

**FACTORS AFFECTING ENTREPRENEURIAL  
INTENTION AMONG POSTGRADUATES**

**KAHLESSENANE  
SOHEYB**

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**KAHLESSENANE SOHEYB**

**MASTER OF SCIENCE  
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## ABSTRACT

Entrepreneurial intention among students has been getting attention from numerous of researchers. It has been considered as an important phenomenon that becomes very famous among today's youth and students in most countries across the globe. This study aims to revisiting the effect of a number of internal and external factors revealed in previous studies on entrepreneurial intention, and examining the importance of conducive business environment at the university that affecting the entrepreneurial intention among postgraduate students. The total number of respondents chosen randomly to participate in this study was 357 postgraduate students from Universiti Utara Malaysia (UUM). Using questionnaires, the data is collected from students in classes, in the library, and online. The Smart-PLS 3 as one of the leading software tools for partial least squares structural equation modelling (PLS-SEM) was utilized to test the hypotheses. The study results display that self-efficacy is the only factor from internal factors that has a positive and significant effect; while, in term of the external factors, financial support, family support; likewise, role model and entrepreneurial education, as the dimensions of the university environment, have positive and significant relationships with entrepreneurial intention. The results suggest that entrepreneurial intention has the potential to be supported more in the universities to create the supportive environment that promotes intention of postgraduates to choose their future career in entrepreneurship sectors.

**Key words:** Entrepreneurship, Entrepreneurial Intention, University Environment, Postgraduate Students.

## ABSTRAK

Niat keusahawanan dalam kalangan pelajar sering kali mendapat perhatian dari pelbagai penyelidik dan ia dianggap satu fenomena yang harus diberi perhatian oleh generasi belia dan pelajar hari ini dari serata dunia. Tujuan kajian ini dilaksanakan adalah untuk mengkaji semula kesan faktor dalaman dan luaran terhadap niat keusahawanan dan mengetahui kepentingan persekitaran universiti yang kondusif dalam mempengaruhi niat dalam kalangan pelajar pasca siswazah untuk menjadi usahawan. 357 pelajar pasca siswazah dari Universiti Utara Malaysia (UUM) telah dipilih untuk terlibat dalam kajian ini. Instrumen soal selidik digunakan sebagai pengumpulan data dan ia diedarkan ke kelas, perpustakaan dan secara atas talian. Hipotesis telah diuji menggunakan perisian SMARTPLS 3 untuk “partial least squares structural equation modeling (PLS-SEM)”. Hasil kajian mendapati bahawa terdapat signifikansi dan hasil positif terhadap keyakinan diri yang merupakan satu-satunya faktor dalaman. Selain itu, hasil kajian juga menunjukkan terdapat hubungan yang positif dan signifikan di antara faktor luaran, sokongan kewangan, sokongan keluarga, begitu juga peranan dan pendidikan keusahawanan sebagai universiti yang mempunyai persekitaran dua dimensi dengan niat keusahawanan. Hasil kajian juga menunjukkan niat keusahawanan mempunyai potensi untuk diberi perhatian di universiti untuk mewujudkan persekitaran yang memberangsangkan di mana ia mampu menggalakkan niat pelajar pasca siswazah untuk memilih bidang keusahawanan sebagai kerjaya pada masa hadapan. Di samping itu, implikasi dapatan kajian, saranan dan cadangan untuk kajian pada masa hadapan dan batasan kajian turut ditekankan dalam kajian ini.

**Kata kunci:** Keusahawanan, Niat Keusahawanan, Persekitaran Universiti, Pelajar Pasca Siswazah

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## TABLE OF CONTENTS

Title	Pages
<b>PERMISSION TO USE</b>	ii
<b>ABSTRACT</b>	iv
<b>ABSTRAK</b>	v
<b>ACKNOWLEDGEMENTS</b>	v
<b>TABLE OF CONTENTS</b>	vii
<b>LIST OF TABLES</b>	ix
<b>LIST OF FIGURES</b>	xi
<b>CHAPTER ONE: INTRODUCTION</b>	1
1.1 Background of Study	1
1.2 Problem Statement	4
1.3 Research Questions	8
1.4 Objectives of Study	9
1.5 Significance of the Study	10
1.5.1 Scientifically	10
1.5.2 Socially	11
1.6 Scope of the Study	11
1.7 Key Term Definition	12
1.7.1 Entrepreneurial Intention	12
1.7.2 Internal Factors	12
1.7.3 External Factors	13
1.8 Outlines of the research report	14
<b>CHAPTER TWO: LITERATURE REVIEW</b>	15
2.1 Introduction	15
2.2 Entrepreneurial Intention	16
2.3 Internal Factors	21
2.3.1 Need for Achievement	22
2.3.2 Locus of Control	23
2.3.3 Risk Taking Propensity	24
2.3.4 Innovativeness	25
2.3.5 Self-Efficacy	27
2.3.6 Tolerance for Ambiguity	28
2.3.7 Prior Experiences	29

2.4	External Factors	30
2.4.1	Financial Assistance	31
2.4.2	Family Support	32
2.4.3	University Environment	33
<b>CHAPTER THREE: METHODOLOGY</b>		42
3.1	Underpinning theories	42
3.2	Research Framework	44
3.3	Hypothesis Development	45
3.4	Research Design	47
3.4.1	Purpose of the study	47
3.4.2	Data collection technique	48
3.4.3	Type of investigation	48
3.4.4	Unit of analysis	48
3.4.5	Time Horizon	49
3.5	Instrumentation	49
3.5.1	Questionnaire Design	49
3.5.2	Measurements	50
3.6	Data Collection and Sampling Procedure	52
3.6.1	Population Interest	52
3.6.2	Target Population	52
3.6.3	Sample Size	52
3.6.4	Sampling Frame	53
3.6.5	Inclusion/ Exclusion of Samples and Procedure for Selecting Elements to be Included/Excluded in Samples	53
3.6.6	Sampling Technique	53
3.7	Techniques Used for Data Analysis	54
<b>CHAPTER FOUR: FINDINGS</b>		55
4.1	Introduction	55
4.2	Response Rate	55
4.3	Data Screening and Preliminary Analysis	56
4.3.1	Missing value analysis	57
4.3.2	Assessment of Outliers	59
4.3.3	Normality test	59
4.3.4	Assessment of the Multicollinearity	61

4.4	Non-Response Bias	61
4.5	Demographic Profile of the Participants	63
4.6	Assessment of the Measurement Model	66
4.7	Summary of Findings	76
4.8	Summary	78
<b>CHAPTER FIVE: DISCUSSION</b>		<b>79</b>
5.1	Introduction	79
5.2	Discussion of Results and Finding	79
5.2.1	Internal Factors	79
5.2.2	External factors	82
5.3	Implications to Theory and Practice	86
5.3.1	Theoretical Implications	86
5.3.2	Practical Implications	87
5.4	Limitation of the Study	88
5.4.1	Area of Conduction the Study	88
5.4.2	Time Constraints	88
5.4.3	Cooperation From the Respondents	89
5.5	Suggestion and recommendation for future research	89
<b>REFERENCES</b>		<b>90</b>
<b>APPENDIX</b>		<b>112</b>



## LIST OF TABLES

	Pages
Table 3.1: The Resource of Items Adopted	51
Table 4.1: Questionnaires' Response Rate	56
Table 4.2: Result of Missing Values Detecting/Replacing	57
Table 4.3: Tolerance and Variance Inflation Factors	61
Table 4.4: Results of Independent-Samples T-test for Non-Response Bias	62
Table 4.5: Profile of Responders	63
Table 4.6: Result of Reflective Measurement Model	68
Table 4.7: Cross Loading.	71
Table 4.8: Hypotheses Testing	74
Table 4.9: Summary of Hypotheses Testing	76

## LIST OF FIGURES

	Pages
Figure 3.1: The Conceptual Framework	45
Figure 4.1: Histogram and Normal Probability Plots	60
Figure 4.2: The Research Model	65
Figure 4.3: Measurement model(PLS Algorithm Results)	67
Figure 4.4: PLS Bootstrapping Results	73

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of Study

This introductory chapter deals with a general idea and background relating to entrepreneurship and entrepreneurial intention. It then discusses on the problematic issues, which leads to this study, as well as its scope and significance.

A considerable interest about entrepreneurship around the globe has been growing since the last 80's century (Klofsten, 2000). This domain becomes a very interesting topic by academicians, researchers, policymakers, economists, and likewise students. This is due to its reputation and importance in economic development, its dramatic impact on the society, and the active roles displayed by the entrepreneurs who indicate its dynamic force on the economic as well as the growth of nations.

In today's world, entrepreneurship is the most preferable strategies to develop the national economy. This comes together with the sustainability and development of the competitiveness level of the countries in confrontation the globalisation and its trade increasing (Amorós, Fernández & Tapia, 2012; Keat, Selvarajah, & Meyer, 2011; Venkatachalam & Waqif, 2005). Thus, entrepreneurs and entrepreneurship have been announced to be extremely significant (Mat, Maat, & Mohd, 2015). For instance, Kelley, Bosma, and Amorós (2011) surveyed that people aged between 18 and 65 years who are involved in starting a business is very high in Brazil and China with 17.5 and 14.4 per cent, respectively.

Historically, these countries were suffering from the economic downturn, high rate of unemployment, and swing of the international trade (Ahamed & Rokhman, 2015). Therefore, entrepreneurship can be a source of incomes when the economy is not equipping sufficient jobs, wages, and/or salaries (Bosma & Levie, 2010). Consequently, starting a new business, especially by youth, will provide jobs, stimulate innovation, competitiveness, and contribute to the national economic growth (Mishory, 2011).

Major development needs strength, science, and intelligent. These can only be seen in youth and the elite students. In fact, it depends on the proper use of human resources and to what extend the country's development will be prosperous, flourishing, and successful. It is important to be noted that entrepreneurship is a noteworthy opportunity in promoting the development and national economic growth (Ahamed & Rokhman, 2015). The people's interest in this field has been increasing. In maintaining this developing interest, the entrepreneurship courses are becoming widespread in universities around the world (Brown, 1999). For this reason, several universities introduced the entrepreneurship courses to promote entrepreneurship; they are pushing students to entrepreneurship sectors (Postigo, Iacobucci and Tamborini, 2006).

Students are the source of entrepreneurship, the future country's anchor, and the future leaders (Mat, Maat, & Mohd, 2015). In fact, over the last decade an extraordinary interest increased among students to involve in entrepreneurship studies (Kuratko, 2005; Solomon, Weaver et al., 2005). In the U.S, hundreds of universities and colleges introduced the entrepreneurship courses with short-term and

long-term objectives. The short-term objective aims to enhance the educational value in students while the long-term objective focuses more on enabling students to contribute into the economic growth through local enterprises (eda.gov, 2015).

The entrepreneurship education motivates to create ventures (Cho, 1998). This undoubtedly has an effective and basic role in human development. Man represents the essential foundation for progress, development, and the change for the better in the areas of comprehensive development. Furthermore, because the human is the objective of development and its device, it is essential that the university equip them with the necessary skills and competencies as students (Mansouri, 2011). Likewise, it can be a positive influential environment to prepare these future entrepreneurs depending on the courses and the different supports provided (Duygu, 2009). However, in order to nurture the entrepreneurship intention among students, the university must take initiative to provide entrepreneurship activities regularly. (Mat, Maat, & Mohd, 2015).

It is interesting to note that entrepreneurial intention has becoming very popular among students. Raju, Kumar, and Ramgopal (2015) identified that 76 per cent of students launched their own businesses based on their innovative ideas. Despite of having positive result in entrepreneurship, most students are less interested to be self-employed, particularly due to the high risks, challenges and threats exposed in business. Indeed, it is worth noting that to get involved in entrepreneurships, they should have a high level of mental, physical, and scientific preparations (Rani, 2012). The creation of new ideas and its application requires a high degree of energy and passion (Mat, Maat, & Mohd, 2015). It is fateful to study further in the

entrepreneurship intention of students to understand their perceptions in depth and to what extent some factors might affect this intention. Hence, the idea can be regarded as another influential environment factor.

A number of researchers had conducted studies in the universities across the globe, and they took into consideration different factors that may influence the entrepreneurship intention either external or internal (Ahamed & Rokhman, 2015; Brenner, Pringle, & Greenhaus, 1991; Denanyoh, Adjei, & Nyemekye, 2015; Mat, Maat, & Mohd, 2015; Raju, Kumar, & Ramgopal, 2015; Pratheeba, 2014; Toth & Torocsik, 2014; Javan, 2014). Those researchers took same population with different samples as well.

In order to take an attempt to describe the features of a population, discussing on causes and effects, make a revision on entrepreneurship intention and factors influencing the intention, this study focuses more on internal and external factors. Consequently, this study will establish a deep understanding on the importance of these factors for determining the intention towards entrepreneurship.

## **1.2 Problem Statement**

In accordance with the deep understanding on the entrepreneurship role towards the Malaysian economic development, growth, and creation of industries for future generations, the government is promoting entrepreneurship by upgrading and assisting the industrial structure (Nor Amna A'liah, 2015). Regardless to the fact that promoting entrepreneurship is becoming an unavoidable reality, we economically take into account the unemployment or the lack of finding a job that suits students'

degree level. This is considered as one of the key factors for unemployment (Postigo, Iacobucci, & Tamborini, 2006). By creating jobs and salaries throughout entrepreneurship, the national unemployment rates are reduced and subsequently the main objective is achieved. Meanwhile, from an educational view, the government should impose and implement the entrepreneurship education in universities programs with the aim of preparing future entrepreneurs, and creating an entrepreneurship's culture and behaviour (Nabi & Holden, 2008). Additionally, it should produce an interaction between the first class graduates and the readiness to start the career as leaders of their own venture (Nabi & Holden, 2008).

The universities' role is to provide educational programs, trainings knowledge, and creating a culture and environment. These will encourage and develop the interest in entrepreneurship among students. On the same note, the teaching on entrepreneurship may ignite ideas, helps students to make a decision to become entrepreneurs, and learn how to innovate new ideas.

In fact, entrepreneurship intention literature has examined numerous issues by focusing on the different factors that affect the entrepreneurial intention. Some researchers linked entrepreneurial intention with external factors in general (environmental, supporting, education, training) while others linked them to internal factors such as personal traits. Looking into this, majority of researches carried out their studies within universities around the globe (Ahamed &Rokhman, 2015; Brenner, Pringle, & Greenhaus, 1991; Denanyoh, Adjei, &Nyemekye, 2015; Mat, Maat, & Mohd, 2015; Raju, Kumar, & Ramgopal, 2015; Pratheeba, 2014; Toth & Torocsik, 2014;Javan, 2014). Their study captured the intention among different

students' population including postgraduates. Besides, there are studies conducted in Malaysia. For instance, UUM students conducted a very limited number of researches –theses and dissertations- on entrepreneurship intention. It is worth noting that previous studies conducted in UUM, only focused on postgraduate students. This relates to a study conducted by Mahmoud (2014) which highlighted on Nigerian postgraduate students.

The critical and primary step to develop entrepreneurship activities is the deep understanding of factors affecting on entrepreneurship intention. There seems to be a huge misunderstanding on this issue, especially among postgraduates. Furthermore, there is no consensus among researchers about one approach that may predict entrepreneurship. Besides, none of the factors, suggested by researchers, may really predict the future entrepreneurs (Yaghmaei & Ghasemi, 2015a).

There is an unclear case about which factors that will affect the entrepreneurship intention more than the other. A study conducted by Harun Sesen (2013) examined both personality factors (internal) and environmental factors (external). He pointed out that personality traits of students are important to predict entrepreneurial intention among them while some external factors' impact such as access to capitalist draw blurs line. Surprisingly, his study has not been proven by the fact that university environment is a supportive environment to create entrepreneurship intention.

It is common if an individual is strongly influenced by the environment (Taormina, & Kin-Mei, 2007). Additionally, entrepreneurship depends on an individual action



and most of the time the creation of business culture started in the university (Klofsten, 2000). Most of students, particularly those who studied in full time, spent almost 7 years for their education; the postgraduates had already spent almost four years in bachelor degree, and they have been spending nearly from two to six years to complete their education before entering the career world. During this period, the university environment has influenced them. Starting a business will never be an accident; it is a long process that may take years to develop and become a reality (Mazzarol, Volery, Doss, & Thein, 1999) and the university period can be the first process. Students are living, learning, communicating and interacting within the university environment. This means that university environment may have an effect on students in Malaysian context.

