:** Outer Loadings

	EE	EI	EO	ESE
EE1	0.880			
EE2	0.834			
EE3	0.904			
EE4	0.911			
EE5	0.864			
EI1		0.898		
EI2		0.862		
EI4		0.912		
EI5		0.932		
EO0			0.881	
EO11			0.889	
EO2			0.859	
EO3			0.876	
EO4			0.847	
EO5			0.903	
EO6			0.873	
EO7			0.895	
EO8			0.844	
EO9			0.895	

ESE1				0.926
ESE2				0.899
ESE3				0.881
ESE4				0.893
ESE5				0.839
EO1			0.882	

The initial step in the PLS-SEM approach is to estimate the outer model, which is also called the measurement model. The measurement of this component enables the determination of item loading and the way they are related to their respective constructs. It is confirmed through the estimation of the outer model that the survey items measured what they intended to. This ensures validity and reliability of the model. The two main criteria involved in the PLS-SEM approach are validity and reliability, which estimate the outer model (Hair Jr, Claudia, Pieper, & Baldauf, 2013; Hulland, 1999). It is the reliability and validity which allow for conclusions about the types of associations among the constructs. The individual item reliabilities indicate the suitability of the outer model. Internal consistency and indicator reliability are involved in composite reliability. The use of AVE is linked with the individual constructs and convergent validity. The discriminant validity has is based on the Fornell-Larcker criterion and the outer loadings indicator. The consistency of the results of similar test items is measured through internal consistency; it estimates whether the proposed items for measuring the constructs give similar values or not (Hair Jr et al., 2013). By estimating CR, the study has assessed the internal consistency reliability. The equal construct loading indicator is not assumed in CR as opposed to Cronbach's alpha (Hair Jr et al., 2013). The value must lie within the range of 0-1. The standard value should be equal to, or greater than, 0.60 (Henseler, Ringle, & Sinkovics, 2009). A value equal to, or greater than, 0.70 is considered sufficient. A value in the range of 0.6 – 0.7 is considered average. However, a value in the range of 0.70-0.90 is considered more than sufficient. The convergent validity is related to the association between measures of the same construct, which are not linked theoretically (Henseler et al., 2009). The degree of association among the measures of the same construct is reflected by convergent validity (Hair Jr et al., 2013). The standard value of 0.50 or above is used to identify the convergent element in construct estimation (Henseler et al., 2009). A value of 0.50 indicates that AVE is sufficient. Half of the variance of indicators is explained by the latent construct and this therefore indicates a sufficient level of convergent validity (Hair Jr et al., 2013).

The discriminant validity is related to the extent of differentiation among the constructs. The constructs measured which are not theoretically linked with each other are referred as discriminant validity (Hair Jr et al., 2013). The criterion of Fornell and Larcker (1981) is the suitable approach for the estimation of discriminant validity (Hair Jr et al., 2013). The

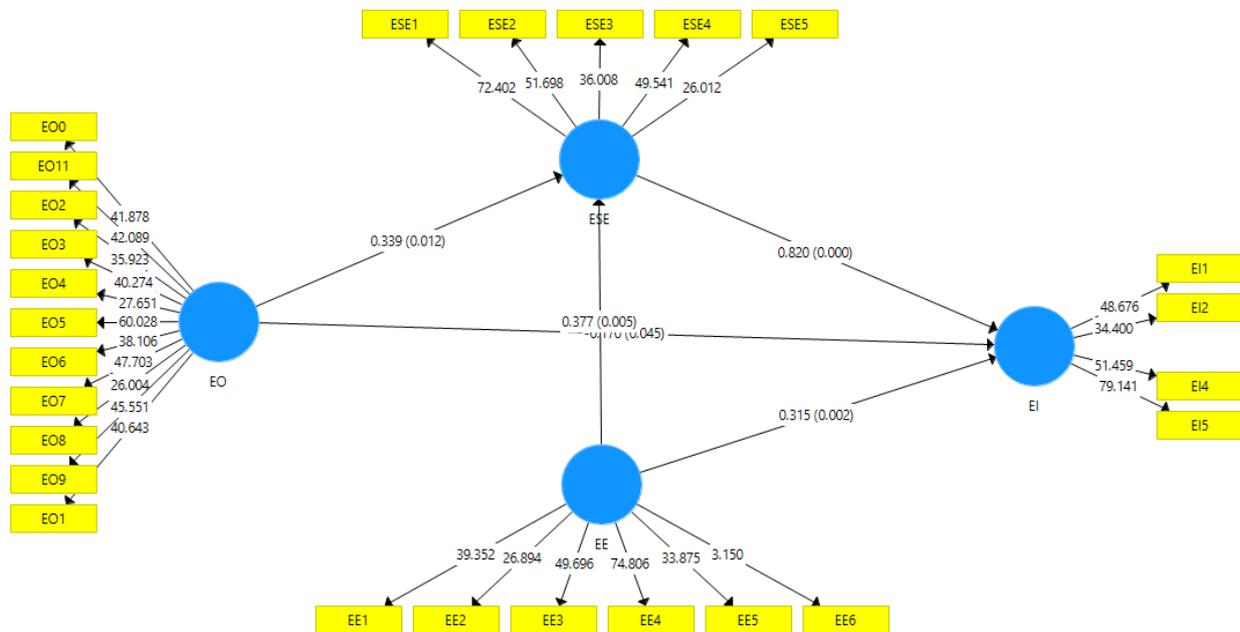
method of examining cross-loadings is considered advanced as there can be more constructs indicating discriminant validity.

