



**THE MODERATING EFFECT OF  
ENTREPRENEURSHIP PROGRAM ON THE  
FACTORS AFFECTING ENTREPRENEURIAL  
INTENTION AMONG BUSINESS AND  
ENGINEERING STUDENTS OF SELECTED  
MALAYSIAN UNIVERSITIES**

by

**KHADEEJA ABDUL SALAM TAHA  
(1633012167)**

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### DECLARATION OF THESIS

Author's Full Name : KHADEEJA ABDUL SALAM TAHA  
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\_\_\_\_\_  
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## LIST OF ABBREVIATIONS

|        |  |
|--------|--|
| AT     | Attitude Toward Behavior                             |
| EP     | Entrepreneurship program                             |
| EIQ    | Intention Questionnaire                              |
| GEM    | Global Entrepreneurship Monitor                      |
| HCT    | Human Capital Theory                                 |
| MECD   | Ministry of Entrepreneur and Cooperative Development |
| PBC    | Perceived Behavioral Control                         |
| PNS    | Perbadanan Nasional Berhad                           |
| SEE    | Shapero's Entrepreneurial Event model                |
| SME    | Small and Medium Enterprises                         |
| SN     | Subjective Norms                                     |
| SPSS   | Statistical Package for the Social Sciences          |
| TEA    | Total Entrepreneurial Activity                       |
| TPB    | Theory of Planned Behavior                           |
| TRA    | Theory of Reasoned Action                            |
| UniMAP | Universiti Malaysia Perlis                           |
| UUM    | Universiti Utara Malaysia                            |

**Kesan Moderasi Program Keusahawanan terhadap Faktor-Faktor yang Mempengaruhi Niat Keusahawanan di kalangan Pelajar Perniagaan dan Kejuruteraan Universiti Malaysia**

**ABSTRAK**

Kajian ini menggunakan niat keusahawanan sebagai pemboleh ubah bergantung, manakala pembolehubah bebas ialah sikap, norma subjektif dan kawalan tingkah laku. Pembolehubah moderasi dalam kajian ini adalah metodologi pengajaran keusahawanan. Niat keusahawanan adalah keazaman yang berkaitan dalam penciptaan usaha. Sikap pula bermaksud pandangan positif atau daya saing seseorang terhadap penciptaan usaha baru. Norma subjektif adalah pandangan keluarga terdekat atau rakan sekerja mengenai keputusan seseorang untuk melibatkan diri dalam aktiviti keusahawanan. Kawalan tingkah laku yang dilihat adalah kemudahan untuk meneroka perniagaan baru. Selain itu, kaedah pengajaran keusahawanan adalah pendekatan pengajaran proses keusahawanan. Populasi kajian terdiri daripada 11,378 mahasiswa perniagaan dan mahasiswa kejuruteraan. Sebanyak 754 soal selidik telah diedarkan kepada responden melalui e-mel dan sebanyak 533 telah dikembalikan semula (71%). Kajian ini menggunakan kaedah tinjauan kuantitatif deskriptif untuk mengkaji niat keusahawanan pelajar-pelajar Sarjana Perniagaan dan Kejuruteraan dari Universiti Malaysia Perlis (UniMAP) dan Universiti Utara Malaysia (UUM). Kajian ini menunjukkan bahawa sikap, norma subjektif, kawalan tingkah laku yang dilihat dan program keusahawanan semuanya mempunyai hubungan positif secara langsung dengan niat keusahawanan. Begitu juga, program keusahawanan secara positif memoderasi hubungan antara sikap dan kawalan tingkah laku yang dilihat dan niat keusahawanan, manakala norma subjektif memberikan interaksi yang negatif. Oleh itu, kajian ini menyumbang kepada kesusasteraan keusahawanan dengan mengintegrasikan program keusahawanan sebagai moderasi positif kepada hubungan antara sikap dan kawalan tingkah laku ke atas keusahawanan pelajar. Kajian ini mencadangkan untuk menggabungkan teori modal insan dan TPB (Teori Tingkah Laku Terancang) untuk lebih memahami maksud keusahawanan pelajar sarjana muda. Walau bagaimanapun, bidang kajian dan kesimpulan masa depan telah dibincangkan.