Consequently, despite the existence of numerous studies, the relationship between internal factors and external factors to entrepreneurial intention was still unclear and researchers found inconsistent relationships. Little studies that examine these factors in a comprehensive model were conducted and it must be developed. This recent study deals with both aspects (internal and external) in order to identify the entrepreneurship intention and which, factors significantly affected the postgraduate students in the UUM.

In sum, the research problem concerning on the factors that influence the entrepreneurship intention among postgraduates is limited in Malaysia. On the other hand, university environment is rarely examined, and its role with other external factors is still unclear. However, researchers found inconsistent relationship between internal factors and entrepreneurial intention. Thus, the main purpose of this study

is to explore the impacts of internal and external factors on the entrepreneurial intentions of university postgraduate students in a comprehensive model.

### **1.3 Research Questions**

Based on the issue discussed above, the research questions for this study are:

- 1) Do the internal factors contribute to the entrepreneurial intention of postgraduate students?
  - a- Does the need of achievement contributes to the entrepreneurial intention of postgraduate students?
  - b- Does locus of control contributes to the entrepreneurial intention of postgraduate students?
  - c- Does risk-taking propensity contributes to the entrepreneurial intention of postgraduate students?
  - d- Does innovativeness contributes to the entrepreneurial intention of postgraduate students?
  - e- Does self-efficacy contributes to the entrepreneurial intention of postgraduate students?
  - f- Do prior experiences contribute to the entrepreneurial intention of postgraduate students?
- 2) Do the external factors contribute to the entrepreneurial intention of postgraduate students?
  - a- Does financial assistance contributes to the entrepreneurial intention of postgraduate students?

- b- Does family support contributes to the entrepreneurial intention of postgraduate students?
  - c- Does university environment contributes to the entrepreneurial intention of postgraduate students?
- 3) Is the university environment important to promote the entrepreneurial intention of postgraduate students?

#### **1.4 Objectives of Study**

The objectives of the study are as follows:

- 1) To examine the influence of internal factors on the entrepreneurial intention of postgraduate students.
  - a- To examine the influence of need of achievement on entrepreneurial intention among postgraduates.
  - b- To examine the influence of locus of control on entrepreneurial intention among postgraduates.
  - c- To examine the influence of risk taking propensity on entrepreneurial intention of postgraduates.
  - d- To examine the influence of innovativeness on entrepreneurial intention of postgraduates.
  - e- To examine the influence of self- efficacy on entrepreneurial intention of postgraduates.
  - f- To examine the influence of tolerance of ambiguity on entrepreneurial intention of postgraduates.

- g- To examine the influence of prior experience on entrepreneurial intention of postgraduates.
- 2) To investigate the influence of external factors on the entrepreneurial intention of postgraduate students.
  - a- To investigate the influence of financial assistance on the entrepreneurial intention of postgraduate students.
  - b- To investigate the influence of family support on the entrepreneurial intention of postgraduate students.
  - c- To investigate the influence of university environment on the entrepreneurial intention of postgraduate students.
- 3) To provide discussion on the entrepreneurial intention among postgraduate students.

## **1.5 Significance of the Study**

### **1.5.1 Scientifically**

This study considers the relationships between internal factors and external factors with the entrepreneurial intention among postgraduate students in the University Utara Malaysia (UUM). Moreover, it assists to determine the entrepreneurial intention's level among them. This study is considered as a revisiting factors investigated in previous studies with focusing more on the importance of the university environment.

Subsequently, it will generate and provides new information. Furthermore, this study increases the body of knowledge relating to entrepreneurship and subsequently will enhances the general understanding of academicians, researchers, economists and, psychologists through different variables. Additionally, it can be regarded as a scientific contribution to the entrepreneurship development.

### **1.5.2 Socially**

This study contributes and benefits the society and economy. At the national level, this study provides benefits to the government, ministry of higher education (Universities), leaders, and policy makers. At the university level, this study helps scientific council of the UUM by providing information to promote and encourage the students towards entrepreneurship sectors.

It also crystallizes the ideas about the university environment in depth, which might enhance the environment to be more effective and comprehensive to the entrepreneurship areas. Individually, especially for students, this study can provide a guideline tool to know their intention toward entrepreneurship and support them to make a wise decision for their future careers.

### **1.6 Scope of the Study**

This study focused on the entrepreneurship intention among postgraduate students, and investigation was conducted to identify which factors positively influenced the entrepreneurial intention. It was conducted at the UUM. This study was conducted through quantitative method, the survey of this study conducted by distributing the questionnaire to students (the respondents) in all colleges at the UUM.

## **1.7 Key Term Definition**

### **1.7.1 Entrepreneurial Intention**

Bird and Jelinek (1988) defined intention as a sinking situation that moderates a person's attention, their expertise, and their behaviours towards fulfilment of a particular intention (goals) and developing a procedure to achieve it. Hmieleski and Corbett (2006) found that starting a plan to create an organization is a result of persons' intention behaviour.

Boyd and Vozikis (1994) noted that the individuals' perceptions of physical and social environments form the intentions' shape, and these intentions are affected by attitudes, choices, believes, expectations, and perceived context. These perceptions allow the intention to develop. The individuals' backgrounds can be influenced on these perceptions as well.

### **1.7.2 Internal Factors**

As a term and according to BusinessDictionary.com (2015), internal factors are defined as the inner point of power, whether its strengths or weaknesses, that has direct effects on business.

Based on previous studies regarding to internal factors, they can be psychological, personal value and traits. In this study, the researcher only studied on the personality traits which defined by Allport (1961) as a generalized and a vocalized neuropsychin

system (peculiar to the individual), with the ability to deliver numerous motive functionally equivalent, and to initiate and guide consistent (equivalent) forms of adaptive and expressive behaviour. In the actual study, internal factors are defined as a need of achievement, locus of control, risk taking propensity, innovativeness, self-efficacy, tolerance of ambiguity, and prior experience.

### **1.7.3 External Factors**

Idiomatically, external factors that are outside influences may affect a venture. Numerous external factors can affect the ability of a venture to achieve its goals. These factors can include politics, law, and economic environments (BusinessDictionary.com, 2015). According to Baldacchino and Dana (2006), external factors are identified as an external component, which plays a considerable role during creating of organization.

Furthermore, they may be environment factors, which create an innovative environment to help persons or organization to success. Franke and Lüthje (2004) mentioned that the external factors are a variety of economic, social, and educational variables that can influence on individual to become an entrepreneur. The external factors influencing the students' process decision should be found within universities.

Moreover, they are defined as influencing and supporting factors in line with other researchers' definition (Bécharde & Toulouse, 1998; Fini, Grimaldi, & Sobrero, 2009). This study focused and researched on variable to work as a university environment

(entrepreneurial education, university role, role model.. etc.) and environment support (financial assistance and family support) that may gives impact on entrepreneurial intention among postgraduate students.

### **1.8 Outlines of the research report**

This study is organised in five chapters. Chapter 1 includes introduction and background of study, followed by research questions and objectives, significance and scope of study and ends with the key definitions. Chapter 2 discusses the literature related to the topic. While, chapter 3 describes the theory related and methodology used in the study such as hypotheses development, sampling method, etc. Chapter 4 shows all the process needed in analysing the data, testing the hypothesis, and outlines the results of the study. The final chapter discusses on the result and highlights the recommendations and limitation of the study.



## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 Introduction

This chapter presents a review of previous studies related to this study framework. The interest of entrepreneurial intention literature is to investigate the factors that might have an effect on individual to be an entrepreneur. This study involves in identifying which the internal and external factors significantly related to the entrepreneurial intention among postgraduate students with taking into consideration whether or not the university environment is important.

“Take on the risk” for starting new ventures is the meaning of word entrepreneur. It is derived from two French words “Entre” and “Prendre” which means between and take, that is to say that taking the risk between the buyer and seller (Tyszka, Cieřlik, Domurat, & Macko, 2011). There are many definitions of entrepreneurship. For example, Schumpeter (1934) defined entrepreneurship as an institution that operates and executes a set of new activities and it can be productive development, new organizational structure, approach of manufacturing, marketing, and raw material sources.

Entrepreneurship as defined by Stevenson and Jarillo (1990) is the steps, which are followed by individuals to pursue opportunities without considering their current situation; they also stated out that it is the art of converting an idea to a business. Hisrich, Peters, and Shepherd (2005) emphasised that entrepreneurship is obtained by taking a great risk and dedicating valuable money, time, and efforts. Mat, Maat,

and Mohd (2015) highlighted entrepreneurship as a vision, a shift, and a creation, which together forms a dynamic process. Three reasons why some people want to become entrepreneurs are to be their own boss, pursue their ideas, and realize financial rewards (Read, 2006). They should be endured for some characteristics of success, such as passion for business, tenacity despite failure and execution intelligence (Barringer & Ireland, 2012). Today, society, government, and universities should prepare youth and students to be entrepreneurs. They should also create an environment that can support and attract them in order to feed their intention to be entrepreneurs and achieve a splendid success.

## **2.2 Entrepreneurial Intention**

Several researches have conducted investigations on entrepreneurial intention, and the majority of them focused on students as a sample of their researches; with the aim of experiencing this intention. Further, the factors are positively affecting it to lead students to become future entrepreneurs. Many researchers have utilized entrepreneurship intention as the dependent variable. These researchers have conducted the entrepreneurial intention through different perspectives and frameworks, and they reached a mix results.

Based on a review of these prior studies, one can conclude that external factors such as environmental factors, demographic factors, family support, financial support, strong social network, role model, education, etc. have been conducted as independent variables (Denanyoh, Adjei, & Nyemekye, 2015; Lucky & Ibrahim, 2015; Keat, Selvarajah, & Meyer, 2011; Rani, 2012). These factors have a mix influence (significant and insignificant) on entrepreneurial intention. With regards to

the internal factors, it has also noted personal and psychological factors such as personal traits (Asghar & Iqbal, 2015; Mat, Maat, & Mohd, 2015; Raju, Kumar, & Ramgopal, 2015; Yusuf & Kamil, 2015; Yurtkoru Kuşcu, & Doğanay, 2014; Tateh, O et al., 2014; Singh, Fahmi Sidique & Riaz 2011) that are related to entrepreneurial intention.

However, other researchers clarified that internal factors, such as traits, are unable to provide a whole characterisation of persons' personality in entrepreneurship (Tateh, Latip, & Awang, 2014), and it should be nurtured by an external factors (Turker & Sonmez Selçuk, 2009). For this reason, many researchers investigated and carried out studies by conducting both internal and external factors (Ahamed & Rokhman, 2015; Samydevan, Piaralal, Othman, & Osman, 2015; Tateh, Latip, & Awang, 2014; Neneh & Vanzyl, 2014).

According to Bird (1988), entrepreneurial intention is the case of mind where it is ready to lead, direct, and control the actions of start-up a new business and its implications. Similarly, Choo and Wong (2009), in their own definition of entrepreneurial intention, described that it is the search of usable information to help to accomplish the goals of the business created.

Individual's entrepreneurial intention commenced with the aspiration and idea of access entrepreneurship areas as an entrepreneur (Delmar & Shane, 2003). This idea does not come by coincidence, but it is a result of intention and individual's attitudes. Furthermore, from the point of view of Krueger, Reilly, and Carsrud (2000), it has

been noted that entrepreneurial intentions are more influenced by activities and entrepreneurship behaviours than personal and situational factors.

As a matter of fact, studying entrepreneurial intention leads to understand the antecedents which can foretell it (Bird, 1988; Krueger, Reilly, & Carsrud, 2000; Liñán, 2004).

As mentioned above, there are numerous researches on the entrepreneurial intention of examining different factors and relationships that can determine the future entrepreneurs.

Wang, Peng, and Liang (2014) investigated a long study consisted of three parts in order to develop and test the measurement and scales of psychological variable, rural practice, and entrepreneurial intention. The first one considered an exploratory aimed to the analysis of factors was performed to determine scales with appropriate structure. The second one, considered as conforming test and analysis of factors was conducted in part one to confirm the structures' validity.

In part three, a study was conducted to examine the impact of psychological factors on entrepreneurial intention, and on rural practice. In these three parts of the study, the aforementioned researchers used a sample of 220, 246, and 223 college students respectively. The study found that psychological factors are comprised by seven factors; three factors comprise rural practices, and the conviction factors and preparation factors comprise the entrepreneurial intention.

Denanyoh, Adjei, and Nyemekye (2015) conducted a study among tertiary students in Ghana in order to investigate and examine the factors that determine entrepreneurial intention; it was conducted on 228 samples of polytechnic students in Ghana. The study used education supports, family and peers support, and environmental supports to examine the entrepreneurial intention. That study showed that all the factors significantly affected on student's intention towards entrepreneurship.

With similar purpose, the study of Mat, Maat, and Mohd (2015) was conducted on 62 engineering technology students at Universiti Kuala Lumpur Malaysia France Institute. The participants were selected by using the sample random sampling and self-administered survey. As a result, they found that the entrepreneurial intention exists among UniKL MFI engineering technology students, and they planned to become entrepreneurs after graduation.

However, Lucky and Ibrahim (2015) conducted a similar research. They used a sample of 159 Nigerian students studied in the UUM, to determine the factors that affected their intention. After using a multiple regression analysis technique to analyse the data, the results indicated that neither environment support nor environmental influences were a positive and significantly related to the entrepreneurial intention of Nigerian students in the UUM.

Similarly, Ahamed and Rokhman (2015) in their study about the role of some social and psychological factors in entrepreneurship intention stressed that education system, family background, and social status as a social factor are significantly

indicated the intention to become an entrepreneur among undergraduate students of the State Islamic College in Kudus, Indonesia. Additionally, the same result can be found in literature – strong indicators- regarding the psychological factors such as the need of achievement, taking a risk propensity, and locus of control.

A study by Robledo, Arán, Sanchez, and Molina (2015), and based on the theory of planned behaviour (TPB), they conducted their study with analysing the moderating effect of gender on theory planned behaviour attitudes, behaviour control, social norms and the effect on entrepreneurial intention. This study was conducted via email and it is completed on January 2015. The questionnaire was conducted among 180 undergraduate business students in Spain by using seven points Likert scale.

The results of this study stressed that what varies between women and men toward entrepreneurial intention was higher by 77 percent and 72 percent, respectively. Furthermore, in their case, they found that subjective norms do not strongly affect the entrepreneurial intention, while both of attitudes and behavioural control were positively related. For the purpose of that study, they analysed the gender moderator effect. They observed that the gender did not have a clear effect on entrepreneurial intention among business students in Spain.

In Malaysia, a study conducted by Yaghmaei and Ghasemi (2015) investigated the factors that influence entrepreneurial intention of postgraduate students with two aims. First, it investigated the relationship between those factors with entrepreneurial intention. Next, it investigated on which factors that have more effects on it. The study conducted on a sample of 380 final year students at the Universiti Teknologi

Malaysia. The result of their study showed that all factors were significantly related to entrepreneurship intention and attitudes and age were the most important factors.

The reviews mentioned above are adapted from the latest and newest researches that studied the relationships between entrepreneurial intentions and the different factors that are related to it and the ones that have significant or insignificant effect.

### **2.3 Internal Factors**

In the present study the seven internal factors used were adopted from previous studies, they are as follows: need of achievement, locus of control, risk taking propensity, innovativeness, self-efficacy, tolerance of ambiguity, and prior experience.

In his study, Harun Sesen (2013) examined internal factors were the need of achievement, locus of control, and self-efficacy as a dimension of personality traits (internal factors) with prior experiences. Moreover, he pointed out a suggestion for future research that should include certain factors such as risk taking propensity, autonomy, and other internal factors.

This current study examined the factors examined and suggested by Harun Sesen (2013) in order to test them in the Malaysian context.

### **2.3.1 Need for Achievement**

The need for achievements is one of personality traits (Ahamed & Rokhman, 2015). According to Lee (1996), the need for achievement is defined as a “unitary disposition that motivates a person to face challenges in the interest of attaining success and excellence”. Terpstra, Rozell, and Robinson (1993) defined the need of achievement as the desire to be a successful person, the inclination to take thoughtful risks, and the desire to have an instant feedback.

A person, who has self-confidence to be a successful person, is having higher need for achievement. With this need of achievement, he/she has more estimation of personal responsibility, preference of self-reliance in solving the problems, taking calculated risks, having a strong concern and interest about knowing the result of their effort, and the feedback from others about their decision (McClelland, 1965).