**Table 3:** Reliability

	Cronbach's Alpha	rho_A	CR	(AVE)
EE	0.926	0.930	0.944	0.773
EI	0.923	0.924	0.945	0.813
EO	0.970	0.971	0.973	0.769
ESE	0.933	0.934	0.949	0.789

An important criterion for the estimation of the contribution of each indicator is through outer factor loading. This research adopted outer factor loading for estimation. The standard value of 0.50 or above was used for the examination of outer loadings. It was stressed by Hair Jr et al. (2013) that values in the range of 0.40-0.70 should be examined carefully. The item should be deleted when the value of AVE and CR increases. The structural model is estimated following an indication of the absence of a collinearity issue. The basic criterion for structural model assessment in PLS-SEM is the significance of the path coefficients, effect size ( $f^2$ ) coefficient determination ( $R^2$ ), and predictive relevance ( $Q^2$ ).

**Figure 2.** Structural Model



This research adopted the method of bootstrapping. This was used to estimate the path model of association between the dependent and exogenous variables in a direct way without incorporating a mediating variable. The t-values and path coefficients were included in the bootstrapping and in the PLS-SEM algorithm (Hair Jr et al., 2013). The path model was later

estimated when incorporating the mediating factors. It focused on whether the mediator influenced the relationship between the dependent and independent variables significantly or not. It is not required to confirm the influence of mediation. The two path coefficients significance values are multiplied and divided by standard error, which estimates the indirect significance effect.

**Table 4:** Direct results

	(O)	(M)	(STDEV)	T Statistics	P Values
EE -> EI	0.645	0.644	0.158	4.070	0.000
EE -> ESE	0.401	0.398	0.154	2.596	0.009
EO -> EI	0.086	0.089	0.164	0.526	0.599
EO -> ESE	0.315	0.320	0.159	1.985	0.047
ESE -> EI	0.819	0.812	0.048	17.125	0.000

