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**TITLE**

**DETERMINANTS OF ENTREPRENEURIAL INTENTION AMONG  
BUSINESS STUDENTS IN INDONESIA**

**By**



**MUHAMMAD AMSAL SAHBAN**

**UUM**  
**Universiti Utara Malaysia**

**Thesis submitted is to  
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In Fulfillment of the Requirement for the Degree of Doctor Philosophy**

OTHMAN YEOP ABDULLAH GRADUATE SCHOOL OF BUSINESS  
UNIVERSITI UTARA MALAYSIA



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\_\_\_\_\_Tandatangan  
(*Signature*)

Tarikh:..... May 2016  
(*Date*)

Nama Pelajar : Muhammad Amsal Sahban  
(*Name of student*)

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Program Penyelia / Penyelia-penyelia : Dr. Subramaniam Sri Ramalu  
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## ABSTRACT

In the world of entrepreneurship, the fundamental aspect that needs to be embedded in every business starter or business graduate is an entrepreneurial intention. Entrepreneurial intention is very much required in Indonesia, given the number of entrepreneurs today is less than 2% compared to other neighboring countries, like Singapore, Malaysia, Thailand and even Vietnam. Moreover, there are only 17% of university graduates in Indonesia who are interested in entrepreneurship. This is due to the fact that the entrepreneurial career is not considered as an important career in Indonesia. Despite several entrepreneurial programs initiated to nurture a business mentality and awareness for the business students, it does not make a significant change in their entrepreneurial behavior. Many of them do not have enough courage to deal with entrepreneurship. It is because the entrepreneurial orientation of the business students is very weak, and there is a lack of self-efficacy to perform the business tasks. In addition, there is seldom any support from their parents and peer groups to make them motivated enough to initiate a business. The entrepreneurship programs like internship program and business incubation program in higher education institutions have failed to enhance the entrepreneurial spirit among business students. These entrepreneurship programs have not been implemented as it should be and desperately need more improvement. Hence, the main purpose of this study is to investigate the determinants of entrepreneurial intention among students in the economics and business faculty in Indonesia's higher education institutions by determining the direct factors affecting entrepreneurial intention. By employing convenience sampling, a total of 381 questionnaires were successfully distributed to the business students and could be used for this study. The usable questionnaires were examined by employing structural equation modeling (SEM). This study found that five predictors are significant factors with respect to entrepreneurial intention: entrepreneurial orientation, social support, entrepreneurial self-efficacy, entrepreneurial internship program and business incubation program. To sum up, these factors of entrepreneurial intention are found to be essential elements for students to successfully start a business and contribute to increasing the number of young entrepreneurs in Indonesia.

**Keywords:** entrepreneurial orientation; social support; entrepreneurial self-efficacy; entrepreneurial internship program; business incubation program; entrepreneurial intention; business students.

## ABSTRAK

Dalam dunia keusahawanan, aspek utama yang perlu dipupuk oleh setiap pemula perniagaan atau graduan jurusan perniagaan ialah niat keusahawanan. Niat keusahawanan sangat diperlukan dan diberatkan di Indonesia memandangkan jumlah usahawan yang terdapat di negara tersebut pada hari ini kurang daripada 2% berbanding bilangan yang ada di negara jiran seperti di Singapura, di Malaysia, di Thailand dan di Vietnam. Selain itu, hanya 17% graduan kolej di Indonesia yang berminat dengan bidang keusahawanan. Hal ini kerana kerjaya dalam bidang keusahawanan belum lagi menjadi kerjaya yang penting di Indonesia. Meskipun sudah terdapat beberapa program keusahawanan yang diusahakan untuk meningkatkan kesedaran mental dan perniagaan dalam kalangan pelajar jurusan perniagaan, namun program ini tidak mengubah tingkah laku keusahawanan mereka secara signifikan. Kebanyakan mereka tidak mempunyai semangat yang cukup kental untuk menangani bidang keusahawanan. Perkara ini disebabkan oleh orientasi keusahawanan pelajar yang agak lemah dan kurangnya efikasi sendiri dalam kalangan mereka untuk mengendalikan perniagaan. Tambahan pula, jarang kali terdapat sokongan daripada ibu bapa atau kelompok rakan sebaya yang boleh mendorong mereka untuk memulakan perniagaan. Program keusahawanan seperti program latihan kerja dan program inkubasi perniagaan pada peringkat pengajian yang lebih tinggi terbukti gagal untuk menyemarakkan semangat keusahawanan dalam kalangan pelajar jurusan perniagaan. Program keusahawanan ini tidak berjaya melaksanakan objektifnya dan perlu ditambah baik. Oleh yang demikian, kajian ini bermatlamat untuk menyelidik penentu niat keusahawanan dalam kalangan pelajar di fakulti ekonomi dan perniagaan di pusat pengajian tinggi di Indonesia dengan menentukan faktor langsung yang mempengaruhi niat keusahawanan. Dengan menggunakan convenience sampling, sejumlah 381 borang soal selidik berhasil diedarkan kepada pelajar jurusan perniagaan dan boleh diguna pakai dalam kajian ini. Respon soal selidik ini diteliti dengan menggunakan pemodelan persamaan struktur (SEM). Kajian mendapati lima peramal merupakan faktor yang signifikan dengan niat keusahawanan. Faktor ini ialah orientasi keusahawanan, sokongan sosial, efikasi sendiri keusahawanan, program latihan amali keusahawanan, dan program inkubasi perniagaan. Rumusnya, faktor niat keusahawanan didapati merupakan elemen penting yang membentuk tingkah laku positif pelajar untuk memulakan perniagaan dan perkara ini boleh meningkatkan bilangan usahawan muda di Indonesia.