**The Moderating Effect of Entrepreneurship Program on the Factors Affecting  
Entrepreneurial Intention among Business and Engineering Students of  
Malaysian Universities**

**ABSTRACT**

This study used entrepreneurial intention as dependent variable, moreover attitude, subjective norms and perceived behavioural control were used as independent variables while entrepreneurship program was used as a moderating variable. Entrepreneurial intention is the determination to engage in to venture creation. Attitude is the positive view or disposition of a person towards new venture creation. Subjective norms is the view of close family, ties or colleagues on a person's decision to engage in entrepreneurial activities. Perceived behavioural control is the ease to venture in to new business. While entrepreneurship program is the teaching approach entrepreneurial processes. The population of study consists 11,378 business and engineering undergraduates, thus, 754 questionnaires were distributed to the respondents through email out of which 533 were returned (71%). This study used descriptive quantitative survey method to examine the entrepreneurial intention of Business and Engineering undergraduate students from Universiti Malaysia Perlis (UniMAP) and Universiti Utara Malaysia (UUM) in relation. This study indicates that attitude, subjective norms, perceived behavioural control and entrepreneurship program all has a direct positive relationship with entrepreneurship intention. Similarly, entrepreneurship program positively moderates the relationship between attitude and perceived behavioural control and the entrepreneurship intention, but subjective norms presents a negative significant interaction. This study therefore contributes to the entrepreneurship literature by integrating the entrepreneurship program as a positive moderator to the relationship between attitude and perceived behavioural control on student's entrepreneurship intention. This study recommend to blends the human capital theory and TPB to better understand the entrepreneurial intention of undergraduate students. However, considering the Beta values, attitude is the strongest factor that influences the entrepreneurial intention and entrepreneurship program among students in selected Malaysian universities. The Malaysian government is therefore recommended to make more effort in redesigning its entrepreneurship development policies to fit the findings of this study.

## CHAPTER 1: INTRODUCTION

### 1.1 Background of the Study

In the dynamic economic development of any country, entrepreneurship has an important role to play, with innovation and job creation being the top contributions it provides (Koe, Wei-Loon, et al., 2012). Entrepreneurship and creation of ventures is a top employment source in all countries around the globe, whether developed (e.g., U.S.) (Harris, 2013) or developing ones, such as Bangladesh (Uddin & Bose, 2012), Nigeria (Oweseni, 2014), and Malaysia (Sandhu & Riaz et al., 2011). Therefore, entrepreneurship is crucial in the fast changing socio-economic global environment (Abid, Altaf, & Bagram, et al., 2012). In this regard, policy makers, institutions, government, and other agencies are increasingly focusing on developing entrepreneurship (Owoseni, 2014). In fact, the entrepreneurship field has been deemed as a producer of economic growth, innovation, and employment (Uygun & Kasimoglu, 2013). This is reflected by the government, universities and other institutions' determination to stimulate venture creation (Karabulut, 2014).

However, regardless of its importance, both entrepreneurship and venture creation are faced with challenges as it is a process that entails voluntary involvement (Liñán, Nabi, & Krueger, et al., 2013). In addition, entrepreneurial intention is the major predictor of entrepreneurial behavior and new business creation (Krueger, Reilly & Carsrud, et al., 2000). According to Ajzen (1991), attitudes, subjective norms and perceived behavioral control are the antecedent of intention and in this regard, entrepreneurship entails human activities and intentions for venture creation. In general, business organizations are brought forth through individual efforts – individuals inclined to creating new ventures (attitudes), with the people important to them socially are inclined towards accepting the



same (subjective norms). It is viewed that such venture creation is aligned with both competence and feasibility (perceived behavioral control). Upon the fulfillment of the above three conditions, intention towards creating ventures will increase. However, without such intention, Owoseni and Akambi (2010) state that no entrepreneurial action or behavior will manifest.

Entrepreneurship is the establishment of business to expand economic growth, while maintaining competitiveness, addressing unemployment issues and opening up opportunities for employment (Ismail, 2017). Entrepreneurship creates and fulfils a healthy economy in the society to minimize the rate of unemployment (Lee, Wei Ni, et al., 2012). This indicates that entrepreneurship is important, due to its role in the economy and for individuals (Hmieleski & Baron et al., 2015). It is however imperative that entrepreneurs should be prepared to carry out entrepreneurial activities in risky and dynamic environments (Andrea & Zepeda, 2015). This has brought about the government's support towards students' involvement in the field of entrepreneurship to minimize a country's rate of unemployment (Nabi, Liñán, & Walmsley, et al., 2016).

As an academic field, entrepreneurship has a key role in driving learners to adopt an entrepreneurial mindset in order to hone entrepreneurial skills that are valuable to the current society. Hence, knowledge on entrepreneurship drives students to adopt skills, get motivated, and be knowledgeable to succeed in their entrepreneurial ventures (Byrne, Fayolle & Toutain, et al., 2014). In the current time, innumerable schools, colleges and universities offer entrepreneurship courses to enhance students' employment opportunities (Ismail, 2017). Added to this, the entrepreneurship course has been deemed as one of the core determinants of entrepreneurial intentions (Herman & Stefanescu, 2017).