Mat, Maat, and Mohd (2015) in their study concluded that the most important factor among personality traits contents which lead to entrepreneurial intention is the need for achievement because it is the driving factor to confront challenges for goal's accomplishment. However, a study by Harun Sesen (2013) conducted across two Turkish universities among 356 students in business, sciences of health, and law faculties. The study accentuated that the need for achievement was positively related to entrepreneurial intention, but the effect of this factor on student's intention was not significant.



### **2.3.2 Locus of Control**

Locus of control is a content of the personality traits that indicate the level the feeling of control of individuals; it is the individuals' ability to control the life's events (Ahamed & Rokhman, 2015). In the same context, the concept of locus of control explained by Hisrich and Peters (1998) is considered as 'an attribute indicating the sense of control that a person has over life'. When people think about establishing a new venture or enterprise, they will directly take into account as to whether they have the ability and energy to face the challenges during the establishment's period and managing it until they succeed (Kristiansen & Indarti, 2004).

Locus of control depicts an expectation of whether a business venture will be a success or a failure (Yusuf & Kamil, 2015). According to Rotter (1966), the locus of control is divided into two types. On one hand, there is the internal locus of control and external locus of control on the other. The internal locus of control depends on the expectation by one's personal life, and person's actions depend on one's own behaviour characteristics, and the external control depends on the expectation of attitude of others and their action. In other words, the persons who have an internal locus of control believed that they can control the events of their life; in contrast, persons who have an external locus of control believed that their life events are controlled by luck, chance, fate, and/or external power.

The internal locus of control are related to learning, motivation, and striving; while external locus of control is impeding the learning and encourage passivity (Rotter,

1966). In fact, by positive action and the readiness to take risks, they create an ability to control the environment through individuals who have an internal locus of control (Mueller & Thomas, 2001). So, one can note that the high level of internal locus of control leads to a higher level of entrepreneurial intention (Ahamed & Rokhman, 2015).

On one hand, Yucuf and Kamil (2015) conducted a study among School of Business Innovation and Technopreneurship's students of Universiti Malaysia Perlis's. They pointed out that locus of high control significantly related to entrepreneurial intention. On the other hand, Renata and Emőke–Sződónia (2013) investigated the matter of entrepreneurial intention among Romanian students and they pointed out that locus of control was identified as having insignificant influence on entrepreneurial intentions of the respondent students.

### **2.3.3 Risk Taking Propensity**

Another important dimension of the entrepreneur's personality traits is the propensity to take the risks. Risk taking is the tendency of individuals to take risking paths (de Pillis & Reardon; 2007). Brockhaus (1980) defined the risk-taking propensity as “the perceived probability of receiving the rewards associated with success of a proposed situation, which is required by an individual before he will subject himself to the consequences associated with failure, the alternative situation providing less reward as well as less severe consequences than the proposed situation”.

Van der Kuipand Verheul (2003) stated that intention is that the propensity to take a risk is definitely linked to the probability of starting a business by not assuring and heaving, or predicting a 100 percent of success. Having said that, the risk-taking propensity is one of the detriments of entrepreneurial intention (Bygrave, 1989); the individuals who are more inclined toward entrepreneurship are deemed to have an intention to start the business or entrepreneurial ventures in the future. This indicates that they are tolerating high risks.

However, the individuals who tolerate low risks have low probability to become entrepreneurs (Remeikiene, Dumciuviene, & Startiene, 2013). Liles (1976) found that in becoming an entrepreneur, individual takes risks by the financial wellbeing, career opportunities, his/her family relationships, and psychic wellbeing. For the sake of entrepreneurial success, he/she could risks by his/her future standard living. Furthermore, he went even further when he mentioned that entrepreneurs carry very seriously in a way that the failure of the ventures becomes in fact a personal failure.

Numerous studies have been conducted concerning the risk-taking as an independent factor that effects on entrepreneurial intention. They found a significant relationship and strong effect with entrepreneurship (Gürol & Atsan, 2006; Sial & Chudry, 2011; Tyagi, 2014; Ahamed & Rokhman, 2015); this mean that the students are significantly inclined to risk-taking and have higher score of it. They have intention to entrepreneurship sectors compared to others.

#### **2.3.4 Innovativeness**

As a matter of fact, Stevenson (1990) defined entrepreneur as an innovator. It seems that much right in this with him. The innovation of new businesses constitutes a main function called “creative destruction” (Schumpeter, 1950). This function in capitalism is considered as the major competition’s mechanism (Kirchhoff, 1989), caused through the innovation. The companies get their power of competitiveness and make the different advantages over each other; consequently, starting new business ventures is under and with the help of innovation.

According to Hansemark (1998), innovation has a comprehensive definition. It means to do at least one of these acts: it is to create a new product or create a new quality, to create a new source of supply, to create a new organization or create a new structure of business, to create a new production method, or to detect and open up a new market. Similarly, Crumpton (2012) defined innovation as “creating better or more effective or more efficient processes and services or generating the ideas or culture that will breed this creativity”.

As far as the question on “why is innovation important for entrepreneurs?” is concerned, Zacharakis (1997) gave an answer to this question by stating that entrepreneurs are always looking for opportunities; thus, innovation means an opportunity and this was confirmed by Cromie (2000) and Utsch and Rauch (2000). They found that innovation is a search of change systematically as an opportunity for new products, markets, and/or ideas.

In a study by Tateh, Latip, and Awang (2014) it has been stressed that innovativeness is positively significant related to entrepreneurial intention. According to Gürol and

Atsan(2006), students who are more inclined to entrepreneurship have higher innovativeness. Al-Harrasi, Al-Zadjali, and Al-Salti (2014) made a general review of the factors that may affect entrepreneurial intention, and they mentioned that innovation is one of the personality trait factors that affect the entrepreneurial intention. From his study, which was conducted among 133 undergraduate students in University of Hong Kong, Chau (2011) pointed out that no significant results were found with respect to innovativeness relationship with entrepreneurial intention.

### **2.3.5 Self-Efficacy**

The term self-efficacy, derived from Bandura's (1977) social learning theory, indicated the belief of a person in his/her capability and ability to do a specific mission or to control even events in his/her life (Wood& Bandura, 1989). Cromie (2000) elucidated that self-efficacy impacts personal's belief as regards whether particular targets can be gained or not. He noted that self-confidence is not a determinant of entrepreneurship but it is an outcome of entrepreneurship.

Ho and Koh (1992) proposed that self-confidence is one of an indispensable entrepreneurial characteristic and through the same token. Antonc'ic', Hisrich, Petrin, and Vahc'ic' (2002) emphasized that self-efficacy can be one of the most important dimensions of an entrepreneur's personality traits. Normally, entrepreneurs described as persons who have self-efficacy duo to their task taking that needs a high level of self- efficacy to get obtained (Gürol & Atsan, 2006).

Raju, Kumar, and Ramgo (2015) in their study, they investigated self-confidence (self-efficacy) as one of the factors that affect entrepreneurship intention and they found that 76 per cent of students have the confidence to start an own venture. Among the Nigerian people, a study by Akanbi (2013) found that self-efficacy is significantly related to entrepreneurial intention. He pointed out that individuals with high level of self-efficacy are having a higher level of entrepreneurial inspiration. In contrast, Kuntu (2015) in his study about entrepreneurship intention found that self-efficacy is insignificant related, and does not play any role when it comes to entrepreneurial intentions.

### **2.3.6 Tolerance for Ambiguity**

Uncertainty cannot be structured due to incomplete data. Frenkel-Brunswick (1949) defined tolerance of ambiguity as an “emotional and perceptual personality variable”. She also related the tolerance for ambiguity to personality variables, and she predicted that it has a positive relationship with family components of personality traits. Twenty-three years later, tolerance for ambiguity is defined by Budner as the tendency to understand the mysterious state as desirable (Bunder, 1962).

Tolerance for ambiguity is referring to what extent individual or entrepreneur has the ability and capacity to work comfortably and respond positively whatever the situation where the ambiguity and uncertainty is a high level. This covers the rules of controlling the success or fail of ventures (Tyagi, 2014; Teoh & Foo, 1997). If an individual takes a decision and he/she trusts totally in his/her decision taken under

inadequate data and uncertainty, his/her tolerance of ambiguity considers higher, and vice versa (Gürol & Atsan, 2006; Teoh & Foo, 1997; Mitton, 1989).

Uncertainty and risk are elements of the initiative since entrepreneurs' decisions lead to actions that are original and innovative (Cromie, 2000; Teoh & Foo, 1997). Entrepreneurial behaviour is totally differentiated from manager, and the tolerance for ambiguity is strongly related to this behaviour (Entrialgo, Fernandez, & Vazquez, 2000).

Tateh, Latip, and Awang(2014) have conducted a study in Sarawak, and examined tolerance of ambiguity as one of personality traits (with risk taking, and innovativeness) aside from social learning factors. They found that all independent variable have a significant relationship with entrepreneurial intention including tolerance of ambiguity. In addition, Renata and Emőke–Sződónia (2013) argued that tolerance of ambiguity have insignificant influence on entrepreneurial intentions among students.

### **2.3.7 Prior Experiences**

There is no reason for controversy between researchers about experiences. Most of them believed that individuals with prior experiences are more inclined and likely to start business, and they are more likely to go far away to achieve the success of this business. Peterman and Kennedy (2003) mentioned that it is sensible to propose that those who are more interested in improving their knowledge and experience of entrepreneurship, are those who have positive experience.

Successful enterprises initiated with ambition targets and goals, and their leaders have clear and broad ideas (Duchesneau & Gartner, 1990). That prior experience is associated with entrepreneurship (Yaghmaei & Ghasemi, 2015a). Davidsson (1995) concluded that most of enterprises owners have a valuable prior experience. These owners might be students. A study investigated by Scott and Twomey (1988) drew attentions that 30% of students who have a work experience, had a venture idea.

Holding knowledge and experiences are very important in this life and in entrepreneurship area. The lack of experiences or the lack of knowledge might obscure vision for a business opportunity, and the missing of these opportunities means the missing of starting a business, increased productivity, growth, and/or enhances competitiveness (OmerzelDoris & Irena, 2013). According to Brockhaus and Nord (1979), it is interesting to note that experience of individuals can affect the choice of an entrepreneur.

The studies conducted by Yaghmaei, Ardestani, Ghasemi, Baraeinezhad, and Parsa (2015b) among postgraduate students indicated that prior experience is significantly related to entrepreneurial intention. On the other hand, Harun Sesen (2013) in his study among Turkish students pointed out the opposite results of Yaghmaei and his colleagues concerning prior experiences that are insignificantly related to entrepreneurial intention.

## **2.4 External Factors**



As mentioned earlier by Tateh, Latip, and Awang (2014), internal factors should be nurtured by external factors; this study was conducted among students and within the university. We supposed that personality traits are nurtured and supported by external factors such as financial assistance, family support, and the university environment that may affect entrepreneurial intention. Due to that, these factors are examined before by Lee (2010), Sesen (2013), and Tateh, Latip, and Awang(2014).They found mix results. Moreover, the strength of these factors is still not clear.

#### **2.4.1 Financial Assistance**

Many researchers studied financial support from dissimilar aspects and referred the significance of financial support to entrepreneurship areas whether inclining, starting-up and/or developing enterprises. Gnyawali and Fogel (1994) revealed that entrepreneurs generally need financial assistance for three purposes or one of them. They are to divide or minimize the risk of starting-up, to get start-up capital, and/or to extend their own.

Yasin Mahmood, and Jaafar(2011) studied entrepreneur intention among Malaysian polytechnic students and found that one of the most important reasons leading to discourage them to be entrepreneurs is the complex of getting financial support. Getting a financial support and working capital to start business are the main challenge facing students; it is considered for them the major obstacle (Samuel, Ernest, & Awuah, 2013; Keat & Ahmed, 2012; Moy, Luk, Sheehan, & Sammapan, 2001; Zhuplev 1998).

However, establishing new ventures and getting capital financing are components of the crucial factors; not only for business establishment, but for business success in advance stages as well (Lee, 2010). For that reason, Singh Sandhu, Fahmi Sidique, and Riaz (2011) pointed out that the financial assistance activities should be further developed and very widened; the government policy and its effort could be directed to create consciousness of an entrepreneurial invention and inclination through it.

Lee (2010) investigated a study among university students about the relationships of five key entrepreneurship' environments and entrepreneurial intention; one of these keys is the financial assistance. His study concluded that financial assistance is significantly related to entrepreneurial intention and promoting it. Otherwise, the result of a research conducted by Harun Sensen (2013) showed that financial assistance or access to capital negatively is insignificantly related to entrepreneurial intention.

#### **2.4.2 Family Support**

For any entrepreneur, a surrounding supportive family is substantial. Family support and interpersonal relationship are significant to human. Dyer and Handler (1994) referred to the key role that the family has played in encouraging its members to start an entrepreneurial business by providing resources, supporting endeavours, and providing a safe haven from the vicissitudes that may happen. On the contrary, the decision to initiate a new entrepreneurial business can create diverse reactions from family members and friends (Pruett, Shinnar, Toney, Llopis, & Fox, 2009).

The support from family members and its intensity can positively affect the entrepreneurial intention to start a new venture. Morisson (2000) went farther to the act after establishment and referred that family support has an important relationship with entrepreneurs' activities. Tateh, Latip, and Awang (2014) mentioned that family background affects entrepreneurial intention and the youth are influenced by the hardworking parents. This provides information for them and encourage them to involve in entrepreneurship.

Denanyoh, Adjei, and Nyemekye (2015) in their study found that family supports are significantly related to entrepreneurial intention, and they referred that the students' intentions are influenced by the support that comes from family.

### **2.4.3 University Environment**

The universities around the globe should create a supportive environment that could support, encourage, emerge, and develop the entrepreneurship culture among students (Roffe, 1999); this environment and culture can expand to affect all segments of society. Furthermore, it should also create this entrepreneurial environment in a potential to nurture the entrepreneurship among students (Keat, Selvarajah, & Meyer, 2011). Autio, Keeley, Klofsten, and Ulfstedt (1997) in their study on entrepreneurial intentions drew attention to the fact that university teaching environment are affecting the greatest factors that influence the perceptions of students towards entrepreneurship.

According to Cambridge dictionary (2015) the term environment is explained as “the conditions that you live or work in and the way that they influence how you feel or how effectively you can work”.

Preparing students with high formation as well as having high entrepreneurial intention become more important. Furthermore, through the education which is considered as the main package that the universities provided for students, it should also provide and create an appropriate environment within these universities that might promote and encourage entrepreneurship regardless to the internal factor and some of external factors that can positively influence entrepreneurial intention like university environment. Another question might arise on this note is, to what extent does the importance of students' work have an intention to be future entrepreneurs?

Moses and Mosunmola (2014) pointed out some points that should be applied by universities and as a way that forward them such as: evaluating entrepreneurship education and measuring its influence on students learning, attitudes and behaviours (intention); creating opportunities to establish an entrepreneurial network by providing platforms; organizing week-end programs and awards to carry students on programs of entrepreneurship as well as allowing students to practice business with limited time within the university. These can increase the interest to entrepreneurship programs. They also create an appropriate environment.

In the next paragraph, this study will briefly discuss on the attributes that can shape the university environment, known as role model, university role, and entrepreneurial education. These three dimensions were conducted due to the entrepreneurship education that is broadly provided in universities. Its role that has been playing may

create an appropriate environment and the role model because it can be within the university. Additionally, the role of these variables is still not clear as dimensions of university environment.

**i. Role model**

The role model is one of the main factors that affect entrepreneurship activity (Lafuente & Vaillant, 2008). Therefore, it might enhance the self-efficacy of individuals and the desire to have their own enterprises (Van Auken, Stephens, Fry, & Silva, 2006). A person may have employees in his/her social network. They have already been starting their enterprises; they will affect him/her and he acquires a comparable behaviour. The individual's decision is profoundly influenced by the opinions, views, and behaviours of role models as well (Ajzen, 1991; Lafuente & Vaillant, 2008). Bosma Hessels, Schutjens, Van Praag, and Verheul (2012) referred that the role models are important in determining future work to inspire, support, encourage, and motivate students to entrepreneurship. It is incumbent upon universities and institutions to involve "symbol" entrepreneurs in their programmes more and more. Furthermore, they mentioned that 54 percent of entrepreneurs in their path have a role model, and 81 percent of them have role model before they launched their enterprise, and the more likely to have a role model are those who have a high education level. One of the entrepreneur that can be considered as a role model is the founder of Apple Company Steve Jobs; it is very precious for students to have a good role model in leading them to success.