**Kata kunci:** orientasi keusahawanan, sokongan sosial, efikasi sendiri keusahawanan, program latihan amali keusahawanan, program inkubasi perniagaan, niat keusahawanan, pelajar jurusan perniagaan

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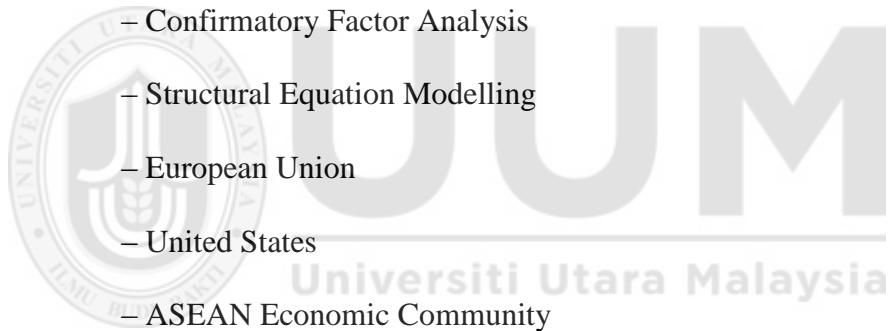
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## LIST OF ABBREVIATIONS

EO	– Entrepreneurial Orientation
BIP	– Business Incubation Program
SS	– Social Support
ESE	– Entrepreneurial Self-Efficacy
EIP	– Entrepreneurial Internship Program
EI	– Entrepreneurial Intention
EFA	– Exploratory Factor Analysis
GDP	– Gross Domestic Product
SMEs	– Small and Medium Enterprises
CFA	– Confirmatory Factor Analysis
SEM	– Structural Equation Modelling
EU	– European Union
US	– United States
AEC	– ASEAN Economic Community



# CHAPTER 1

## INTRODUCTION

### 1.0 Introduction

This chapter includes eight sections: the background of the study; the problem statement; the research questions; the objectives of this study; the significance of the study; the scope of the study; the definition of key terms; the organization of thesis; and finally, the chapter summary.

### 1.1 Background of the Study

Entrepreneurship is a worldwide phenomenon closely associated with economic growth. Entrepreneurs are the “engines” that can accelerate economic growth (Acs, 2006; Baron & Shane, 2008). They have brought about enormous positive contributions to a country's economic growth and social development. As mentioned by Morrison, Breen and Ali (2003), entrepreneurs play a pivotal role in creating jobs, innovating, creating wealth, improving health and even in economic advancement. Since entrepreneurship is synonymous with self-employment, it is believed to be an effective strategy for handling the issue of employability, particularly among the youth (Koe, Sa'ari, Majid & Ismail, 2012). Entrepreneurship entities enable reduction in the unemployment rate or what has been termed as the Schumpeter Effect (Musa & Semasinghe, 2013; Schumpeter, 1934).

Davidsson (2003) and Kirzner (1973) asserted that entrepreneurship is a competitive behavior that not only drives the new market and employment creation but also the creation of new innovation in the market than can contribute to economic growth. According to Katua (2014), the role of Small and Medium Enterprises (SMEs) is highly needed as the

engine of economic growth and job creators as well as drivers of innovation in a country (Katua, 2014). Beck and Levin (as cited in Katua, 2014) said that SMEs increase competition and entrepreneurship activities, As a result, they benefit the economy, innovation and total productivity.

It is widely known that majority of entrepreneurships began as small-sized enterprises or SMEs. In Europe, for instance, there are there are over 23 million enterprises, but only 41,000 are large-sized enterprises (Mihalache, 2010), indicating the significant role of SMEs in accelerating the economic growth of developed nations in the European continent.

In the continent of North America, there are around 23 million SMEs, which employ more than 50% of the private workforce, and contribute more than 50% of the GDP. In the European continent, the economy is driven by a large number of SMEs, especially in the European Union (EU) member countries. There are approximately 19.3 million SMEs that provide up to 65 million jobs or 66% of total employment.

In the continent of Asia, there are several counties that rely on SMEs as the catalyst of economic growth. In Pakistan for instance, about 65% of the workforce has been absorbed by the SMEs and successfully contributes to the GDP four times higher than the contribution from the large-scale industries. Malaysia is another example, where 76% of the SMEs in all sectors contribute around 47% to GDP (Katua, 2014). SME activities also contribute substantially to the economic growth of other Asian countries, like Japan, Taiwan, Korea and China. The contribution of SMEs to GDP in China is 60%; Japan, around 55.3%; and Korea, 50%. Recent statistics have shown that enterprises in China are dominated by SMEs, comprising more than 50 million SMEs or 99% of the total industries. In addition, SMEs' output volume in China is 40% of the total taxes and profit; while in Japan, it is 65% (Katua, 2014). Deil (2015) asserted that the Philippines' and Vietnam's