In the 21<sup>st</sup> century, Malaysia has witnessed a high expansion of education, focused on knowledge development including entrepreneurship (Halim, & Meerah, et al., 2016). Malaysia is considered a developing country but reports have evidenced considerable university graduates who are unemployed and this is one of the social problems faced by the country's government. Graduates of universities are perceived as a contributing factor to the current issue of unemployment (Shah, Mahmood, et al., 2016).

According to the Global Entrepreneurship Monitor (GEM) report, the total entrepreneurial activity (TEA) in Malaysia is small in comparison to other countries (Singer, Amorós, & Arreola, et al., 2015), with the country ranking as the third lowest in terms of the rate of TEA. This is not a good sign for the country. Consequently, the enhancement of entrepreneurial intention for undergraduates and the development of a better entrepreneurship program will help the country out of this poor ranking by providing employment opportunities and improving economic activities.

In this regard, the government of Malaysia introduced the Eleventh Malaysia Plan 2016 - 2020, (2015) that aims to encourage and develop entrepreneurs and entrepreneurship ventures. This plan is assisted by three organizations namely, Perbadanan Nasional Berhad (PNS), Ministry of Entrepreneur and Cooperative Development (MECD) and SME (Small and Medium Enterprises) Bank. The government has been attempting to urge unemployed graduates to start entrepreneurial ventures, as opposed to just being unemployed. Aside from the above, local universities in Malaysia are obliged to offer entrepreneurial program for undergraduate students. Majority of studies in literature shows that the entrepreneurship program is crucial in the creation of successful entrepreneurs (Gelard & Saleh, 2011). This shows that the education system for developing entrepreneurship works towards increasing the entrepreneurial intention of individuals to execute the related behavior (Abdul Kadir, Salim, & Kamarudin, et al.,

2010). Majority of students were noted to be inclined towards taking up entrepreneurial subjects and later becoming future entrepreneurs (Ismail et al., 2009).

Intention predicts the performance of a specific behavior as explained by Ajzen and Fishbein (1980) and therefore, the intention of an individual can assist in predicting whether or not he/she will execute a certain behavior. The lack of intention may not enable the individual to consider entrepreneurship as a career option and he/she may remain unemployed or be employed by firms. In this study, the researcher attempts to shed light on factors that influence entrepreneurial intention among Malaysian university students by examining the relationships between entrepreneurial intentions, attitude, subjective norms, perceived behavioral control and entrepreneurship program, as dependent, independent, and moderating variables.

Literature on entrepreneurship programs for both business and engineering student categories is lacking, with the exception of a few studies (Yanez et al., 2010). Likewise, Rauch and Hulsink (2015) called for more studies to investigate the particular effects of entrepreneurship programs on students from various disciplines, in particular, business and engineering. Added to this, further studies are needed to take a closer look on the specific situation of undergraduate university students as the most likely to take up entrepreneurial ventures. The analysis should indicate the drivers through which educators can nurture the entrepreneurial intention of students.

With regards to the suitable theory to be used in this study, the theory of planned behavior (TPB) seems to be the top contender from all competing models in entrepreneurial action and it is the most recognized, validated and prominently positioned of the entrepreneurial intention theories, offering a well-developed basis (Owoseni, 2014). More importantly, the use of TPB model in entrepreneurial intention studies in the context of Asia has been scarce indicating that the antecedents of the TPB model are not

well-validated in this area. Adding to this, Iakovleva et al. (2011) urged further studies to use other student groups in different countries to examine the strength of TPB. Hence, this study provides insight into entrepreneurial intention, to validate the antecedents of TPB in Asian country i.e., Malaysia. By testing the theory, this study will contribute to extant literature on entrepreneurial intention, with the findings expected to drive the development of entrepreneurial intention initiatives to motivate entrepreneurship in the area (Mahmoud, 2014).

Moreover, TPB model was used as the basic foundation of the intentional theory for this study, as the significance of studying cognitive factors to entrepreneurial intention has been clarified by many researchers (Linan et al., 2013; Thompson, 2009). Thus, the expectation of the study is therefore, to have a significant relationship between undergraduate studies or enrollment and the intense of entrepreneurial intention and to find the applicability of the Ajzen's (1991) TPB model in the context of university students. These expectations are due to the level of challenges ranging from unemployment to industrial actions (in certain sectors) that affect the Malaysian working age. Thus, the study was expected to show a positive shift in the need for self-reliant employment. In addition, the exposure to knowledge both within and outside the undergraduate's country, culture and within their field of study will be another reason for these positive expectations.