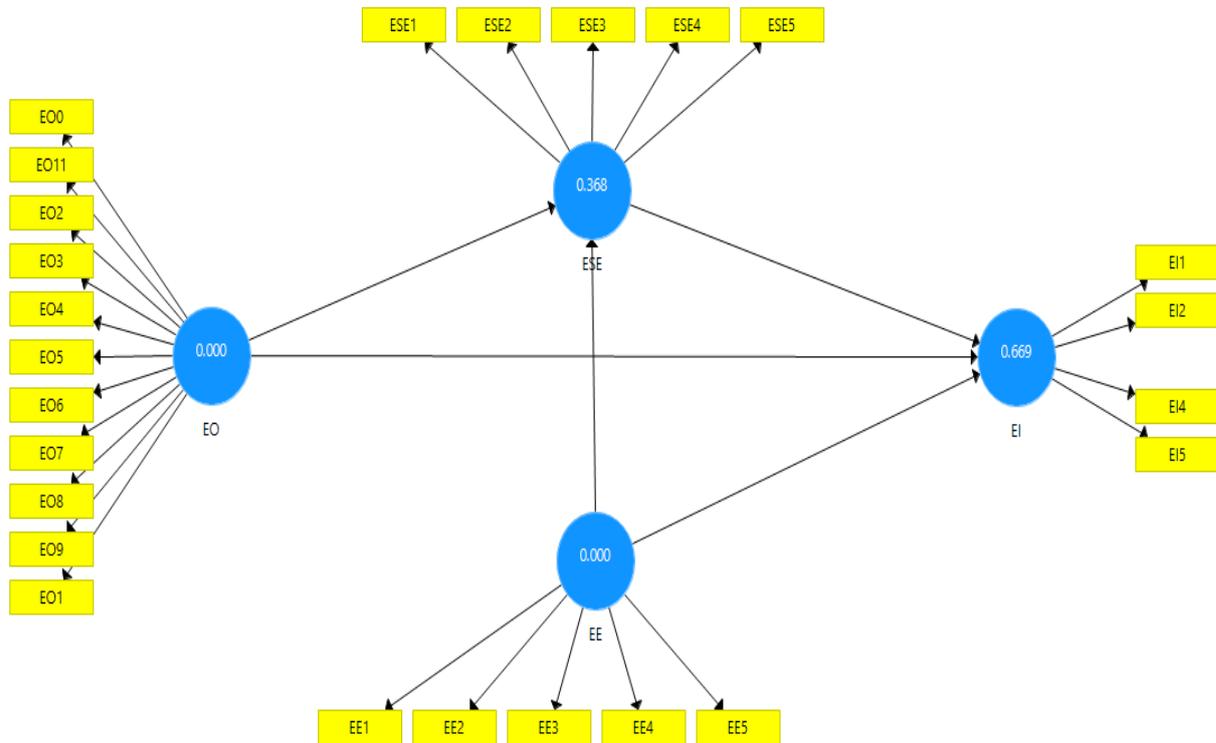
The results were presented using a systematic analysis of structural modelling. All seven hypotheses were tested in a comprehensive way. The estimate of direct associations between the dependent and independent variables was completed in the inner model assessment. The PLS-SEM algorithm was used to examine the path coefficient. The significance of the relationship was estimated through the bootstrapping process of PLS-SEM in SmartPLS 3.0. The number of cases used was the original number of cases i.e. 5000 for bootstrapping samples (Hair Jr et al., 2013). The focus of the first model was on the estimation of direct associations between the dependent and independent variables (Hypotheses 1 to 5). Except for the second hypothesis, all of the hypotheses were significantly supported. The second model involved the incorporation of a mediator between the dependent and independent variables (Hypotheses 6 to 7). Following this, the association between the dependent variables and mediators were estimated.

**Table 5:** Mediation

	(O)	(M)	(STDEV)	T Statistics	P Values
EE -> ESE -> EI	0.328	0.323	0.127	2.593	0.010
EO -> ESE -> EI	0.258	0.258	0.126	2.045	0.041

The predictive relevance ability of the model is a part of the structural model assessment. The criterion of Stone-Geisser has been used for estimating predictive relevance. This method assumes that the predictive evidence is provided through the inner model for dependent unobserved indicators of the construct (Henseler et al., 2009). The test of Stone-Geisser's Q2 can be used for assessing predictive relevance estimated through the process of blindfolding (Hair Jr et al., 2013; Henseler et al., 2009). The Stone-Geisser test was used in the current study to determine Q2 using the process of blindfolding to attain the redundancy measure of cross-validating the endogenous unobserved construct (Hair Jr et al., 2013).

**Figure 3. Q<sup>2</sup>**



**Table 6: Predictive Relevance Ability**

	Q <sup>2</sup> (=1-SSE/SSO)
<b>EI</b>	0.669
<b>ESE</b>	0.368

### Discussion and Conclusion

This will pave the way for, and create an environment open to, entrepreneurial activities and venture creation. Once students have knowledge on entrepreneurship, they would automatically be encouraged to become entrepreneurs. However, for governments to ensure venture creation in new generations there is a need for provision of funding and other supporting structures as well as the removal of the stumbling blocks that lay in the path of an entrepreneurial career (Bagheri & Pihie, 2011). Similarly, the present results suggest to universities that one of the ways to enhance an entrepreneurial mind-set among students is by providing entrepreneurial education in an early stage. This could also lead to entrepreneurial self-efficacy which will then increase their intention to become entrepreneurs (Akanbi, 2013). The findings may also help instructors and tutors to design their course content to be practically-oriented and proactive enough to encourage students' entrepreneurial intention. Furthermore, more programs and workshops related to entrepreneurship should be organised within universities so as to improve students' knowledge in the areas of business proposal

and managing small businesses. Lastly, the findings of this study provide insight to guidance and counselling experts within universities. These findings provide them with an understanding to take notice variables such as entrepreneurial orientation and self-efficacy while counselling their students and/or building their intention to be self-employed.