economic growth in Asian region is superceded by only China and India. The economic growth in each country was more than 7% in July 2015. This is due to the fact that these countries emphasize more on entrepreneurship activities to increase their economic growth. In addition, Indonesia also relies heavily on SMEs since the biggest contribution to GDP is derived from SMEs. About 99% of SMEs in Indonesia contribute to around 64% of the GDP (Deny, 2014; Hardum, 2014; UNY, 2013). Currently, more than 4.2 million SMEs are spread across Indonesia and they have successfully created jobs for 11.2 million people. However, the economic growth in Indonesia decreased to 4.67% this year due to the decline in the demand for commodities from China (BPS, 2015b; Deil, 2015). Therefore, Indonesia needs to accelerate entrepreneurship activities in an effort to increase economic growth.

Based on the above discussion, it can be concluded that the SMEs play a pivotal role in enhancing economic growth. Therefore, the number of entrepreneurs needs to be improved in order to enable higher growth rate of GDP in any country, especially in Indonesia. Table 1.1 below depicts in detail the contribution of SMEs to employment and GDP in North American, Europe and Asian continents:

**Table 1.1**  
*SMEs Contribution to Employment and GDP*

Country	Total SMEs	Contribution to Employment	Contribution to GDP
US	23 million units	50%	50%
European Union	19.3 million units	66.9%	58.1%
Greece	653,944 units	85.8%	72.1%
Ireland	N/A	45%	N/A
United Kingdom	1.72 million units	53.3%	51%
Kenya	N/A	N/A	18%
Pakistan	3 million units	65%	30%
Netherlands	802,087 units	67%	61.60%

Malaysia	645,012 units	3.7 million people	47%
India	49 million units	40%	57%
China	50 million units	107 million people	60%
Vietnam	N/A	64%	39%
Germany	2.2 million units	62.7%	57%
Japan	N/A	N/A	65%
Korea	N/A	N/A	50%
South Africa	N/A	55%	22%
Italy	N/A	N/A	48%
Indonesia	42.5 million units	37%	64%

*Source: World Bank (2015); Katua (2014); European Commission (2014)*

Table 1.2 below depicts the annual GDP growth rate in ASEAN countries, showing Indonesia standing at the lowest growth rate in 2015.

**Table 1.2**  
Annual Growth Rate in ASEAN Countries in July 2015

No	Countries	GDP Growth (%)
1	Indonesia	4.67
2	Malaysia	5.9
3	Vietnam	6.8
4	The Philippines	5.6
5	China	7
6	Thailand	5.8
7	Laos	7.4
8	Cambodia	7
9	Myanmar	8.7

*Source: World Bank (2015)*

The ASEAN economic community (AEC) will come into effect by the end of 2015. The AEC is an agreement among ASEAN countries to form a free trade area in order to enhance competitive advantages among ASEAN countries by making ASEAN the world production base as well as developing a regional market for their 500 million population. The agreement is rapidly increasing the competitive spirit, specifically in Indonesia, because the

people do not compete only locally, but also with people across the ASEAN countries. The advantage of this agreement is that it will give multiple opportunities for Indonesian entrepreneurs to market their products to the ASEAN countries. If the Indonesian entrepreneurs fail to take advantage, then Indonesia will end up becoming a huge market for the products of ASEAN countries (Hardum, 2014). Therefore, it is crucial for Indonesia to enhance human capital as well as the number of entrepreneurs to face competition under the AEC. Apart from that, the government believes that SMEs need to be armed with competencies in business incubator technology that universities can teach how to face the challenges and prospects of the AEC.

In terms of statistics, the percentage of entrepreneurs in Indonesia is still below 2% of the total population (Alamsyah, 2015; Antara, 2015; MRI, 2015; Puspayoga, 2015). This is far below the neighbouring countries, such as Malaysia (5%); Thailand (3%); Singapore (7.2%); China (10%); as well as European countries that comprise more than 4% of entrepreneurs on average (Puspayoga, 2015; Rochmah, 2013). As stated by David McClelland (as cited in Arcom, 2013; Hatta, 2012; Kurnianto & Putra, 2012; Musa & Semasinghe, 2013), a wealthy nation should have 2% at a minimum the number of entrepreneurs. Therefore, the Indonesian government has to increase the number of entrepreneurs to attain at least 2%. Table 1.3 below shows the percentage of entrepreneurs in other countries in comparison to Indonesia:

**Table 1.3**  
*Percentage of Entrepreneurs in Other Countries*

No	Countries	% of Total Population
1	Singapore	7.20%
2	Malaysia	5%
3	Thailand	3%
4	China	10%



5	Indonesia	1.65%
6	Vietnam	4%
7	South Korea	4%
8	Japan	10%
9	Tiongkok	10%
10	America	11.50%

*Source: Marketing Research Indonesia (2015)*

Looking at the unemployment rates worldwide, the International Labor Organization (ILO) stated that the unemployment crisis among youth remains acute and is far from over (ILO, 2013). The report found a mild recovery in the job market for young people aged 15 to 24 years. It said the global unemployment rate stabilized at 13% in 2012-2014 period. However, this is still well above the pre-crisis level of 11.7% (Schlein, 2015). Azita Berar Awad, the head of the ILO employment division, reported that the highest level of youth unemployment is in the Middle East and North Africa, at 46% and 44%, respectively. This was mainly due to the violence and instability created by the Arab Springs (Schlein, 2015). Apart from that, the second highest rate of unemployment of youth aged 15 to 24 years is in Central and South-eastern Europe (non-EU member countries) which stood at around 22% of the total workforce (ILO, 2013).