However, the role model is not confined to the famous people only, but it can refer to teachers, family members, friends, or colleagues (Kennedy, Drennan, Renfrow, & Watson, 2003). In this study, due to most of the students living inside dorms in universities, students have been interacting and communicating more with teachers and other students that may develop into friendship and role model relation. This study will take into consideration the approach of Kennedy, (Drennan, Renfrow, & Watson, 2003; Keat, Selvarajah, & Meyer, 2011) by focusing only on colleagues whether they can be considered as role models.

Karimi, Biemans, Lans, Chizari, Mulder, and Mahdei, (2014) conducted a study among 331 students. Their study was consistent with the theory planned behaviour. They found that role model was significantly influenced the entrepreneurial intention indirectly, through the antecedent in the theory. Shiri, Mohammadi and Hosseini (2012) conducted a study among agriculture students. They found that role model was significantly related to entrepreneurial intention.

## **ii. University's role**

The concept of the university's role explained the role of the university in which it could play a role to contribute to society and the economy by providing educational programs, trainings, knowledge, and creating a culture. In terms of promoting entrepreneurship, universities can play a key role in encouraging, promoting, and developing entrepreneurship as well as institutionalizing and making suitable settings to encourage innovation (Sadeghi, Mohammadi, Nosrati, & Malekian, 2013; Jesselyn&Mitchell 2006).

Furthermore, in order to inspire students, universities and educational institutions are considered as the appropriate places to shape and create the entrepreneurial culture (Landstrom, 2005). In respect of teaching students a fruitful way to think like entrepreneurs, university has to place itself as the centre of entrepreneurship for creating and nurturing an entrepreneurial environment that combines factors that can contribute to entrepreneurship development. This can be done by creating fundamental and main contributions (Gnyawali & Fogel 1994). To accomplish this great mission, the university can take a steady and a great step by applying various mechanisms such as creating the entrepreneurial culture (Sadeghi, Mohammadi, Nosrati, & Malekian, 2013) This creation is expected to affect the students' decision to be entrepreneurs (Keat, Selvarajah, & Meyer, 2011).

Wells (2012) mentioned that the university administrations should support starting-up businesses by embracing the concepts required and changing the culture mind-set of separating the business from academy tasks. He suggested seven roles/practical measures that the university can take in assisting the successful of new businesses. Among others is the university has the responsibility to facilitate in getting the intellectual properties and assisting them in terms of funding. This university's role can enhance the intention of students, youth, and/or spin-offs.

In their studies, Ooi and Nasiru (2015) elucidated that university role of promoting entrepreneurship is related to entrepreneurial inclination. While, the effect of this role is still not examined very well and it is still not clear.

### **iii. Entrepreneurship Education**

Nowadays, the role of entrepreneurial education becomes very important to promote entrepreneurial intention and develop individuals' enterprising (do Paço, Ferreira, Raposo, Rodrigues, & Dinis, 2013). Policy makers believed that through education one can reach the augmentation of high levels of entrepreneurship (European Commission, 2006), and in particular entrepreneurship education (Oosterbeek, Van Praag, & Ijsselstein, 2010). According to Fleming (1996), entrepreneurship education is able to create the consciousness to boot it. It also encourages self-employment as a career choice amongst youth.

McIntyre and Roche (1999) defined entrepreneurship education as the process of providing individuals or students with the skills and concept to recognize opportunities that are not evident to other individuals and have overlooked, have the self-esteem, prudence, and insight to act very well and crucially where others confused (McIntyre & Roche 1999, p.33). This means through a convenient entrepreneurial education individuals can obtain the prerequisites of knowledge and skills to start and develop ventures (Do Paço, Ferreira, Raposo, Rodrigues, & Dinis, 2013).

European Commission (2006) established that "Entrepreneurship can be increased through education, especially entrepreneurship education". According to Reynolds Hay and Camp (1999) and Sánchez, Bañón, and Vivaracho (2010), Entrepreneurship is stimulated by an important way; it is seemingly the education due to four reasons. Firstly, education provides the self-confidence and independent senses to individuals.



Secondly, education created among individuals a consciousness of alternative career choices. Thirdly, education made individuals more eligible to realize opportunities by expanding their horizons and finally, education provides individuals with knowledge that can be utilized to evolve new venture opportunities.

Volery and Mueller (2006) asserted the possibility of entrepreneurship education's role in affecting the decision of individuals to start a business.

Keat, Selvarajah, and Meyer (2011) in their study among Malaysian university students emphasised that the term entrepreneurial education is used widely in the United States and some European countries. It also used and accepted by the universities in Malaysia; in their study, they examined the entrepreneurship education through different attributes. In this study, two attributes will be discussed, namely, entrepreneurial curriculum and entrepreneurial internship programmes.

#### **a- Entrepreneurship Curriculum**

The entrepreneurship curriculum consists of information and knowledge on how students can recognize and shape opportunities and generate ideas, get the business concepts, develop effective operational business plans, establish and start businesses, building and develop new ventures, and discuss case studies about entrepreneurial strategies, successful experiences, and failures of entrepreneurs in their first path (OECD, 2010).

In developing the entrepreneurial competencies and skills among students, the suitability of curriculum and teaching methods are considered the main challenge of entrepreneurial education (Garavan & O'Connell, 1994). To increase the students'

interest in entrepreneurship sectors, this should pass through entrepreneurial programs. Thus, the final objective of these programs is to encourage entrepreneurship consciousness amongst students (Keat, Selvarajah, & Meyer, 2011). The teaching of entrepreneurship is divided into types of the conventional approach like a textbook (Fiet, 2002), unconventional approach such as conferences (Klandt & Volkman, 2006), and field studies (Cooper, & Bottomely, & Gordon, 2004). The unconventional teaching approach can be more practical and creative of the entrepreneurial environment as well.

#### **b- Entrepreneurial internship programs**

The entrepreneurship learning process should not be limited to the classrooms only, and to the discussions provided in it. In today's world, in order to develop and refine the individuals' entrepreneurial skills, they should have a vital communication and interaction with the business environment (Dilts & Fowler 1992). The objective of internship programs is to teach students what is entrepreneurship. Additionally, they teach them how to put the theory that learned in the classes into practice.

Throughout this direction, it is expected that students will earn self-confidence, a motivation, creativity, and know how team working should be (Junior Achievement Young Enterprise annual report, 2006). They also develop working skills of students (Dodge & McKeough, 2003). For that reason, entrepreneurial internship is considered as a perfect technique or mechanism to provide a real business environment for students to learning from experiences. Providing entrepreneurial

internship programs offer many advantages for enterprises, companies, and students (Dilts & Fowler, 1999).

In conclusion, Ooi and Nasiru (2015) and Keat, Selvarajah, and Meyer (2011) have investigated entrepreneurship curriculum, and entrepreneurial internship as having attributes of entrepreneurial education. They mentioned that they positively affect entrepreneurial inclination. In our study, we will investigate the effect on this attribute concerning entrepreneurial intention.

By using the Ajzen's theory of planned behaviour, Shapero's entrepreneurial event model, and entrepreneurial cognition theory, Zhang, Duysters, and Clodt (2014) investigated a study regarding the entrepreneurial intention of students; they collected the data across ten universities by 494 samples. One of the findings is that entrepreneurial education significantly affects entrepreneurial intention. On contrary, a study conducted by Bae, Qian, Miao, and Fiet (2014), they examined the relationship between entrepreneurial education and entrepreneurial intention. Their study showed that the relationship between entrepreneurship education and entrepreneurial intention is not significant.

One of the factors in this study is still not clear; it is the university environment. The study conducted by Harun Sense (2013) argued that university environment does not have any significant impact on entrepreneurial intention.

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.1 Underpinning theories**

This chapter presents a particular step used in writing the analysis and gathering the information for this research. It also provides the various methods and techniques used in the analysis.

Based on prior studies, we propose a model to analyse the entrepreneurial intention of postgraduate students in Malaysia. Nabi, Holden, and Walmsley (2010) stated that there are three basic approaches which are followed in the majority of studies into entrepreneurial intentions. These are: (1) Shapero's model of the entrepreneurial event (SEE), (2) Ajzen's theory of planned behaviour (TPB); and (3) Lu'thje and Franke's model (LFM).

Away from the three famous theories, as well as Social Cognitive Career Theory SCCT, this current study applied Lu'thje and Franke's model LFM.

#### **I. Lu'thje and Franke's Model**

Lu'thje and Franke's Model LFM has been applied in only a few selected studies (Franke & Lu'thje, 2004; Harun Sense, 2013; Kristiansen & Indarti, 2004; Lu'thje & Franke, 2003; Schwarz, Wdowiak, Almer-Jarz, & Breiteneker, 2009). Although this model provides a broad framework with which it evaluates the antecedents of

entrepreneurial intention (Nabi, Holden, & Walmsley, 2010), Lu`thje and Franke's Model LFM of entrepreneurial intentions combines personality traits(internal factors) and contextual factors (external factors) to examine attitudes regarding self-employment and entrepreneurial intentions.

Lu`thje and Franke (2003) stated that the contradictory findings of earlier personality trait-based models of entrepreneurial tendencies may have resulted from their use of generalized approaches instead of a focus on the specific context of entrepreneurs. The LFM however connects personality traits, attitudes, and a variety of social, economic, and contextual variables in explaining entrepreneurial intentions. This approach provides a broad perspective on career development as being shaped by personal and environmental factors. It also offers a sound framework within which we can assess the antecedents of entrepreneurial intentions (Nabi, Holden, &Walmsley, 2010).

Harun Sense (2013), Kristiansen and Indarti (2004), and Schwarz, Wdowiak, Almer-Jarz, and Breitenecker (2009) used this model to study the demographic, personal, and contextual antecedents of entrepreneurial intentions. Given its innovative approach and broad range of factors that are able to influence entrepreneurial intentions, LFM is used in this study to treat internal factors (personality traits) and the external factors (environmental factors).

## **II. Social Cognitive Career Theory (SCCT)**

This theory is developed by Lent, Brown, and Hackett in 2002. This theory provides a framework, which organizes relation of career with interests, choice, and performance. Social Cognitive Career Theory proposed that self-efficacy expectations, outcome expectations, and the role model can indirectly influence career selection by determining interest; then it influences the intention or goal (Lent et al., 2002). Thus, this study used Social Cognitive Career Theory in clarification of the entrepreneurial intention influenced by some factors.

### **3.2 Research Framework**

Based on the review of relevant literature, the theoretical framework of the study is shown below.

This framework means that the study that has been conducted assumed the internal factors (1) need of achievement, (2) locus of control, (3) risk taking propensity, (4) innovativeness, (5) self-efficacy, (6) tolerance of ambiguity, and (7) prior experience. The external factors are as follows: there are (8) financial assistance, (9) family support, and (10) university environment by token university's role, role model, and entrepreneurial education as its dimensions, that have positive and significant relationships with the entrepreneurial intention of postgraduate students.

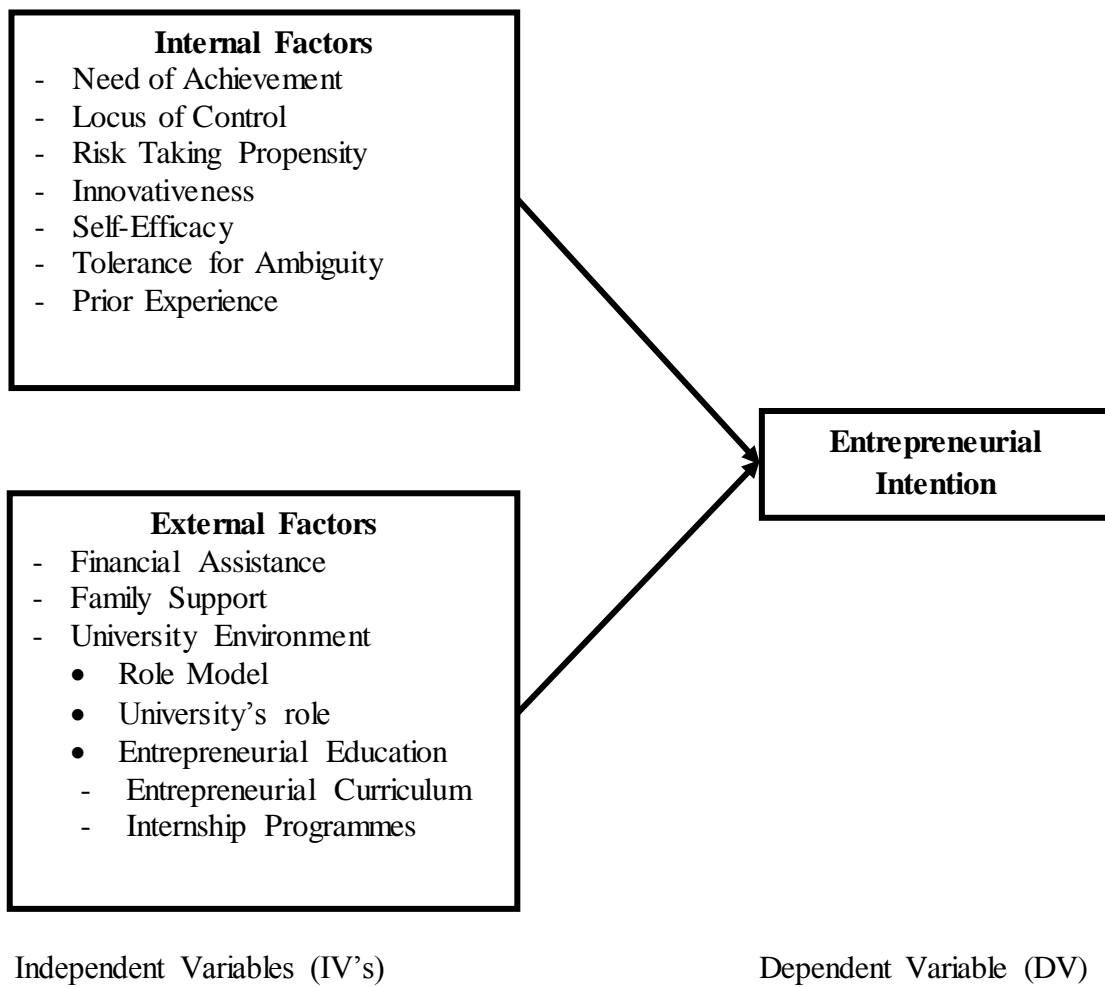


Figure 3.1  
*The Conceptual Framework*

### 3.3 Hypothesis Development

The following are the formulated hypotheses of this study:

H1: There is significant relationship between internal factors and entrepreneurial intention among postgraduate students.

H<sub>1A</sub>: There is significant relationship between need of achievement and entrepreneurial intention among postgraduate students.

- H<sub>1B</sub>: There is significant relationship between locus of control and entrepreneurial intention among postgraduate students.
- H<sub>1C</sub>: There is significant relationship between risk taking propensity and entrepreneurial intention among postgraduate students.
- H<sub>1D</sub>: There is significant relationship between innovativeness and entrepreneurial intention among postgraduate students.
- H<sub>1E</sub>: There is significant relationship between self-efficacy and entrepreneurial intention among postgraduate students.
- H<sub>1F</sub>: There is significant relationship between tolerance of ambiguity and entrepreneurial intention among postgraduate students.
- H<sub>1G</sub>: There is significant relationship between prior experiences and entrepreneurial intention among postgraduate students.
- H<sub>2</sub>: There is significant relationship between external factors and entrepreneurial intention among postgraduate students.
- H<sub>2A</sub>: There is significant relationship between financial assistance and entrepreneurial intention among postgraduate students.
- H<sub>2B</sub>: There is significant relationship between family support and entrepreneurial intention among postgraduate students.
- H<sub>2C</sub>: There is significant relationship between university environment and entrepreneurial intention among postgraduate students.
- H<sub>2C1</sub>: There is significant relationship between role model and entrepreneurial intention among postgraduate students.
- H<sub>2C2</sub>: There is significant relationship between university's role and entrepreneurial intention among postgraduate students.



H<sub>2C3</sub> There is significant relationship between entrepreneurial education and entrepreneurial intention among postgraduate students.

H3: University environment relates more than the other factors on entrepreneurial inclination of postgraduate students?

### **3.4 Research Design**

The research design step comes after developing the theoretical framework and identifying the variables. Is the way that leads to gather, analyse, and display data to get findings (Sekaran, 2003).

#### **3.4.1 Purpose of the study**

According to Awias (2015), there are four types of the study's purposes, which are descriptive research, exploratory research, hypothesis testing, and case study.