The present study examined the relationship between students' entrepreneurial orientation, entrepreneurial education, self-efficacy, and entrepreneurial intention. Moreover, the findings of this study have several implications such as (i) theoretical implications and (ii) policy implications, which are discussed in the following sections. The findings of the present study demonstrate that entrepreneurial intention can be tested with entrepreneurial orientation, entrepreneurial education, and self-efficacy. Moreover, the results of the current study contribute to the literature as well as theory development in different ways. Regarding entrepreneurial orientation and entrepreneurial intention, several studies have been conducted. Most of these studies focused on entrepreneurial orientation at a firm level and have used three to five entrepreneurial orientation dimensions to measure the performance of a firm. However, the present study applied these three dimensions (proactiveness, willingness to take risks, and innovativeness) on individuals in order to measure their entrepreneurial intention. Therefore, the findings contribute to the existing literature regarding entrepreneurial intention by introducing individual entrepreneurial orientation into the model. Most previous studies of entrepreneurial intention were conducted outside of the African continent. Specifically, the studies were conducted in developed countries in Europe, America, and Asia.

The findings of the current study practically contribute to the government, policy makers, and also to university management in creating policies. For example, the present findings demonstrate a positive relationship between entrepreneurship education and students' entrepreneurial intention is helpful for governments to know. This may mean that an increase in entrepreneurial training/programs could lead to a greater increase in students' intention to be self-employed. Furthermore, the findings demonstrate the role that self-efficacy plays, as well as entrepreneurial orientation, on students' intention to start businesses. Moreover, all the three independent variables are correlated, and the results demonstrate the role of education in improving both entrepreneurial orientation as well as self-efficacy.

## REFERENCES

- Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, 50(2), 179-211.
- Akanbi, S. T. (2013). *Familial factors, personality traits and self-efficacy as determinants of entrepreneurial intention among vocational based college of education students in Oyo State, Nigeria*. Paper presented at the The African Symposium.
- Awogbenle, A. C., & Iwuamadi, K. C. (2010). Youth unemployment: Entrepreneurship development programme as an intervention mechanism. *African Journal of Business Management*, 4(6), 831-835.
- Bagheri, A., & Pihie, Z. A. L. (2011). Entrepreneurial leadership: towards a model for learning and development. *Human Resource Development International*, 14(4), 447-463.
- Bird, B. J. (1989). *Entrepreneurial behavior*: Scott Foresman & Company.
- Bolton, D., & Lane, M. D. (2012). Individual entrepreneurial orientation: Development of a measurement instrument. *Education+ Training*, 54(2/3), 219-233.
- 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.
- 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.
- Carter, M. A., & Goldie, D. (2018). Educational Media: Potential impacts on tertiary students' mental health. *International Journal of Innovation, Creativity and Change* Volume 3, Issue 3, December,
- Chienwattanasook, K. & Jermstiparsert, K. (2019). Impact of Entrepreneur Education on Entrepreneurial Self-Employment: A Case Study from Thailand. *Polish Journal of Management Studies* 19(1), 106-116.
- Dohse, D., & Walter, S. G. (2010). The role of entrepreneurship education and regional context in forming entrepreneurial intentions: Document de treball de l'IEB.
- Ediagbonya, K. (2013). The roles of entrepreneurship education in ensuring economic empowerment and development. *Journal of business administration and education*, 4(1).
- 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.



- Ferreira, J. J., Raposo, M. L., Gouveia Rodrigues, R., Dinis, A., & do Paço, A. (2012). A model of entrepreneurial intention: An application of the psychological and behavioral approaches. *Journal of Small Business and Enterprise Development*, 19(3), 424-440.
- Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics: SAGE Publications Sage CA: Los Angeles, CA.
- Gieure, C., Benavides-Espinosa, M. d. M., & Roig-Dobón, S. (2019). Entrepreneurial intentions in an international university environment. *International journal of Entrepreneurial Behavior & research*.
- Haenlein, M., & Kaplan, A. M. (2004). A beginner's guide to partial least squares analysis. *Understanding statistics*, 3(4), 283-297.
- Hair, Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing theory and Practice*, 19(2), 139-152.
- Hair Jr, B., Claudia, J. F., Pieper, T. M., & Baldauf, A. (2013). Exploring the effect of distinct family firm reputation on consumers' preferences. *Journal of Family Business Strategy*, 4(1), 3-11.
- Heinonen, J. (2007). An entrepreneurial-directed approach to teaching corporate entrepreneurship at university level. *Education+ Training*, 49(4), 310-324.
- Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing *New challenges to international marketing* (pp. 277-319): Emerald Group Publishing Limited.
- Hulland, J. (1999). Use of partial least squares (PLS) in strategic management research: a review of four recent studies. *Strategic management journal*, 20(2), 195-204.
- Iacobucci, D., & Micozzi, A. (2012). Entrepreneurship education in Italian universities: trend, situation and opportunities. *Education+ Training*, 54(8/9), 673-696.
- Jermisittiparsert, K. & Wajeetongratana, P. (2019). The Role of Organizational Culture and It Competency in Determining the Supply Chain Agility in the Small and Medium-Size Enterprises. *International Journal of Innovation, Creativity and Change*, 5(2), 416-431.
- Kickul, J., & Krueger, N. (2004). A cognitive processing model of entrepreneurial self-efficacy and intentionality. *Frontiers of entrepreneurship research*, 2004, 607-617.
- Kolvereid, L. (1996). Prediction of employment status choice intentions. *Entrepreneurship Theory and practice*, 21(1), 47-58.