The President of Labor Union, Said Iqbal reported that Toshiba and Panasonic are going to close their companies and stop their investment in Indonesia by April 2016. This situation will give bad impact on its 2500 employees (Ariayanti, 2016). Moreover, the unemployment rate among youngsters continues to grow nowadays since the number of youth in Indonesia aged below 30 years dominates more than half of the total population. Consequently, Indonesia has a huge number of workforces. This can trigger a demographic disaster if these workers cannot be absorbed by industries (Indonesia-investments, 2015).

The World Bank (2014) reported that unemployment among the country's youth aged 15 to 24 years is at an unusually high level. The World Bank representative recently gave a warning on Indonesia's unemployment problem among youth. It is due to the fact that the highest rate of unemployment in Indonesia is dominated by people aged 15 to 24 years. This is very ironic since the fresh university graduates, vocational school graduates as well as secondary school graduates face difficulty in looking for a job (Indonesia-investments, 2014). Based on the report, there are around 20% of Indonesia's young men and one-third of the young women being unemployed nor going to school. The total number of young men aged 15 to 24 years in Indonesia reached approximately 20.5 million; and the total number of young women aged 15 to 24 years is around 20.2 million. Although the number of unemployed females has reduced significantly compared to their male counterparts, gender disparity is still a challenge in Indonesia. Despite several key areas like education and health showing considerable progress, there are still many women working in the informal sector (twice as many as the number of men). Moreover, they are paid lower wages compared to men for similar work (Indonesia-investments, 2014).

The open unemployment rate in Indonesia is indeed huge as evidenced from the statistics. In 2015, the Statistical Bureau reported that the number of unemployed based on educational level in Indonesia has reached 7,424,952 people (BPS, 2015a). This phenomenon is very ironic given the educated young generation is jobless, contributing significantly to unemployment in Indonesia. Interestingly, the rate of open unemployment has a tendency to be higher in the group of the highly educated labor force. Figures 1.1 and 1.2 below show that the open unemployment of senior high school, diploma and university graduates is higher (9.9%, 12.2 and 11.6, respectively) compared to the elementary and junior high school leavers which are only 3.4% and 7.8%, respectively. In addition,

university and diploma graduates only contribute 5% and 3% to the labor force, while more than 50% of elementary school leavers have been successfully absorbed by the industries.

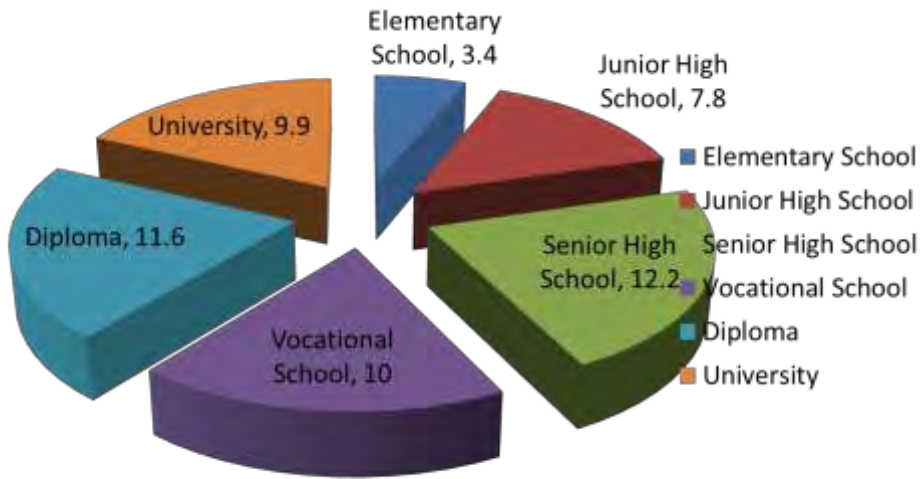


Figure 1.1 :  
*Open Unemployment (2013)*

Source: General Directorate of Higher Education (2013)