In this study, for answering the research questions, this study is based on a descriptive research method and survey that investigated the level of entrepreneurial of postgraduate students as well as the importance of the university environment. Likewise, the purpose is to describe the relevant aspects of entrepreneurial intention from postgraduate students.

This method, due to its advantage, quite helps in obtaining data that described the characteristics of the topic of interest. Survey research method was used where the

questionnaire was distributed to collect the data which is related to the study, it aims to study a sampling of individuals ( $n$ ) from the total population ( $N$ ).

### **3.4.2 Data collection technique**

As for this study, data was collected from various secondary resources such as journals, books, reports, and statistics. Additionally it has been collected from primary resources by questionnaire for gathering information related to this study.

### **3.4.3 Type of investigation**

This study is 'causal study'. It tries to highlight the factors (need of achievement, locus of control, risk taking propensity, innovativeness, self-efficacy, tolerance of ambiguity, prior experience; financial assistance, family support, and university environment - role model, university's role, and entrepreneurial education-), cause strengthen and make positive concerning the entrepreneurial intention of postgraduate students. It tries to find cause-and-effect relationships between these factors and the entrepreneurial intention. It clarifies that the university environment may have a stronger relationship as well.

### **3.4.4 Unit of analysis**

The unit of analysis in this study, which is the appropriate one for investigating the concepts, was individual; each postgraduate student in University Utara Malaysia UUM was a source of data.

### **3.4.5 Time Horizon**

Based on time horizon, this study is divided into two types: cross-sectional and longitudinal. The aim is to answer the research questions by collecting the data at the same time. This maybe done during a period of days; this means that the type of this study is cross-sectional one.

### **3.5 Instrumentation**

This study will use primary data to get information from respondents by distributing a questionnaire. The questionnaire is developed from the research's objectives in order to get the desired information (Awais, 2015).

#### **3.5.1 Questionnaire Design**

The questionnaire of this study consists of 51 statements used to collect the needful data. This questionnaire is divided into four main sections, the first one (a) presents the demographic descriptive questions, the second (b) presents dependent variable questions, and the third (c) presents the first part of independent variables'(internal factors) statements, and the last part (d) presents the second part of independent variables' (external factors) statements. These statements are adopted from various sources as mentioned in the Table 3.1.

In the section (a) there are 7 statements for the purpose of taking the detail of respondents. It includes gender, age, and marital status, semester of study, CGPA,

and family business background. Whilst, in section (b) there are 6 statements; all of them aim to explore the entrepreneurial intention of responding, and how many of the respondents are likely to initiate a business in the near future. Whereas, in section (c) there are 18 statements represent the internal factors; it is divided by 3, 2, 3, 3, 2, 2, and 3. They represent the need of achievement, locus of control, risk taking propensity, innovativeness, self-efficacy, tolerance of ambiguity, and prior experience respectively. However, in section (d) there are 20 statements; the external factors are divided by 3, 4, and 8 items. They represent role model, university role, and entrepreneurial education respectively.

### **3.5.2 Measurements**

In this questionnaire, all the questions are close questions; we use the measure 5-point Likert scale for capturing the original concepts of all dimensions except prior experiences. In prior experiences, we use yes/no Likert scale. The 5-point scale is effective for collecting data on the basis of interval scale and helps the respondents choose their responses correctly, clearly, and in an easy way, by determining the grade of agreeableness –from strongly disagree to strongly agree- with the matter proposed. Thus, like that scale, we can evaluate the respondents' view according to their perceptions of the subject matter. However, yes/no questions coded 1, and 2, and yes answer followed by positive and negative question to measure the quality of prior experiences. According Krueger (1993), it should consider both quantity (breadth) and quality (positiveness).

As mentioned above, this questionnaire has four sections; the first one is demographic, the second deals with the intention towards start enterprises, the third involves the influence of internal factors, and the forth is about the effect of external variables on the dependent variable.

The table 3.1 demonstrates the number of items, which measure the variables, and from whom we adapted.

Table 3.1  
*The Resource of Items Adopted*

<b>Variables</b>	<b>Number of items</b>	<b>Adapted by</b>
Entrepreneurial intention	6	Liñán & Chen (2009)
Need of achievement	3	Kristiansen & Indarti (2004)

Table 3.1 (Continued)

<b>Variables</b>	<b>Number of items</b>	<b>Adapted by</b>
Locus of control	2	Kristiansen & Indarti (2004)
Risk taking propensity	3	Lüthje & Franke (2003)
Innovativeness	3	Yusof Sandhu & Jain (2008)
Self-efficacy	2	Kristiansen & Indarti (2004)
Tolerance of ambiguity	2	Budner (1962)
Prior experience	3	Krueger (1993), and
	/	Peterman & Kennedy (2003)
Financial assistance	2	Franke & Lüthje (2004)
Family support	3	Turker & Sonmez (2009), and
	/	Gregory et al. (1988)
University environment	/	/
- Role model	3	Keat et al. (2011)
- University role	4	Keat et al. (2011)
- Entrepreneurial education	8	Keat et al. (2011)

## **3.6 Data Collection and Sampling Procedure**

### **3.6.1 Population Interest**

The interest population of this study involves all the postgraduate students who are currently engaged in their studies and the status of their portal is active in this semester A151 (2015/2016) in University Utara Malaysia UUM. The total grand number of postgraduate students is 5345.

### **3.6.2 Target Population**

The postgraduate students who are currently studying at University Utara Malaysia (UUM) in the semester A151 are the target population ( $N$ ) of this study. They are distributed to three colleges UUM CAS, UUM COB, and UUM COLGIS by 2252, 2511, and 582 students respectively; the total is 5345 students. In this study, we will select  $n$  357 elements according to the table that determines sample size for research activities provided by Krejcie & Morgan (1970).

### **3.6.3 Sample Size**

The total of 357 respondents will be considered from the sample frame, which will serve as sample size for the purpose of this study.

#### **3.6.4 Sampling Frame**

To identify students who are doing master and PhD programs, this study gets a document of the total number of students registered at UUM from the UUM Academic Affair of Students and alumni. As for the target population, my sampling frame is 357 postgraduate students.

#### **3.6.5 Inclusion/ Exclusion of Samples and Procedure for Selecting Elements to be Included/Excluded in Samples**

Only the postgraduate students in UUM were included in the survey, due to two reasons: Firstly, there are limited studies that investigate the entrepreneurial intention among postgraduates. Thus, the undergraduates are excused from my sample to focus more on postgraduate student's category. Secondly, around the globe most of postgraduate students tend to work after graduation. The undergraduates may have the desire to continue their education. Due to this, the study focuses only on this sample.

#### **3.6.6 Sampling Technique**

This study is quantitative research and the way of collecting data is a survey. To choose the element of our sample, this study used probability-sampling technique. The property of this method/technique is every element a non-zero probability to select it. Additionally, sampling provides the obtaining of representative sample allowed to generate the results of the population.

As mentioned above, the target population are the postgraduate students who are currently studying in University Utara Malaysia UUM. Choosing the element of sample size is based on the randomly selection for selecting the element. This study uses the simple random sampling that is a subset of a statistical population in which each member of the subset has an equal probability of being chosen. The simple random sample is meant to be an unbiased representation of a group.

This population of this study is 5345 students and sample is 357. The questionnaire is distributed through email, contacts, Facebook UUM groups, and hand to hand as well.

### **3.7 Techniques Used for Data Analysis**

The technique used to analyse the data collected from the questionnaire for testing the hypotheses is PLS path modelling -the software tools for partial least squares structural equation modelling (PLS-SEM). It is used due to the advantages provided and they are not available in other techniques of analysis like regression analysis.

However, before utilizing the PLS-SME, the data screening and preliminary analysis were conducted by using SPSS 20.0to guarantee that the data utilized were totally valid by analysing missing values, outliers, normality test, multicollinearity as well as response bias. This study then used different statistical tools such as descriptive statistics (frequencies and percentages).



## **CHAPTER FOUR**

### **FINDINGS**

#### **4.1 Introduction**

This chapter presents the results of the study based on the data analysis by using Smart-PLS 3 path modelling. The data were collected among postgraduate students of University Utara Malaysia. The results are set out in the followings forms: (i) data screening and preliminary analysis, (ii) non-responds bias, (iii) common method variance test, (iv) demographic file of participants, and (v) assessment of measurement model. Additionally, the results from the analysis contributes in answering the research questions as well as the research objectives discussed in chapter one (Pg. 8, 9).

#### **4.2 Response Rate**

In this study, the sample size is 357 elements. The distribution of the questionnaire used the self-administered method, 360 questionnaires in classes in UUM library, as well as distributing the questionnaires online to respond the emails, Facebook profiles and student groups in UUM. However, for the entire questionnaire collected, only 284 questionnaires are returned to the researcher. This represents 79.5 percent of the respondents' rate. Johnson & Owen (2003) in their report stated that the acceptable response rate is 32.6 percent. Thus, the 76.75 percent rate of response is sufficient. In fact, only 274 out of 284 questionnaires were found to be sufficiently

completed, researcher set aside 10 questionnaires which were not suitable and incompletely filled.

Table 4.1  
*Questionnaires' Response Rate*

<b>Response Rate</b>	<b>Frequency/Rate</b>
Number of distributed questionnaires	357
Returned questionnaires	284
Not returned questionnaire	73
Unusable returned questionnaire	10
Usable questionnaire	274
Respond rate	79,55
Valid respond rate	76.75

### **4.3 Data Screening and Preliminary Analysis**

The significance of very good data screening in multivariate related analysis cannot be an exaggerated. Due to this, screening will enable the researcher to guarantee that the multivariate models' main assumptions are not profaned (Hair, Black, Babin, & Anderson, 2010). At first and before conducting the initial data screening, the 274 questionnaires, which returned and are usable were encrypted as codes and entered into the statistical software Statistical Package for the Social Sciences (*SPSS*). From these 274 usable questionnaires, 6 of them were totally removed for further analysis because they were filled by undergraduate students of the UUM. The remaining 268 usable questionnaires were utilized for the existing data screening.

According to Field (2009) and Hair, Black, Babin, and Anderson (2010), they stated that after coding, entering, and transferring the data, they should be moved to analysis. To analyse the preliminary data, the researcher does the following: (i)

missing value analysis, (ii) assessment of outliers, (iii) normality test, and (v) multicollinearity test.

### 4.3.1 Missing value analysis

From the 268 explicit SPSS datasets, 88 data were missing randomly. For the replacement of these 88 missing values in a close point substitution for replacing the missing value, the approach was utilized as suggested by Tabachnick and Fidell (2007). The total randomly missing values' numbers of this research are illustrated in the following Table 4.2:

Table 4.2:  
*Result of Missing Values Detecting/Replacing*

Result Variable	N of Replaced Missing Values	Case Number of Non-Missing Values		N of Valid Cases
		First	Last	
NA1	0	1	268	268
NA2	2	1	268	268
NA3	3	1	268	268
LC4	0	1	268	268
LC5	1	1	268	268
RTP6	1	1	268	268
RTP7	0	1	268	268
RTP8	1	1	268	268
INN9	0	1	268	268
INN10	0	1	268	268

Table 4.2 (Continued)

Result Variable	N of Replaced Missing Values	Case Number of Non-Missing Values		N of Valid Cases
		First	Last	
INN11	1	1	268	268
SC12	1	1	268	268
SC13	3	1	268	268
TA14	4	1	268	268
TA15	4	1	268	268
PE16	2	1	268	268
PE17	1	1	268	268
PE18	5	1	268	268
FA19	5	1	268	268
FA20	4	1	268	268
FS21	1	1	268	268
FS22	3	1	268	268
FS23	5	1	268	268
RM24	0	1	268	268
RM25	2	1	268	268
RM26	0	1	268	268
UR28	0	1	268	268
UR29	3	1	268	268
UR30	3	1	268	268
EE31	1	1	268	268
EE32	2	1	268	268
EE33	0	1	268	268
EE34	1	1	268	268
EE35	1	1	268	268
EE36	1	1	268	268
EE37	0	1	268	268
EE38	0	1	268	268
EI39	0	1	268	268
EI40	1	1	268	268
EI41	0	1	268	268
EI42	1	1	268	268
EI43	2	1	268	268
EI44	20	1	268	268

Note.

N. = Number

Total number of missing Values: 88

### 4.3.2 Assessment of Outliers

According to Barnett and Lewis (1994, p. 7) outliers are “observations or subsets of observations which appear to be inconsistent with the remainder of the data”. In this study, the Mahalanobis distance (D2) technique was utilized in order to reveal the multivariate outliers based on the proposed study of Hair, Black, Babin, and Anderson (2010). In 2007, Tabachnick and Fidell defined Mahalanobis distance (D2) as “the distance of a case from the centroid of the remaining cases where the centroid is the point created at the intersection of the means of all the variables”.

In this study, items of variables were 44 in general. Based on this, the threshold's chi-square applicable was 78.75 ( $p = 0.001$ ). Particularly, with  $d$  degrees of freedom, the Mahalanobis distance of samples pursues a chi-square distribution. From the table of chi-square statistics, the acquired chi-square value was 78.75 (degrees of freedom:  $44-1 = 43$ ;  $p$ -value = 0.001); so, the values, that were greater than these values, were deleted. As a result, from 268 dataset, 12 multivariate outliers were revealed and subsequently deleted. Thus, the remaining dataset was 256 which were utilized in the next stages.

### 4.3.3 Normality test

According to Field (2009), Hair, Black, Babin, and Anderson (2010) and Tabachnick and Fidell (2007), it has been found that, in the analysis, all studies must use both graphical and statistical methods to ensure whether the data were collected is normal or not.

For the first method, histogram and normal probability plots were tested. As exhibited in Figure 4.1, the result showed that the data has the normal pattern as a whole; the bars were close to a normal curve.

The second method -statistical method- skewness and kurtosis statistics were tested. The skewness and kurtosis statistics for normally distributing data must not be more than 2.0 and 7.0 respectively (Curran, West, & Finch; 1996). As illustrated in Appendix 2, the results highlighted that skewness and kurtosis statistics were less than 2.0 and 7.0 respectively. Consequently, by considering both of graphical and statistical methods, the normality was acceptable.

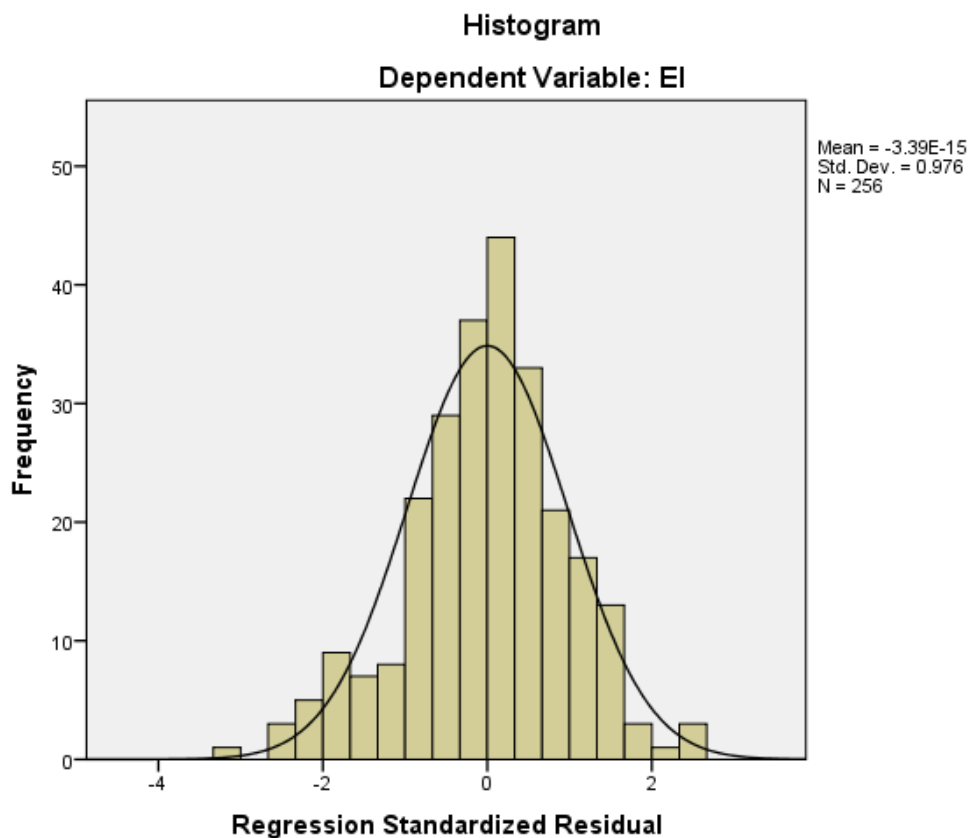


Figure 4.1:  
*Histogram and Normal Probability Plot*

#### 4.3.4 Assessment of the Multicollinearity

According to O'Brien (2007), the tolerance and variance inflation factor must be checked to guarantee that the exogenous latent constructs are not extremely correlated. Table 4.3 shows that, all the tolerance values more than 0.20, while the variance inflation factor values were less than 5 as introduced by Hair, Ringle, and Sarstedt (2011) and Hair, Sarstedt, Ringle, and Mena (2012b). This means that there is no multicollinearity among the exogenous latent constructs. Table 4.3 illustrates in details the collinearity statistics for the exogenous latent constructs.