Davey et al. (2012) indicated that the later stage of education is the suitable stage to measure entrepreneurial intention behavior; this further justifies the focus sample of this study. With regards to unemployed graduates, Pulka and Ayuba (2014) explained that the government is faced with the challenge of supporting them, however, the students of today, will be the country's economic assets of tomorrow and thus, the lack of entrepreneurship knowledge among students should be addressed (Stankiewicz &

Wasilczuk, 2012). To this end, majority of universities and colleges in various countries offer entrepreneurial courses in their curricula to meet the increasing demand and to promote entrepreneurship and entrepreneurial careers (Tsordia & Papadimitriou, 2015).

In the context of Malaysia, employability is becoming a major issue for graduates. Several efforts have been adopted to resolve this issue with one being the promotion of entrepreneurship (Rahim & Lajin, 2015). The realization of the current problems and the significance of entrepreneurship in developing knowledge-based economy have been boosted by the Malaysian government through the adoption of entrepreneurship efforts (Chen et al., 2009). More specifically, the education institutions began offering formal entrepreneurship program coupled with new approaches in their course instructions that assists in inculcating entrepreneurial thinking to Malaysian education (Sipon et al., 2015). In this regard, Rengiah (2016) highlighted the lack of empirical studies concerning Malaysian entrepreneurial intention with only a few conducted in the past few years. Yet, the number of graduated university students and unemployment rate in Malaysia is considered high (Kamaruddin & Robuan et al., 2017).

Entrepreneurship is among the tools employed to inculcate pro-social behavior in students, so that they would be inclined towards social and humanity issues, thus, there is a greater requirement to develop this human capital and entrepreneurship in order to build pro-social character (Sahri & Sirajuddin, 2013). Presently, there are more than 1.2 million students in Malaysian education institutions and there is a need to empower them to take up roles that can contribute towards the country's development which includes entrepreneurial engagements (Sahri & Sirajuddin, 2013).

This study therefore intends to examine the role of entrepreneurship program on the relationship between attitude, subjective norms and perceived behavior control on entrepreneurial intention based on TPB (theory of planned behavior), to provide

Malaysian institutions and ministries with the tools and methods to develop entrepreneurial behavior among students, aligned with the attempts of authors in prior studies (e.g., Greenslade & White, 2005). The current study focuses on the entrepreneurial intention among university students in Universiti Malaysia Perlis (UniMAP) and Universiti Utara Malaysia (UUM).

## **1.2 Problem Statements**

Malaysia is a federal constitutional monarchy, divided into 13 federation states and three federal territories. The country's population of 28 million comprises of Malays, who are the majority, followed by ethnic Chinese and Indians. The economic sector of the country focuses on multiple sectors such as mining, agriculture, tourism and manufacturing sub-divisions. The active agricultural sector is involved in the production of palm oil and rubber. It is well worth noting that Malaysia used to be the largest producer of tin, rubber and palm oil in the world and still has a hold on the global demand for these products (Mohamed, & Mu'az Mahmud 2012).

Moreover, according to the Global Entrepreneurial Monitor's GEM (2017) survey, greater than 200,000 candidates graduate from Malaysian universities each year. In addition, Malaysia has a relatively high number of university graduates, but the country is ranked the third lowest in terms of total entrepreneurial activity (TEA), with only 8.7% of entrepreneurial start-ups (Domènech, Lazzeretti, & Serra, 2018). Likewise, youth unemployment rates have increased from 2.4% in 2011 to 3.5% in 2017 (Department of Statistics, Malaysia, 2011–2017). This is a very alarming situation that requires the attention of government and researchers. The alternative solution to these unemployment issues is entrepreneurship (Egunsola et al., 2012; Sandhu, Sidique, & Riaz, 2011).