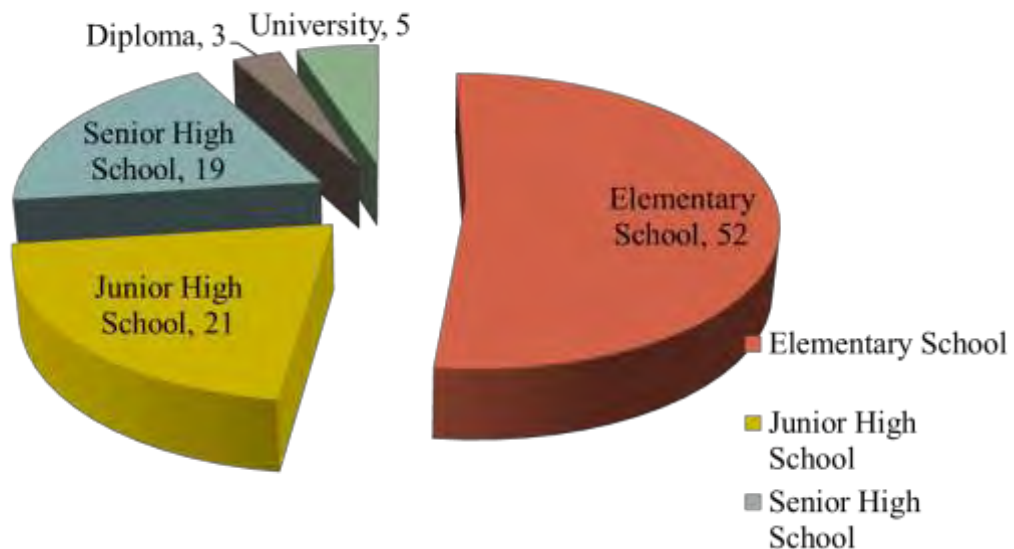


Figure 1.2  
*Labor force (119.4 million people)*

Source: General Directorate of Higher Education (2013)

Based on the figures above, it can be concluded that the higher one's education, the greater the chances to get into unemployment. It is due to the lack of job absorption from industries and the unwillingness of university graduates to engage in entrepreneurial activities after the completion of their studies.

Linking education and entrepreneurship with academic institutions clearly points out that universities have become strategic places to nurture entrepreneurial spirit among students (Nastiti, Indarti, & Rostiani, 2010). Universities have a crucial role in enhancing entrepreneurial education in order to encourage the students to become self-employed once they graduate from university. Therefore, the purpose of higher education institutions is not only to produce graduates to become job seekers, but also job creators. The small number of entrepreneurs in Indonesia indicates the lack of entrepreneurship among the academic community, including their activities in the university environment. The discourse and application of the entrepreneurial university are becoming hot topics in the academic world. However, many of the universities focus on academia and few have plunged into the world of practitioners and entrepreneurship. Among 2,679 private universities and 82 state universities in Indonesia, only a few universities are concerned with the importance of entrepreneurship on campus (Kuswara, 2012). Of the 4.8 million university students in Indonesia, only 17.4% have the right entrepreneurial spirit and orientation to venture into entrepreneurship after completing their studies. Meanwhile, more than 83% of university graduates in 2012 preferred to become employees in any of the leading companies or government institutions (Amrullah, 2012; Subachtiar, 2013; Sutarto, 2012; Temonsoejadi.com, 2013). Interestingly, the industries are only able to accommodate up to 10-15% of the university graduates each year. As a result, the rate of the educated unemployed increases every year (Yusuf, 2012).

Kraaijenbrink, Bos and Groen (2010) suggested that although entrepreneurs receive numerous forms of support from universities, in order to comprehend the impact of such actions, it is important to assess the magnitude of influence they have on students. However, only a few studies have attempted to integrate the concept of entrepreneurship among students and tried to comprehend the link between entrepreneurship education with the student's entrepreneurial intention and thereby behavior (Robinson et al., 1991; Saeed, Yousafzai, Yani-De-Soriano, & Muffatto, 2013). Most of the students in Indonesia still do not seem to realize that it is challenging to find jobs nowadays and their awareness of entrepreneurship is very low (Sulistiyorini, 2013). Therefore, it is very important for universities to play a role in preparing the best curriculum in order to promote awareness on entrepreneurship among students.

In the entrepreneurship world, an essential aspect that needs to be embedded in every new start-up is the entrepreneurial intention (De Clercq, Honig, & Martin, 2012). Entrepreneurial intention includes an attitudinal commitment of individuals to commence a new business start-up (Krueger, 1993). In addition, Gorman, Hanon and King (1997) claimed that students' inclination towards entrepreneurship is an important source of the establishment of a new business. The attitude, behavior, and entrepreneurial knowledge owned by students can stimulate intention and desire to initiate new business ventures in the future (Nastiti et al., 2010). The educated students at the college level are expected to be successful entrepreneur initiators (Nastiti et al., 2010). Hence, entrepreneurial intention among students is a vital issue that needs to be further explored in an effort to understand the procedure for establishing new businesses.

According to Indarti (2004), entrepreneurial intention of students in Indonesia is weak. This is reinforced by Hidayat (as cited in Masykur, 2007) who claimed that most students do not

have a plan for being self-employed and are more likely to work in large companies. Intention plays a distinctive role in directing action or behavior. Entrepreneurial intention plays a pivotal role as the link between consideration to engage in entrepreneurship and the entrepreneurial activities conducted by the entrepreneurs themselves (Supatra, 2009).

The inclination towards entrepreneurial behavior may be influenced by some aspects, like needs, values, beliefs, wants and habits (Barbara Bird & Jelinek, 1988; Lee & Wong, 2004). Specifically, the cognitive variables influencing intention are called motivational “antecedents” by Ajzen (1991). More favorable antecedents would increase the start-up intention (Liñán, 2004). Obviously, situational factors also affect one’s inclination to deal with entrepreneurship (Ajzen, 1987; Boyd & Vozikis, 1994; Tubbs & Ekeberg, 1991). These factors affect one’s attitude toward entrepreneurial activity (Krueger, 1993). Factors, such as task difficulty, time constraints and the encouragement of other people through social pressure could be illustrations of these situational variables (Lee & Wong, 2004). Nastiti et al. (2010); and Indarti (2008) proved that there are some differences between Indonesia and China in the factors affecting students’ desire to be entrepreneurs. While the entrepreneurial intention of Chinese students is affected by self-efficacy, the need for achievement, the readiness of instrument and locus of control, Indonesian students are only influenced by one factor, i.e., self-efficacy. Therefore, this factor is considered as important in predicting entrepreneurial intention.