Table 4.3:  
*Tolerance and Variance Inflation Factors*

Model	Collinearity Statistics	
	Tolerance	VIF
Locus of Control	.757	1.321
Risk Taking Propensity	.671	1.490
Innovativeness	.543	1.842
Self-efficacy	.574	1.741
Tolerance for Ambiguity	.738	1.356
Prior Experiences	.855	1.169
Financial Assistance	.741	1.350
Family Support	.835	1.198
Role Model	.650	1.539
University's Role	.482	2.076
Entrepreneurial Education	.463	2.158
Need of Achievement	.686	1.457

#### 4.4 Non-Response Bias

According to Lambert and Harrington (1990), non-response bias refers to “the differences in the answers between non-respondents and respondents”. To determine the non-response bias, Armstrong and Overton (1977) proposed an approach named time-trend extrapolation, and based on this approach, the participants were divided

into two groups: the first group is the early respondents who returned their surveys prior to the dateline and late respondents who returned their surveys after the datelibe.

Table 4.4 illustrates the test of non-response bias results, with 164 participants who responded earlier and the residual 54 participants were categorized as late respondents. The results presented showed that there was no significant difference between the early and late groups based on the Levene's test for equality of variances.

Table 4.4:  
*Results of Independent-Samples T-test for Non-Response Bias*

Variables	Group	Levene's Test for Equality of Variances	
		F	Sig.
Need of Achievement	Equal variances assumed	.001	.976
	Equal variances not assumed		
Locus of Control	Equal variances assumed	.042	.837
	Equal variances not assumed		
Risk Taking Propensity	Equal variances assumed	1.922	.167
	Equal variances not assumed		
Innovativeness	Equal variances assumed	1.579	.210
	Equal variances not assumed		
Self-efficacy	Equal variances assumed	.396	.530
	Equal variances not assumed		
Tolerance for Ambiguity	Equal variances assumed	.250	.617
	Equal variances not assumed		
Prior Experiences	Equal variances assumed	2.953	.087
	Equal variances not assumed		
Financial Assistance	Equal variances assumed	2.333	.128
	Equal variances not assumed		
Family Support	Equal variances assumed	3.109	.079
	Equal variances not assumed		
Role Model	Equal variances assumed	.065	.799
	Equal variances not assumed		
University's Role	Equal variances assumed	2.181	.141
	Equal variances not assumed		
Entrepreneurial education	Equal variances assumed	.000	.997
	Equal variances not assumed		
Entrepreneurial intention	Equal variances assumed	.421	.517
	Equal variances not assumed		



#### 4.5 Demographic Profile of the Participants

This section presents the participants' demographic profile. The demographic characteristics in this study include gender, age, marital status, and program of study, semester of study, CGPA, and family business background. Table 4.5 illustrated that the minority of the participants in the sample were females by 60 participants and 65.3 percent of the participants were in the 25-34 year age range. In terms of marital status, it is almost 50/50 between singles and married participants by 55.9 and 44.1 respectively. Table 4.5 shows that MSc.d Students and PhD students participated by 57 percent and 36.7 percent respectively in this study.

On the other hand, master and doctorate of business administration students were 4.3 and 2.0 respectively. Regarding to the semester of study, from first to more than six semesters, students are closely distributed between these categories. About 177 of the participants were not from a family business background by 69.1 percent, while agriculture and trade were the two major business backgrounds by 31 percent and 37 percent respectively. The results are presented in Table 4.5.

Table 4.5:  
*Profile of Responders*

<b>Variables</b>	<b>Frequency</b>	<b>Percent</b>
<b>Gender</b>		
Male	196	76.6
Female	60	23.4
<b>Age</b>		
20-24	38	14.8
25-29	101	39.5
30-34	66	25.8
35 and above	51	19.9

Table 4.5: (Continued)

<b>Variables</b>	<b>Frequency</b>	<b>Percent</b>
<b>Marital Status</b>		
Single	143	55.9
Married	113	44.1
<b>Program of study</b>		
MSC	146	57.0
MBA	11	4.3
PHD	94	36.7
DBA	5	2.0
<b>Semester</b>		
First	73	28.5
Second	63	24.6
Third	54	21.1
Fourth	29	11.3
Fifth	23	9.0
Sixth	11	4.3
Seventh	3	1.2
<b>CGPA</b>		
Not yet/ No CGPA	94	36.7
From 3.0 to 3.49	91	35.5
3.5 to 3.79	45	17.
3.8 to 4	26	10.2
<b>Family</b>	<b>Business</b>	
<b>Background</b>		
Agriculture	31	12.1
Trade	37	14.5
Constriction	5	2.0
Manufactures	6	2.3
No background	177	69.1

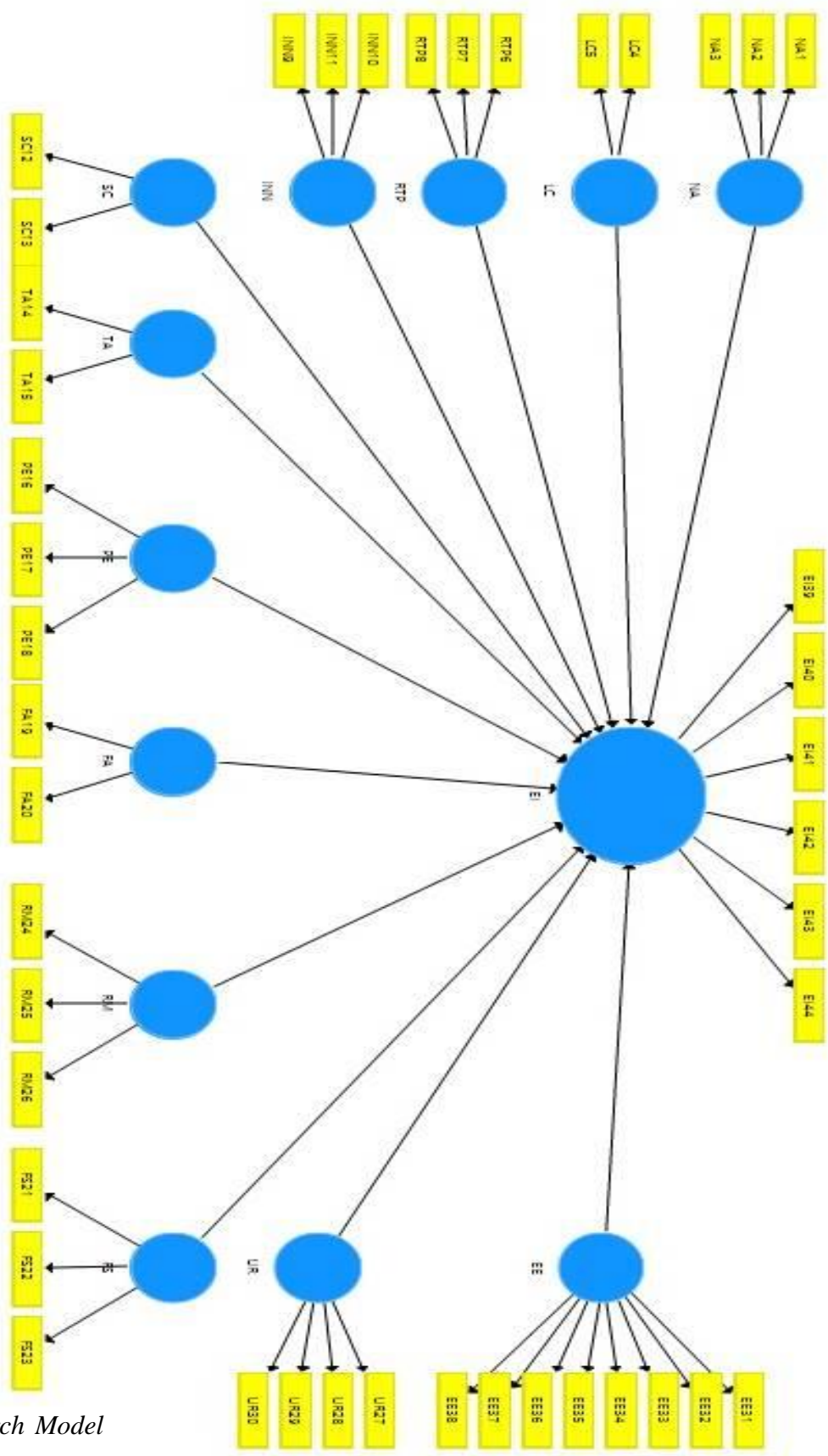


Figure 4.2  
The Research Model

#### **4.6 Assessment of the Measurement Model**

Based on the previous study's recommendations, the measurement model's quality in this research was evaluated by utilizing the next criteria: (i) indicator reliability, (ii) internal consistency reliability, (iii) convergent validity, and (iv) discriminant validity for reflective and formative construct.

Figure 4.2 describes the results of the measurement model for the complete research model for the reliability and validity of the constructs, whereas the results of reflective measurement models are presented in Table 4.6.

This study should draw attention to that analysis when the model was tested for the first time. This study found that the reliability of the variable family support was 0.665, and the Average Variance Extracted of variation of the prior experience was 0.478. While, both of standardized loadings of items PE16, FS21, and EI44 were 0.276, -0.207, and -0.353 respectively; these values are not acceptable.

In order to make the value to be acceptable, three items PE16, FS21, and EI44 were removed.

The results are illustrated in the Figure 4.3 as well as Table 4.6.

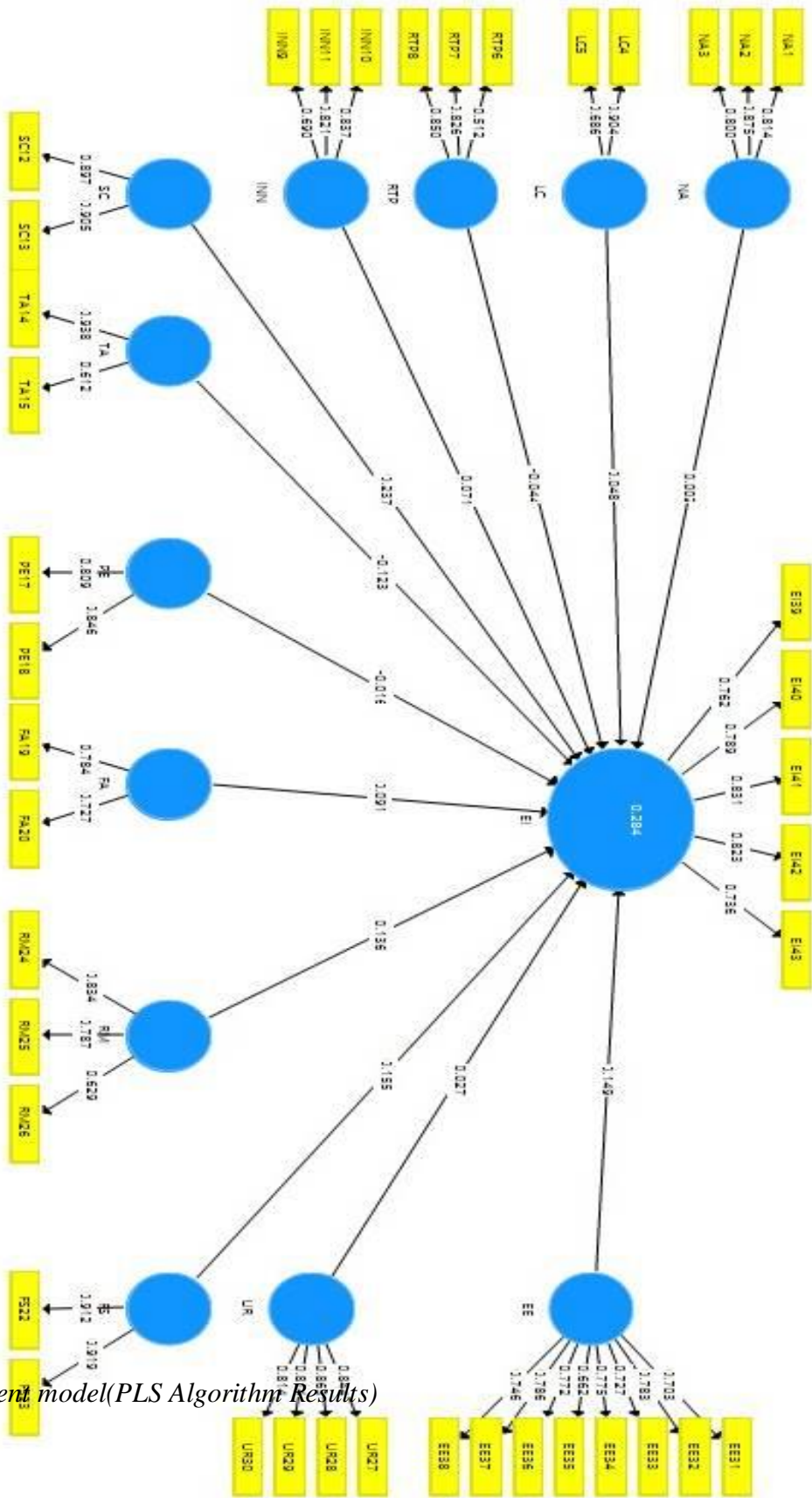


Figure 4.3  
Measurement model(PLS Algorithm Results)

Table 4. 6  
*Result of Reflective Measurement Model*

<b>Construct</b>	<b>Items</b>	<b>Std. Loadings</b>	<b>AVE</b>	<b>CR (<math>\alpha</math>)</b>
Entrepreneurial Education	EE31	0.703	0.556	0.909
	EE32	0.783		
	EE33	0.727		
	EE34	0.775		
	EE35	0.662		
	EE36	0.772		
	EE37	0.786		
	EE38	0.746		
Entrepreneurial Intention	EI39	0.762	0.622	0.892
	EI40	0.789		
	EI41	0.831		
	EI42	0.823		
	EI43	0.736		
Financial Assistance	FA19	0.784	0.572	0.727
	FA20	0.727		
Family Support	FS22	0.912	0.837	0.912
	FS23	0.919		
Innovativeness	INN10	0.837	0.617	0.827
	INN11	0.821		
	INN9	0.690		
Locus of Control	LC4	0.904	0.643	0.780
	LC5	0.686		
Need of Achievement	NA1	0.814	0.689	0.869
	NA2	0.875		
	NA3	0.800		
Prior Experience	PE17	0.809	0.685	0.813
	PE18	0.846		
Role Model	RM24	0.834	0.570	0.797
	RM25	0.787		
	RM26	0.629		
Risk Taking Propensity	RTP6	0.512	0.556	0.782
	RTP7	0.826		
	RTP8	0.850		
Self-efficacy	SC12	0.897	0.811	0.896
	SC13	0.905		
Tolerance for Ambiguity	TA14	0.938	0.627	0.763
	TA15	0.612		
University Role	UR27	0.844	0.696	0.90
	UR28	0.863		
	UR29	0.814		
	UR30	0.814		

First of all, The AVE is for Extracted Average Variance, CR is for Composite Reliability, and Std is for Standardized. As pointed out in table 4.2 the standardized loadings of the reflective construct are whole very well; all are above of the value 0.4. This is the threshold value which suggested by Hair, Hult, Ringle, and Sarstedt (2014). Hence, the reliability indicator was highly satisfactory in reflective measurement model with standardized loadings ranging from 0.512 to 0.938.

Secondly, by examining the composite reliability coefficients, the internal consistency reliability was established (Henseler, Ringle, & Sinkovics, 2009). Bagozzi and Yi (1988) stated that if a composite reliability's value indicates 0.7 and above; this means that the internal consistency reliability is extremely satisfying and favourable. All the composite reliability coefficients of the reflective constructs were well above of 0.7 that is the threshold value recommended, thereby suggesting acceptable internal consistency reliability, were ranged from 0.727 to 0.912.