- Kolvereid, L., & Isaksen, E. (2006). New business start-up and subsequent entry into self-employment. *Journal of business venturing*, 21(6), 866-885.
- Krueger, N. F., Reilly, M. D., & Carsrud, A. L. (2000). Competing models of entrepreneurial intentions. *Journal of business venturing*, 15(5-6), 411-432.
- 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(2), 195-218.
- Liñán, F., & Santos, F. J. (2007). Does social capital affect entrepreneurial intentions? *International Advances in Economic Research*, 13(4), 443-453.
- Lowry, P. B., & Gaskin, J. (2014). Partial least squares (PLS) structural equation modeling (SEM) for building and testing behavioral causal theory: When to choose it and how to use it. *IEEE transactions on professional communication*, 57(2), 123-146.
- Lumpkin, & Dess, G. G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of management review*, 21(1), 135-172.
- Lumpkin, & Dess, G. G. (2001). Linking two dimensions of entrepreneurial orientation to firm performance: The moderating role of environment and industry life cycle. *Journal of business venturing*, 16(5), 429-451.
- Margahana, H., & Negara, S. T. (2019). SELF EFFICACY, SELF PERSONALITY AND SELF CONFIDENCE ON ENTREPRENEURIAL INTENTION: STUDY ON YOUNG ENTERPRISES. *Journal of Entrepreneurship Education*, 22(1).
- Menzies, T. V., & Paradi, J. C. (2003). Entrepreneurship education and engineering students: Career path and business performance. *The International Journal of Entrepreneurship and Innovation*, 4(2), 121-132.
- Miller, D. (1983). The correlates of entrepreneurship in three types of firms. *Management science*, 29(7), 770-791.
- Nobanee, H. (2018). Efficiency of working capital management and profitability of UAE construction companies: size and crisis effects. *Polish Journal of Management Studies*, 18 (2), 209-215.
- Rauch, A., & Frese, M. (2007). Let's put the person back into entrepreneurship research: A meta-analysis on the relationship between business owners' personality traits, business creation, and success. *European Journal of work and organizational psychology*, 16(4), 353-385.



- Rauch, A., Wiklund, J., Lumpkin, G. T., & Frese, M. (2009). Entrepreneurial orientation and business performance: An assessment of past research and suggestions for the future. *Entrepreneurship Theory and practice*, 33(3), 761-787.
- Setamanit, S. (2018). Evaluation of outsourcing transportation contract using simulation and design of experiment. *Polish Journal of Management Studies*, 18 (2), 300-310.
- Tripopsakul, S. (2018). Social media adoption as a business platform: an integrated TAM-TOE framework. *Polish Journal of Management Studies*, 18(2), 350-362.
- Turker, D., & Selçuk, S. (2009). Which factors affect entrepreneurial intention of university students? *Journal of European Industrial Training*, 33(2), 142-159.
- Turker, D., & Sonmez Selçuk, S. (2009). Which factors affect entrepreneurial intention of university students? *Journal of European Industrial Training*, 33(2), 142-159.
- Vinzi, V. E., Chin, W. W., Henseler, J., & Wang, H. (2010). *Handbook of partial least squares*: Springer.
- Wilson, F., Kickul, J., & Marlino, D. (2007). Gender, Entrepreneurial Self-Efficacy, and Entrepreneurial Career Intentions: Implications for Entrepreneurship Education. *Entrepreneurship Theory and practice*, 31(3), 387-406.
- Wood, R., & Bandura, A. (1989). Social cognitive theory of organizational management. *Academy of management review*, 14(3), 361-384.
- Zainudin, Z., Ibrahim, I., Hussain, H. I. & Hadi, A.R.A (2017) Debt and Financial Performance of REITs in Malaysia: An Optimal Debt Threshold Analysis, *Jurnal Ekonomi Malaysia (Malaysian Journal of Economics)*, 51, (2), 63 – 74.