If the question of what personal characteristics or attitudes are needed in individuals in order to increase their potential to engage in viable entrepreneurial activities is explored, then several personality traits will emerge. One of the traits is the attitude of the individuals which will directly influence their entrepreneurial orientation, especially when it involves risk-taking and innovation (as direct dimensions of EO), and pro-activeness.

Entrepreneurial orientation attitude should be owned by an entrepreneur, whether it is student or otherwise. Considering the Indonesian scenario, such varied features of entrepreneurial orientation among the Indonesian students have yet to be extensively researched.

Apart from that, the social support system is considered as a vital aspect for developing entrepreneurial intention. Some related aspects, like environmental support and parental support, play an important role in influencing a person's desire for entrepreneurship (Indarti & Rostiani, 2008; Lee, Wong, Foo, & Leung, 2011; Suharti & Sirine, 2011). This opinion is reinforced by Kasmir (2006), who stated that the support of family, especially parental support, is imperative to increase the motivation to become an entrepreneur. Thus, family support is a primary driving force to foster students' mind-set and motivation (Kasmir, 2006). The jobs of parents are also instrumental for career choice of their children after graduating from college. According to Mustikawati & Bachtiar (2008), parents play an undeniably significant role in providing support and motivation to their children to enable them to be socially competent, confident and responsible to realize their intentions to become entrepreneurs. However, studies have found that the presence of significant social risk experienced by an individual in setting up a business is an anxiety of being degraded and derided when the risk of failure is imminent and this will lead to negative opinions of their inability (Phikala & Vesatlenein, as cited in Astuti, 2009). They lack parental support because parents prefer for their children to be employed rather than being self-employed. Mustikawati & Bachtiar (2008) found that a number of parents go against their children's wishes to become entrepreneurs and unconsciously try to impose their will on their children's desire.

Entrepreneurial self-efficacy is also considered as a fundamental aspect in the formation of a student's entrepreneurial intention (Indarti, 2004; Sata, 2013; Setiawan, 2014). Further, entrepreneurial self-efficacy plays a role in building the mental strength of an individual, which includes perceptions of himself, the belief about his ability and strong expectations to achieve new feats. This will create a sense of confidence and the hope of success. However, Amalia (2012) found through her study that students tend to display low self-confidence in their ability to become entrepreneurs.

In terms of the entrepreneurial internship program, some researchers have pointed out that the rewards provided by this program are beneficial to all parties. According to Gault, Redington & Schlager (2000), internship plays a pivotal role to bridge the gap between students' classroom expectation about career and the employment in the real world. Furthermore, internship programs play a significantly potential role in enhancing the link between classrooms and the business world (Gault et al., 2000). One study showed empirical evidence that internship programs are really useful to assist individuals to enter the world of work and enable them to achieve higher job satisfaction (Groves, Howland, Headly & Jamison, 1977; Hite & Bellizzi, 1986; Bales, 1979).

In addition, Ruyadi (2004) stated that the internship program or usually called co-op program has the goal to bridge and integrate the university with the world of work by providing opportunities for selected students to work in a particular period in the corporate world. Ruyadi found that these students perceive that this program can enhance their entrepreneurial spirit. The implementation of the Co-op program in SMEs is to provide hands-on experience to students about the 'ins and outs' of SMEs. These activities are expected to be a stimulus to develop self-efficacy behavior among students, ultimately leading to the entrepreneurial spirit (Katiah, 2005). However, it has been revealed that



almost half of students (41, 6%) still have doubts about taking up business after completing their internship program. It indicates that the students still have the mindset to be job seekers rather than job creators. They feel they do not yet have good business ideas and enough experience and confidence of their skills. Widiastuti (2012) stated that student intention to participate in the internship program is low. This is because of several reasons, such as students must leave mid-way during this program to continue their studies to graduate on time. In addition, based on the implementation of the internship program, Belanger & Tremblay (as cited in Gault, Redington & Schlager, 2000) found that there is a lack of guidance from mentors to the students on how to adapt to the working environment as well as knowledge and experience in the real world; consequently, the students find it difficult to face actual problems when they start working. Moreover, it has been found that the SMEs restrict students from getting in-depth knowledge regarding actual conditions of their business.

Another education program that has been established by many higher education institutions is a business incubation program. The existence of the business incubator in a higher education institution is highly needed to support and assist *civitas academica* primarily students who have a business to be able to improve and develop their business. Besides, the business incubator also serves to motivate potential new entrepreneur and realize their business ideas into real businesses (Hasbullah, Surahman, Yani, Almada, & Faizaty, 2015) (Agustina, 2011).