Thirdly, if the Average Variance Extracted (AVE) value is 0.50 or above, the convergent validity is then considered acceptable (Bagozzi & Yi, 1988); the AVE values of the reflective constructs were ranged from 0.556 to 0.837. Subsequently, it established satisfactory convergent validity for reflective measurement model.

As a result, discriminant validity for reflective constructs was confirmed by testing the loadings and cross loadings. In specific, with a view to achieve satisfactory discriminant validity, the loading of every indicator must be more major than all of its cross-loadings.

As displayed in Table 4.7, the whole standardized loadings were well on their respective constructs without cross-loadings on the remaining latent variables. Therefore, in this research the reflective measurement model accomplished satisfactory discriminant validity.

Once the measurement model have been estimated and evaluated, the structural model testing of hypotheses will be analysed. From the PLS path modelling literature (Hair, Hult, Ringle, & Sarstedt, 2014; Hair, Sarstedt, Pieper, & Ringle, 2012a; Henseler, Ringle, & Sinkovics, 2009) testing the structural model at four criteria were utilized, which are  $R^2$  of endogenous latent variables, effect size  $f^2$ , prediction relevance  $Q^2$ , and estimates for path coefficients.

The standard bootstrapping procedure with 5000 bootstrap samples was applied in this research to output the beta values, standard errors, and t-values for both the effect model (Hair, Hult, Ringle, & Sarstedt, 2014; Hair, Sarstedt, Pieper, & Ringle, 2012a; Henseler, Ringle, & Sinkovics, 2009). The assessments of the effect structural model were illustrated in Figure 4.3 and Table 4.8.



Table 4.7  
Cross Loading

	EE	EI	FA	FS	INN	LC	NA	PE	RM	RTP	SC	TA	UR
<b>EE31</b>	<b>0.703</b>	0.308	0.170	0.220	0.324	0.307	0.288	-0.124	0.312	0.223	0.291	0.261	0.590
<b>EE32</b>	<b>0.783</b>	0.269	0.095	0.230	0.317	0.225	0.277	-0.081	0.310	0.332	0.342	0.270	0.505
<b>EE33</b>	<b>0.727</b>	0.269	0.100	0.211	0.291	0.243	0.254	-0.124	0.332	0.221	0.225	0.189	0.506
<b>EE34</b>	<b>0.775</b>	0.267	0.116	0.210	0.341	0.261	0.277	-0.106	0.323	0.299	0.327	0.274	0.504
<b>EE35</b>	<b>0.662</b>	0.276	0.271	0.167	0.371	0.291	0.301	-0.072	0.278	0.398	0.338	0.358	0.427
<b>EE36</b>	<b>0.772</b>	0.251	0.086	0.121	0.291	0.333	0.231	-0.080	0.272	0.257	0.277	0.255	0.470
<b>EE37</b>	<b>0.786</b>	0.251	0.116	0.184	0.351	0.338	0.239	-0.048	0.251	0.266	0.289	0.315	0.429
<b>EE38</b>	<b>0.746</b>	0.267	0.033	0.235	0.330	0.264	0.261	-0.084	0.284	0.243	0.334	0.289	0.451
<b>EI39</b>	0.257	<b>0.762</b>	0.175	0.168	0.216	0.127	0.231	-0.130	0.295	0.119	0.317	0.140	0.250
<b>EI40</b>	0.313	<b>0.789</b>	0.132	0.255	0.242	0.146	0.173	-0.066	0.319	0.200	0.319	0.199	0.307
<b>EI41</b>	0.251	<b>0.831</b>	0.142	0.306	0.262	0.236	0.215	-0.209	0.243	0.144	0.324	0.058	0.198
<b>EI42</b>	0.344	<b>0.823</b>	0.150	0.296	0.239	0.249	0.165	-0.139	0.204	0.145	0.310	0.082	0.221
<b>EI43</b>	0.272	<b>0.736</b>	0.259	0.245	0.324	0.155	0.131	-0.160	0.306	0.286	0.332	0.152	0.210
<b>FA19</b>	0.137	0.173	<b>0.784</b>	0.140	0.147	-0.023	0.009	-0.001	0.280	0.138	0.100	0.254	0.233
<b>FA20</b>	0.117	0.156	<b>0.727</b>	0.166	0.247	0.108	0.151	-0.113	0.247	0.192	0.188	0.253	0.128
<b>FS22</b>	0.221	0.291	0.159	<b>0.912</b>	0.193	0.182	0.223	-0.137	0.300	0.158	0.277	0.184	0.252
<b>FS23</b>	0.266	0.303	0.208	<b>0.919</b>	0.221	0.205	0.173	-0.141	0.285	0.169	0.203	0.167	0.315
<b>INN10</b>	0.403	0.285	0.288	0.197	<b>0.837</b>	0.194	0.383	-0.189	0.316	0.443	0.447	0.316	0.392
<b>INN11</b>	0.394	0.287	0.190	0.217	<b>0.821</b>	0.443	0.408	-0.184	0.210	0.451	0.403	0.272	0.386
<b>INN9</b>	0.193	0.174	0.092	0.092	<b>0.690</b>	0.262	0.313	-0.162	0.079	0.264	0.357	0.153	0.179
<b>LC4</b>	0.376	0.227	0.004	0.219	0.400	<b>0.904</b>	0.466	-0.227	0.056	0.179	0.349	0.211	0.242
<b>LC5</b>	0.206	0.134	0.108	0.098	0.172	<b>0.686</b>	0.169	-0.069	0.066	0.173	0.188	0.170	0.079
<b>NA1</b>	0.314	0.172	0.093	0.181	0.370	0.410	<b>0.814</b>	-0.158	0.079	0.242	0.333	0.131	0.223
<b>NA2</b>	0.269	0.196	0.052	0.196	0.404	0.343	<b>0.875</b>	-0.142	0.101	0.288	0.273	0.106	0.203
<b>NA3</b>	0.314	0.203	0.107	0.161	0.398	0.330	<b>0.800</b>	-0.093	0.157	0.351	0.337	0.246	0.240
<b>PE1</b>	-0.109	-0.142	-0.040	-0.113	-0.236	-0.197	-0.125	<b>0.809</b>	-0.151	-0.105	-0.265	-0.088	-0.015

Table 3.7 (continued)

	EE	EI	FA	FS	INN	LC	NA	PE	RM	RTP	SC	TA	UR
<b>PE18</b>	-0.094	-0.156	-0.077	-0.137	-0.146	-0.144	-0.133	<b>0.846</b>	-0.171	-0.223	-0.275	0.003	-0.018
<b>RM24</b>	0.378	0.319	0.217	0.332	0.281	0.114	0.128	-0.213	<b>0.834</b>	0.264	0.304	0.242	0.343
<b>RM25</b>	0.235	0.269	0.314	0.196	0.163	0.030	0.109	-0.140	<b>0.787</b>	0.244	0.267	0.263	0.246
<b>RM26</b>	0.292	0.158	0.301	0.163	0.163	-0.015	0.058	-0.041	<b>0.629</b>	0.213	0.222	0.228	0.394
<b>RTP6</b>	0.271	0.043	0.162	0.039	0.378	0.267	0.277	-0.153	0.068	<b>0.512</b>	0.246	0.195	0.212
<b>RTP7</b>	0.256	0.184	0.231	0.083	0.315	0.111	0.259	-0.207	0.257	<b>0.826</b>	0.282	0.215	0.178
<b>RTP8</b>	0.351	0.213	0.128	0.218	0.498	0.209	0.315	-0.126	0.293	<b>0.850</b>	0.414	0.213	0.237
<b>SC12</b>	0.344	0.359	0.194	0.212	0.468	0.292	0.346	-0.256	0.330	0.355	<b>0.897</b>	0.351	0.238
<b>SC13</b>	0.391	0.372	0.145	0.258	0.458	0.340	0.336	-0.330	0.307	0.409	<b>0.905</b>	0.317	0.249
<b>TA14</b>	0.386	0.160	0.317	0.194	0.355	0.259	0.203	-0.081	0.269	0.224	0.349	<b>0.938</b>	0.351
<b>TA15</b>	0.143	0.070	0.200	0.085	0.092	0.064	0.079	0.051	0.264	0.211	0.225	<b>0.612</b>	0.240
<b>UR27</b>	0.508	0.283	0.162	0.263	0.275	0.196	0.183	-0.045	0.306	0.159	0.225	0.277	<b>0.844</b>
<b>UR28</b>	0.570	0.276	0.189	0.306	0.423	0.161	0.256	0.002	0.376	0.231	0.274	0.251	<b>0.863</b>
<b>UR29</b>	0.564	0.219	0.242	0.205	0.367	0.154	0.250	0.005	0.358	0.276	0.208	0.407	<b>0.814</b>
<b>UR30</b>	0.561	0.203	0.236	0.251	0.372	0.231	0.209	-0.025	0.341	0.218	0.182	0.365	<b>0.814</b>

Note.

EE= Entrepreneurial Education, EI= Entrepreneurial Intention, FA= Financial Assistance, FS= Family Support, INN= Innovativeness, LC= Locus of Control, NA=Need of Achievement, PE= Prior experience, RM= Role Model, RTP= Risk Taking Propensity, SC= Self-Efficacy, TA= Tolerance for Ambiguity, UR= University's Role.

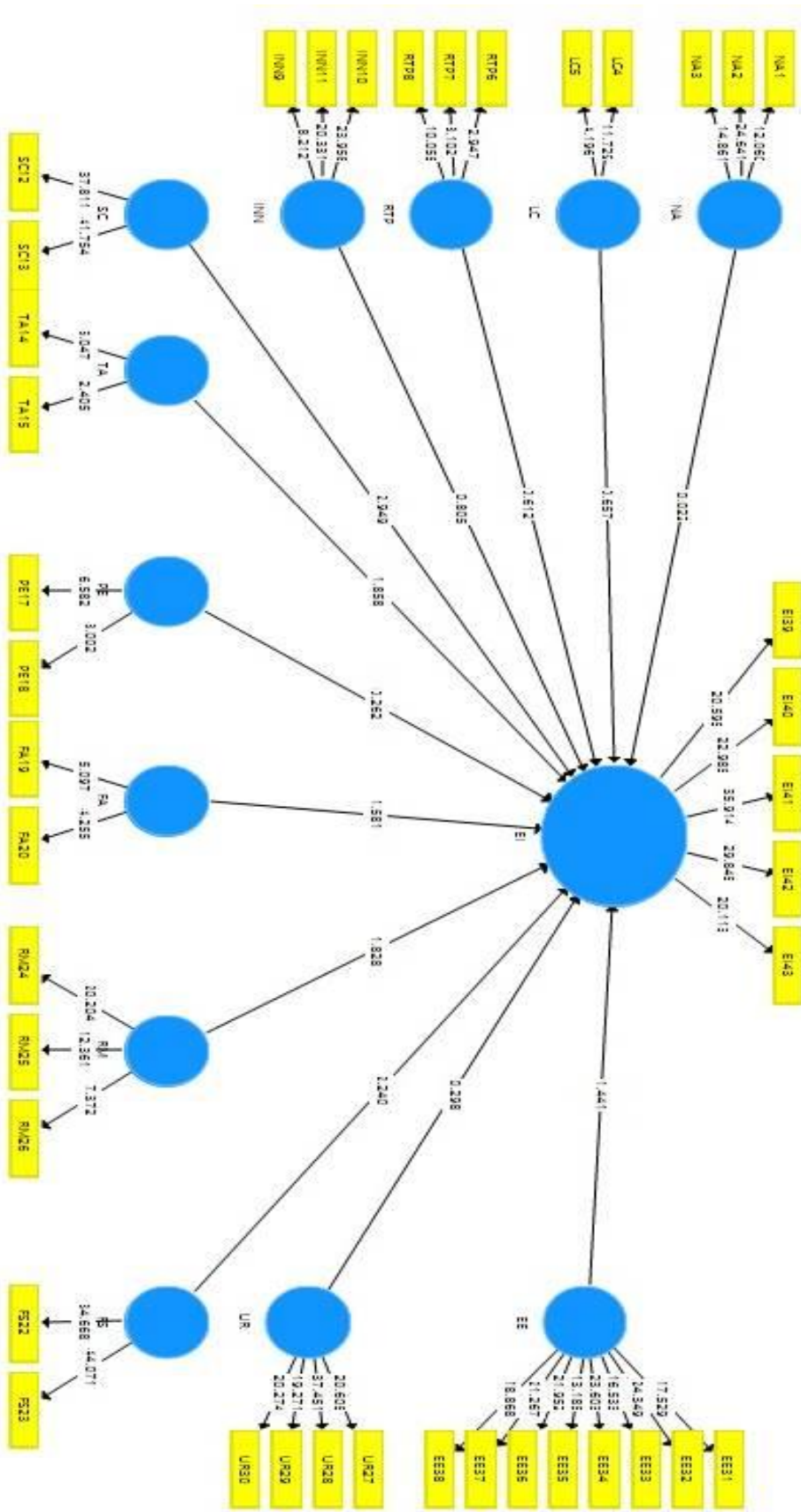


Figure 4.4  
PLS Bootstrapping Results

Table 4.8  
Hypothesis Testing

Hypothesis	Relationship	Std. Beta	Std. Error	T-Value	P-Value	Result
H <sub>1A</sub>	NA -> EI	0.009	0.085	0.022	0.49	NS
H <sub>1B</sub>	LC -> EI	0.051	0.073	0.657	0.26	NS
H <sub>1C</sub>	RTP -> EI	-0.033	0.073	0.612	0.27	NS
H <sub>1D</sub>	INN -> EI	0.070	0.088	0.805	0.21	NS
H <sub>1E</sub>	SC -> EI	0.228	0.080	2.949	0.00***	S
H <sub>1F</sub>	TA -> EI	-0.103	0.066	1.858	0.03**	S
H <sub>1G</sub>	PE -> EI	-0.025	0.062	0.262	0.40	NS
H <sub>2A</sub>	FA -> EI	0.095	0.058	1.581	0.06*	S
H <sub>2B</sub>	FS -> EI	0.153	0.069	2.240	0.01***	S
H <sub>2C1</sub>	RM -> EI	0.133	0.074	1.828	0.03**	S
H <sub>2C2</sub>	UR -> EI	0.026	0.092	0.298	0.38	NS
H <sub>2C3</sub>	EE -> EI	0.143	0.103	1.441	0.08*	S

\*\*\*p< 0.01, \*\*p< 0.05 \*p<0.1 (1-tailed)

Endogenous latent variable Entrepreneurial Intention:  $R^2 = 0.284$ ;  $Q^2 = 0.155$ ;

NS = Not Supported

S= Supported

According to Falk and Miller (1992), the minimum level accepted for the endogenous latent variable  $R^2$  was 0.10. The tested model showed that  $R^2$  value was 0.284

To ensure the predictive relationship of the model, a cross-validated redundancy measure ( $Q^2$ ) was utilized (Hair, Hult, Ringle, & Sarstedt, 2014; Henseler, Ringle, & Sinkovics, 2009).  $Q^2$  is defined as a standard to measure, in a careless cases how well the model predicts the data (Chin, 1998). Henseler, Ringle, and Sinkovics (2009) stated that research model is considered as having predicting relevant; the  $Q^2$  statistics should be superior to zero. The tested model showed that  $Q^2$  refers to sufficient predictive relevance.

The results in table 4.8 indicated that the Need of achievement has an insignificant effect on the entrepreneurial intention at level of significance ( $\beta= 0.009$ ,  $t= 0.022$   $p= 0.49$ ). Locus of control has an insignificant effect on the entrepreneurial intention of at the level of significance ( $\beta= 0.051$ ,  $t= 0.657$ ,  $p= 0.26$ ). Risk taking propensity has insignificant effect on the entrepreneurial intention at level of significance ( $\beta= -0.033$ ,  $t= 0.612$ ,  $p= 0.27$ ). The relationship between the innovativeness and the entrepreneurial intention is not supported at the level of significance ( $\beta= 0.070$ ,  $t= 0.805$ ,  $p= 0.21$ ).

On the contrary, Table 4.8 shows that self-efficacy has a significant effect on the entrepreneurial intention at the level 0.01 level of significance ( $\beta= 0.228$ ,  $t= 2.949$ ,  $p= 0.00$ ), that means if the self-confidence increase by 1 percent, the entrepreneurial intention increase by 22.8 percent. Hence, hypothesis 5 was supported.