Entrepreneurship has always been considered more as a substantial generator of employment, economic growth, and innovation (Badulescu, 2013; Uygun & Kasimoglu, 2013). Entrepreneurship engagement is voluntarily done with the individual's conscious intention (Liñán, Nabi, & Krueger, et al., 2013). Therefore, it is important for policy makers and universities to collaborate to come up with strategies to bring about the entrepreneurship intention among students by providing them with the appropriate education. While entrepreneurial intentions studies are numerous on university students, most of them were conducted in developed countries (Sandhu et al., 2011). The present study is aimed at solving the problem of unemployment and poor entrepreneurial activities among youth graduates by studying the factors that influence entrepreneurial intention and entrepreneurial actions of potential graduates. Thus, the government believes once encourages graduates to become entrepreneurs after completing their studies would help to contribute the economy of the country by bringing in new ideas and tools to empower the unemployment issues. Also it can be seen how much importance has been placed upon entrepreneurship in developing knowledge and innovation as the government has recognized it as one of the new engines of growth for Malaysia's economy (Ghadas & Hamid, 2014).

The theory of planned behavior (TPB) is the best, effective, and extensively used theory for predicting behavior (Bakotic & Kruzic, 2010); the vigorous model to predict entrepreneurial behavior therefore, remains the TPB model. This model offers the most predictive ability to behavior compared to trait or demographic features (Autio et al., 2001). The antecedents of TPB model include attitude, subjective norms, and perceived behavioral control; these three factors are believed to influence intention and subsequently behavior (Ajzen, 1991). While the antecedents of TPB have been proven to influence human performance, inconsistency in findings were also reported by different

researchers from different contexts and study samples. This theoretical gap requires academic contributions that will enhance the theory and help policy makers and researchers understand the theory better.

For instance, attitude is found to have a positive significant relationship with entrepreneurial intentions by many studies in European (Linan et al., 2013; Zampetakis et al., 2013; Kuttim et al., 2014) and African samples (Otuya et al., 2013; Mahmoud & Muharam 2014; Malebana, 2014). Nevertheless, this relationship was also found to be insignificant by many researchers across African and Asian continents (e.g., Astuti & Martdianty, 2012; Ogundipe et al., 2012) indicating an inconsistent finding. This inconsistent findings require further studies in both continents and with a moderating variable that may enhance to bolster the result and explain the relationship better.

Likewise, subjective norms present inconsistent findings on its relationship with entrepreneurship intention (Astuti & Martdianty, 2012; Ogundipe et al., 2012). For instance, a positive relationship was reported between subjective norms and entrepreneurship intention (Mahmoud & Muharam 2014; Malebana 2014; Mueller, 2011) but many studies reported insignificant relationships between subjective norms and entrepreneurship intention (Astuti & Martdianty, 2012; Kolvereid & Isaksen 2006; Krueger et al., 2000; Linan and Chen 2009; Ogundipe et al., 2012; Sahindis et al. 2012) or negatively significant (Kuttim et al., 2014; Zampetakis et al., 2013).

Perceived behavioural control is positively significant to entrepreneurship intention, contrarily perceived behavioural control is insignificant to the entrepreneurial intention (Kolvereid & Isaksen, 2006; Linan et al., 2013; Sesen 2013 Mahmoud, 2014; Mahmoud & Muharam 2014).

Various studies have indicated inconclusive findings pertaining to the relationship between TPB elements and entrepreneurial intention. Some studies have showed a



significant relationship between TPB elements and entrepreneurial intention but with a low value of R-square. Therefore, in the present study, entrepreneurship program (EP) is examined for its moderating role in enhancing positive EI among university students as suggested by prior studies (e.g., Jin & Meng, 2014; Bell & Andrew, 2015).

The relationship form/strength between two variables may be dependent on the value of another variable that moderates their relationship. In other words, a moderator refers to a variable that modifies the form/strength of the relationship between the independent and dependent variables. Examination of the moderating variable has been, time and again, conducted in various research areas throughout the years (Aguinis, 2004; Aiken & West, 1991). According to Baron, Rueben, and Kenny (1986), the moderator/mediator variable stands out in social psychological research in terms of their concept, strategy, and statistical considerations. Examining moderating variables addresses the complex behavior, experiences, and relationships, indicating that individuals are dissimilar. Stated clearly, it would be surprising if individuals were one and the same. Therefore, Simpson (1945) explained that focusing on individual versus group effects is generally known as the researcher's inclination to be lumpers or splitters.

In general, the moderating variable search is the objective of a splitter, where as a lumper would instead search for moderating variables on general outcomes involving all persons. Both approaches have their weaknesses - splitters producing smaller and smaller groups until only one person remains in a group, and lumpers failing to observe real sub-groups that may have iatrogenic effect to predict relationships owing to the opposite sub-groups impacts (Mac Kinnon, 2011). Analyzing the moderating effect shows whether or not there is similar intervention effects throughout groups. It is significant to illustrate, in this case, that such effects are obtained for both male and female participants if the program is provided to a whole group of both genders (Brunwasser & Kim, 2009). Along