According to Agustina (2011), business incubator is a center or institution that can help new entrepreneurs to start a business, so that the start-ups can survive in the real business environment. Systemically, a business incubator is a transformation vehicle for the people who want to be entrepreneurs but not creative or productive enough to become one. Its goal

is to ensure that the new business ventures can be financially viable and survive in a real business environment. This statement was reinforced by Hasbullah, Surahman and Yani (2013) that the incubation program can help in the development of entrepreneurs and has been widely used as an economic strategy for the growth of SMEs by other countries in the world. Business incubator programs can encourage the emergence of new and resilient entrepreneurs and could become an effective tool for the development of SMEs. Moreover, the head of SMEs education and training, Abdul Aziz Bennu (2014) stated that the incubation program is made to guide the university students in Indonesia who are eager to engage in entrepreneurial career. They will receive guidance in 2 years period in order to become independent young entrepreneurs.

It is proven that the role of universities business incubators in Indonesia is pivotal to enhance the performance of SMEs in terms of increasing the number of workforce, gaining better turnover, expanding market share as well as obtaining better access to the capital source. However, it is only 17% of them could perform well (Hasbullah et al., 2015; Nur, 2007). Most of the business incubators in Indonesia are facing multiple issues in terms of its quality, inadequate technological support, infrastructure, lack of funding, and networking when doing marketing. Other difficulties include complications in coaching the tenants because most of them are outwall tenants, and administrative issues, such as the agreement or contract of assistance is not sealed in writing (Agustina, 2011; Hasbullah et al., 2015).

Operational funding for instance, the amount of funding has been reduced over time and the commitment to the incubation program has not been followed through by all related parties (the local government, businesses, related agencies and central governments to support the incubation centers) (Hasbullah et al., 2015; Muafi, Wahyuningsih, Effendi, & Sriyono, 2012).

Economic development cannot be realized without active participation of women in all segments of life (Sarfaraz, Faghih & Majd, 2014). Many scholars have agreed that women can play a pivotal role in entrepreneurship activities. Women's contribution to economic development mainly depends on equal support as for men from relevant institutions. Despite women comprising about 50% of the world's population, they have less opportunity to take part in decision-making (Revenga & Shetty, 2012). Since 2008, i.e. after the financial crisis, women have been experiencing greater difficulties in earning capital than men and the economic crisis has had an adverse impact on women (Pines, Lerner, & Schwartz, 2010). Further, Pines et al. (2010) found that the number of women entrepreneurs is less than men. The proportion of female entrepreneurs is higher in countries where the general income per capita is at a lower level, where women have to work for a living. However, Balea (2015) argued that women are starting to change the scenario nowadays in terms of an entrepreneurship career even though there are still only a few studies that have focused on the factors influencing entrepreneurial intention among female students (Aaijaz & Ibrahim, 2013). Thus, there is a need to do further investigation to figure out if there is any difference in terms of gender and entrepreneurial intention, especially among young business students in Indonesia.

Developing entrepreneurial intention among students seems to be a collective task. Entrepreneurial orientation, entrepreneurial self-efficacy, business incubation program facilitation and social support system may have complex and collective influence on the students' feelings and emotions, which intensify entrepreneurial intentions within them. The next section formulates the problem statements, taking into account the above discussion in the Indonesian context.

## 1.2 Problem Statement

The shortage of entrepreneurs in Indonesia remains acute and still far left behind compared to other neighboring countries. Whatever regulations the universities following now, they are still not able to increase the number of entrepreneurs.

The education system does not provide what was needed to become aspiring entrepreneurs. Our education system is, or was, only about telling students what to memorize and what to write. With that kind of education, it was very hard for the students to be able to grow as someone who was keen to produce new ideas and concepts, courageous in taking risks and adaptable to changes in an ever-changing world.

Social factors are also one of the handicaps for the university students to improve their entrepreneurial awareness. Since entrepreneurship is not appreciated as prestigious profession. The condition is worsened by the long-ingrained belief that being successful in life equals having a stable job at a government office or at a prestigious multi-national company.

There is a lacking from the government support to create a friendly entrepreneurial climate among university students by providing assistance to obtain any loan from financial sectors with lower interest. As a result, young people, especially students experience difficulties getting financial assistance and access to startup grants and cheap loans.

Entrepreneurship program like internship and incubation program at the universities fail to produce good number of entrepreneurs, since the education programs do not provide the students what is needed to become aspiring entrepreneurs. Free entrepreneurial workshops are also hard to find, in which the young can learn how to manage a business and develop products or even how to find opportunities in foreign markets.

Consequently, it is very hard for the students to be able to grow as someone who is keen to produce new ideas and concepts, start up a business, courageous in taking risks and adaptable to changes in an ever-changing world.

### **1.3 Research Questions**

The main research questions to be pursued throughout this study are described below:

1. What is the relationship between entrepreneurial orientation (EO) and entrepreneurial intention (EI) among business students in Indonesia?
2. What is the relationship between social support (SS) and entrepreneurial intentions (EI) among business students in Indonesia?
3. What is the relationship between entrepreneurial self-efficacy (ESE) and entrepreneurial intentions (EI) among business students in Indonesia?
4. What is the relationship between business incubation program (BIP) and entrepreneurial intentions (EI) among business students in Indonesia?
5. What is the relationship between entrepreneurial internship program (EIP) and entrepreneurial intentions (EI) among business students in Indonesia?