Similarly, the relationship between tolerance of ambiguity and entrepreneurial intention is supported; it was significant at the level 0.05 of significance ( $\beta= -0.103$ ,  $t= 1.858$ ,  $p= 0.03$ ).

The results illustrated in table 4.8 indicates that prior experiences has insignificant relationship with entrepreneurial intention at the level of significance ( $\beta= -0.025$ ,  $t= 0.262$ ,  $p= 0.40$ ).

However, financial assistance has a positive significant impact on the entrepreneurial intention on the level 0.1 of significance ( $\beta= 0.095$ ,  $t= 1.581$ ,  $p= 0.06$ ).

Furthermore, family support also has a significant influence on the entrepreneurial intention on the level 0.01 of significance ( $\beta= 0.153$ ,  $t= 2.240$ ,  $p= 0.01$ ). Accordingly, the hypothesis  $H_{2B}$  was supported.

The relationship between role model as a dimension of the university environment and entrepreneurial intention was significant impact at the level 0.05 of significance ( $\beta= 0.133$ ,  $t= 1.828$ ,  $p= 0.03$ ). In contrary, university role as the second dimension of university environment had an insignificant impact on the entrepreneurial intention at level of significance ( $\beta= 0.026$ ,  $t= 0.298$   $p= 0.38$ ).

While, the third dimension entrepreneurial education was affecting positively and significantly on the entrepreneurial intention at the level 0.1 of significance ( $\beta= 0.143$ ,  $t= 1.441$ ,  $p= 0.08$ ). Hence, hypothesis  $H_{2c1}$  and  $H_{2c3}$  were supported, while  $H_{2c2}$  was not supported.

#### 4.7 Summary of Findings

We summarised the hypothesis testing in the following table:

Table 4.9:

*Summary of Hypotheses Testing:*

Hypotheses	Statements	Results
H1	There is significant relationship between internal factors and entrepreneurial intention among postgraduate students	Supported
H <sub>1A</sub>	There is significant relationship between need of achievement and entrepreneurial intention among postgraduate students	Not supported

Table 4.9 (Continued)

<b>Hypotheses</b>	<b>Statements</b>	<b>Results</b>
H <sub>1B</sub>	There is significant relationship between locus of control and entrepreneurial intention among postgraduate students	Not supported
H <sub>1C</sub>	There is significant relationship between risk taking propensity and entrepreneurial intention among postgraduate students	Not supported
H <sub>1D</sub>	There is significant relationship between innovativeness and entrepreneurial intention among postgraduate students	Not supported
H <sub>1E</sub>	There is significant relationship between self-efficacy and entrepreneurial intention among postgraduate students	Supported
H <sub>1F</sub>	There is significant relationship between tolerance of ambiguity and entrepreneurial intention among postgraduate students	Supported
H <sub>1G</sub>	There is significant relationship between prior experiences and entrepreneurial intention among postgraduate students	Not Supported
H <sub>2</sub>	There is significant relationship between external factors and entrepreneurial intention among postgraduate students	Supported
H <sub>2A</sub>	There is significant relationship between financial assistance and entrepreneurial intention among postgraduate students	Supported
H <sub>2B</sub>	There is significant relationship between family support and entrepreneurial intention among postgraduate students	Supported
H <sub>2C</sub>	There is significant relationship between university environment and entrepreneurial intention among postgraduate students	Supported
H <sub>2C1</sub>	There is significant relationship between role model and entrepreneurial intention among postgraduate students	Supported
H <sub>2C2</sub>	There is significant relationship between university's role and entrepreneurial intention among postgraduate students	Not supported
H <sub>2C3</sub>	There is significant relationship between entrepreneurial education and entrepreneurial intention among postgraduate students	Supported
H <sub>3</sub>	University environment significantly affect more than the other factors on entrepreneurial intention of postgraduate students.	Not supported

## **4.8 Summary**

This chapter presented the key findings of the research after the evaluation of the structural model. Specifically, this study shown some rejected and accepted hypotheses. The findings of the research will be discussed in the next chapter.



## **CHAPTER FIVE**

### **DISCUSSION**

#### **5.1 Introduction**

The primary objective of this chapter is to find the internal and external factors that contribute to entrepreneurial intention among postgraduate students. In relation to the objectives of this research, this chapter discusses in details all the numerous findings resulted from the interrelation between variables until the testing of hypotheses. This chapter also discusses on the theoretical and practical implications, and limitations of this research. Further to that, it provides important recommendations and suggestions that should be taken into consideration for future studies.

By interpreting and discussing the findings, this chapter establishes a conclusion and summary of this study.

#### **5.2 Discussion of Results and Finding**

##### **5.2.1 Internal Factors**

The first research question of this study was as follows: ‘Do the internal factors contribute to the entrepreneurial intention of postgraduate students?’ To answer this question, the hypothesis test is applied.

In general, the hypothesis H1 was supported by two dimensions, which are self-efficacy and tolerance of ambiguity. This study found that some of the factors had significant influence on entrepreneurial intention, and some of them were insignificant. This finding is proportionate with earlier studies by Harun Sesen (2013). In his study, he found that some of personality trait factors (internal factors) and environmental factors (external factors) have a significant relationship with entrepreneurial intention, and some of them do not have any significant relationship.

Based on the hypothesis H<sub>1E</sub>, self-efficacy has the strongest and significant relation to the entrepreneurial intention. This result suggests that self-efficacy encourages the postgraduate students in UUM to be the entrepreneurs and become a key player in creating and supporting entrepreneurships. It is consistent with studies conducted by Ahamed and Rokhman (2015), Harun Sesen (2013), Mat, Maat, and Mohd (2015), and Zhao, Seibet, and Hills (2005). As reviewed in Chapter 2, self-efficacy is one of internal factors that has a very strong relationship and it is considered as the main predictor of entrepreneurial intentions. This result supported the view that self-efficacy is the main factor affecting the entrepreneurial intention among Malaysians.

Another dimension of internal factors that yield significant results is tolerance of ambiguity. This concludes that the hypothesis H<sub>1F</sub> for tolerance of ambiguity has a significant relationship with the entrepreneurial intention of postgraduates in UUM. This finding is consistent with those expressed by Ahmed and Rokhman (2015).

However, the hypothesis H<sub>1A</sub> showed that there is a significant relationship between need of achievement and entrepreneurial intention among postgraduate students. The

hypothesis  $H_{1A}$  is not supported; the analysis yields an insignificant relationship between need of achievement and entrepreneurial intention. Harun Sesen (2013) produced a result in parallel with our results among students in the Turkish context.

While the hypotheses  $H_{1C}$ , for risk taking propensity has posited insignificant impact on entrepreneurial intention among postgraduates, the results did not support the hypotheses by implying insignificant relationship with entrepreneurial intention. Thus, it was rejected. The result is in similar with Neneh and Vanzyl (2014) who found that risk taking has an insignificant relationship with entrepreneurial intention growth. It goes in contrast with Tyagi's (2014) results as well.

As with prior experience, the results indicated that prior experience has insignificant effect. This is in contrast with the finding demonstrated by Yaghmaei, Ardestani, Ghasemi, Baraeinezhad, and Parsa (2015b). However, Espiritu-Olmos and Sastre-Castillo (2015) found the similarity in which prior experience in companies has an insignificant impact on the entrepreneurial intention. This result indicates that postgraduates in UUM do not have any prior entrepreneurial experience or it was limited within a small number of students.

Similarly, the results of locus of control and innovativeness were in contrast with Tateh, Latip, and Awang (2014) and Yucuf and Kamils' (2015) results who found that locus of control and innovativeness are significantly related to entrepreneurial intention respectively. The results provided that locus of control and innovativeness has positive and insignificant relationships; thereby it is not supporting the hypothesis  $H_{1B}$  and  $H_{1D}$ .

### 5.2.2 External factors

The second main research question is “Do the external factors contribute to the entrepreneurial intention of postgraduate students?” In order to answer this question, this study suggested the hypothesis H2, i.e. “There is a significant relationship between external factors and entrepreneurial intention among postgraduate students”.

The results indicated that the hypothesis H2 supported all dimensions, including financial assistance, family support, and university environment.

Firstly, the results revealed that financial assistance has a significant influence on the intention of UUM postgraduates to be an entrepreneur. Hence, it supported the hypothesis H<sub>2A</sub>. This finding is consistent with the research conducted by Lee (2010) and thus supports his survey among university student which led to similar results. Furthermore, the finding highlighted that financial assistance is positively related, in contradiction with the results of Harun Sense (2013). Financial assistance is crucial to create an entrepreneurship’s intention, and it is considered as one of the main external factors that should be instilled in starting a business.

Secondly, the H<sub>2B</sub> supported the analysis, which shows a significant positive relationship between family support and entrepreneurial intention. In other words, the total support from families, encourages and creates the intention of UUM postgraduate students towards entrepreneurship. This result was similar to previous studies by Denanyoh, Adjei, and Nyemekye (2015), Turker and Sonmez (2009), and Rani (2012) who found a significant relationship between family support and entrepreneurial intention.

Thirdly, in this study, the university environment consists of three sub-dimensions, namely, role model, university's role, and entrepreneurial education. In order to determine the result of the H<sub>2C</sub> hypothesis, this study examined the hypothesis H<sub>2C1</sub>, H<sub>2C2</sub>, and H<sub>2C3</sub>.

As for the role model, the results revealed that role model has a significant impact on entrepreneurial intention among postgraduate students; the role model can be a family member, friend, and teacher (Bosma, Hessels, Schutjens, Van Praag, & Verheul, 2012) as well as a famous and successful person. Due to the aim of this study, target population, and location where the study was conducted, the student's (respondent's) colleagues can be identified as role model in this study. The findings are consistent with the findings of Keat, Selvarajah, and Meyer(2011), Shiri, Mohammadi, and Hosseini(2012), and Karimi, Biemans, Lans, Chizari, and Mulder (2014), who found that role model is significantly related to the intention to be future entrepreneurs.

Furthermore, for the second sub-dimension of university environment is university's role, as illustrated in table 4.5. The hypothesis H<sub>2C3</sub> has not been supported and the relationship is not significant. This means that the university does not play an important role to promote entrepreneurship in creating an entrepreneurship intention among postgraduates. That result is inconsistent with previous study's result of Keat, Selvarajah, and Meyer(2011) who found that the prompting role of universities has significant influence on entrepreneurial intention among final year university students.

We can justify this poor relationship between the promoting role of universities and entrepreneurial intention of postgraduate students by stating that the entrepreneurial activities organized by or within the university are probably very limited. This might be due to lack of attention obtained from the top managers to formulate a policy that can promote entrepreneurship. Hence, it is a failure. There is an imperative need to organize entrepreneurial activities such as seminars, workshops, training, and talks within the university's campus. There is also a need to involve all postgraduates concerning these activities in order to nurture the entrepreneurial intention among them and to enhance its supporting role in this matter.

However, the results demonstrated that entrepreneurial education is significantly related to the entrepreneurship intention among postgraduates. This finding categorically denies the finding of Gurel, Altinay and Daniele (2010) which referred that entrepreneurial intention is not affected by education in university and it does not have any role. However, this finding is similar with Franke and Lüthje(2004) and Schwarz,Wdowiak, Almer-Jarz, and Breiteneker (2009). Their studies showed that the educational context have a significant effect on the entrepreneurial intentions of students.

The current study took into the consideration that education consists of two components. These are entrepreneurial curriculum and internship programs and the result was significant. Moreover, findings were consistent with the study results of Keat, Selvarajah, and Meyer (2011) that found there is a positive and significant effect of internship and entrepreneurial curriculum with students' intention. This

indicates that entrepreneurship education is highly impressive in the UUM and it plays a key important role to predict the intention toward entrepreneurship career.

University environment is very important and has a positive and significant impact on postgraduate students by the role model and entrepreneurial education terms. Consequently, H<sub>2C</sub> was supported by two dimensions. Students can create a supportive environment leads towards the creating of new enterprises and business. This finding supported our hypotheses, denied completely and it was inconsistent with the finding of Harun Sesen (2013) who found that university environment does not have any significant effect, and in the same context is denied and contradicted with the finding of Lucky and Ibrahim (2015) who argued that environment factors are not affecting entrepreneurial intention in the UUM.

Fini, Grimaldi, and Sobrero (2009) argued that environmental influence is very crucial for the efficient realization of students' entrepreneurial intention. Promoting and supporting the role of universities should be more extended and widely applied within university at all levels. The university should play a role in supporting the activities related to entrepreneurship; it also provides platforms for the augmentation of the interaction between the university and its surrounding community.

The results in general revealed that the external factors have more effect on entrepreneurial intention than the internal factors among postgraduate students at the UUM. A numerous of researches on entrepreneurial intention have highlighted the significance of the external factors such as environmental factors and family support.

On the other hand, it has underestimated some internal factors (personality traits) (Harun Sense, 2013). This research has discovered that self-efficacy was the strong one among all factors tested in this study. Moreover, the university environment was found to have significant and positive impact on the entrepreneurial intention of postgraduate students. This result is extremely good and denies previous results. However, the level of significance is not bigger than self-efficacy. Therefore, the hypothesis H3 is not supported.

A high level of self-efficacy with financial and family supports, and an ideal university environment, is to create the intention among postgraduates to be future entrepreneurs.

### **5.3 Implications to Theory and Practice**

As for both implications, theoretical and practical, the results of this study have provided some significant implications.

#### **5.3.1 Theoretical Implications**

From the theoretical point of view, this study has contributed and provided further insight into the existing literature of entrepreneurial intention and the internal and external factors influenced among postgraduate students. There are numerous studies on these phenomena. These are still limited in Malaysia and UMM. Furthermore, this study may encourage the necessity to conduct similar studies that can make an extension in body knowledge in this domain.



It also draws attention to study the university environment's importance on entrepreneurial intention from other different perspectives and dimensions. This study also makes revisiting of entrepreneurial intention and achieves the need for the fully understanding, particularly in designing and dealings with the university environment in general through the postgraduates' perspective.

### **5.3.2 Practical Implications**

Practically, the implication of this study would be directed to three levels of beneficiaries in the form of national, domestic, and individual aspects.

At the national level, this study would suitably guide the government leaders and policy makers, especially those who have interest to entrepreneurship intention like government agencies. It helps them to recognize the potential entrepreneurs. They can provide training and assistance needed to boost their entrepreneurial intention. This study also guides the government to create among students a positive image about entrepreneurship development to promote it.

At the university level, this study provides information to help the leaders of universities, especially in the UUM to design a suitable plan and policy, particularly among postgraduate students concerning the university environment that can create, support, and enhance the entrepreneurial intention. As a result, universities will go far away to allow students to put all their attention an intention to get practice and entrepreneurial knowledge.

Individually, this study will provide a platform to have a basic knowledge about the programs and training that can positively affect their future career choices.

## **5.4 Limitation of the Study**

### **5.4.1 Area of Conduction the Study**

Only students from the main campus of the UUM in Sintok were investigated in this study. As a result, the limited time -around three months- has limited the investigation for this study across the country. Thus, the study's findings cannot be generalised to all postgraduate students across Malaysia. For more accurate results, it must be conducted against all universities in Malaysia.

### **5.4.2 Time Constraints**

This study is cross-sectional; it takes around three months to be completed. It is conducted within the time limit, and due to this short time the sample size was restively small which is estimated at  $n=357$  from population  $N=5345$  that represents the number of postgraduates whose their status have been activated in the second semester of 2015 (A151) in the UUM. A large sample size will give a deep investigation and more results that are reliable.

### **5.4.3 Cooperation From the Respondents**

It is quite difficult to find cooperation from respondents; some of them have difficulties in understanding some questions, thus, they left a blank space. Moreover, some participants do not answer important questions in a questionnaire, which needs to be analysed. This affected the results of the data analysis. It is also difficult to reach postgraduate students and take responds from them.

### **5.5 Suggestion and recommendation for future research**

Based on the aforementioned objectives and limitations of the study, in order to provide more clarification and understanding of the entrepreneurial intention among students, and the importance of creating conducive university environment, the following recommendations should be taken into consideration for the future researches.

- 1- In order to get a deep understanding and more clarification of the role of the university environment of entrepreneurial intention among students, a mediating and/or moderating variable should be introduced in the model.
- 2- The future studies recommended conducting this study in other universities such as northern Malaysia and among different student populations such as undergraduates. By doing so, they can generate the findings.

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