### **1.4 Objectives of Research**

According to the background of this study and the problem statement proposed, the main objectives of this study are to identify the relationship between entrepreneurial orientation, social support, entrepreneurial self-efficacy entrepreneurial internship program and business incubation program and entrepreneurial intention among business students in Indonesia and to examine the difference between male and female students in dealing with an entrepreneurship career. The specific objectives are described below:

1. To examine the direct effect of entrepreneurial orientation (EO) on entrepreneurial intentions (EI) among business students in Indonesia;
2. To examine the direct effect of social support (SS) on entrepreneurial intentions (EI) among business students in Indonesia;
3. To examine the direct effect of entrepreneurial self-efficacy (ESE) on entrepreneurial intentions (EI) among business students in Indonesia;
4. To examine the direct effect of business incubation program (BIP) on entrepreneurial intentions (EI) among business students in Indonesia;
5. To examine the direct effect of entrepreneurial internship program (EIP) on entrepreneurial intentions (EI) among business students in Indonesia;

### **1.5 Significance of the Study**

This study is important for several reasons. First, this study can contribute to the literature concerning students' intention to engage in entrepreneurial careers. Although a large number of studies have examined factors affecting higher education students' entrepreneurial intention, there are currently only a few studies which have examined the social support system as well as the entrepreneurial orientation of Indonesian students that can encourage them to be entrepreneurially inclined.

Second, there are very few of studies on entrepreneurial intention of Indonesian students utilizing AMOS-SEM to analyze the data, perform a group of analysis and the model fit. Most entrepreneurial intention studies have employed simple regression analysis in SPSS where this software is unable to do the model fit and analyze the group of path analysis simultaneously.

Third, this research can enhance knowledge in the field of students' entrepreneurial intentions; this research can become the basis to generate new frameworks on entrepreneurial intention among business students in Indonesia.

Fourth, this research investigates university students' orientation, perception, attitude, viewpoints, social support and their participation in the entrepreneurship program and their intention to be involved in entrepreneurship. Consequently, this research might offer some empirical evidence for the heads of universities and local governments on building an entrepreneurial environment in every university as well as enforcing better regulations to support entrepreneurship programs for students in Indonesia.

Fifth, the results of this study can inspire the heads of universities to provide better curriculum, facilities and infrastructure for their students to be engaged in entrepreneurial activities during their studies. It is hoped that this study can help university students to have the right information to improve their entrepreneurial inclinations while still in the academic environment.

Sixth, the finding of this research can help to identify students who have the propensity to choose an entrepreneurial career in the future. The universities could also develop an entrepreneurial network for students and come up with better policies to provide more effective entrepreneurship programs for these students.

Seventh, this research can help and give a meaningful contribution to the government, policymakers as well as stakeholders on how to motivate more students to be involved in entrepreneurship. It is also hoped that based on the findings, the government can legislate more effective regulations to increase the number of entrepreneurs in Indonesia.

Finally, this research identifies the main aspects of entrepreneurial intention among students; future research could take this result as the foundation to generate more findings.

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

Although this research provides beneficial research findings, it is important to define its scope to put it in the right context. The scope of this study as mentioned as follows:

1. The geographical location is restricted to 19 universities in Indonesia that have a business incubator. Further, it only focuses on the students in the faculty of economics and business using convenience sampling. Thus, the finding cannot be generalized to all students in Indonesia.
2. Only the undergraduate students at the higher education level are the focus of this study. Though the best time for learning entrepreneurship is not the focus of this study, it is important to investigate this issue in future research.
3. The dependent variable is entrepreneurial intention, whereas the predictor variables are entrepreneurial orientation, social support and self-efficacy, as well as entrepreneurship program (Entrepreneurial Internship Program and Business Incubation Program). These variables are deemed to be the most appropriate predictors for measuring entrepreneurial behavior.
4. This research does not track the participant students of the study to gauge their career choices and analyse conversion of entrepreneurial intention into actual behaviour.
5. This study does not involve analysing and comparing the process and quality of various entrepreneurship programs. Yet, the entrepreneurship programs identified by this research are considered to be at least equivalent to other plans by following minimum criteria for this purpose (Souitaris, Zerbinati, & Al-Laham, 2007).



6. The level of gender, income, education level, age, marital status, religion and prior entrepreneurial experience are not part of this research.

### **1.7 Definition of Key Terms**

The following conceptual terms are defined in the context of this research and supported by the literature review.

**Entrepreneurial orientation** is the attitude the individual possesses to successfully achieve entrepreneurship performance. The attitude includes risk-taking, innovativeness and proactiveness (Bolton & Lane, 2012; Taatila & Down, 2012).

**Social support** is the support from both family and peers that has a strong influence on opportunity recognition, new venture creation, business decision-making and resource mobilization. In other words, social support is considered as the support from family and peers in offering a number of resources, ranging from professional to non-professional resources, which have a strong effect on new venture creation and its activities (Rani, 2012; M. Amsal Sahban, Kumar, & Ramalu, 2015).

**Entrepreneurial Self-Efficacy** is the young graduates' self-judgment about their capacity and capability to create a new venture and perform the tasks and roles related to entrepreneurship. As such, it can be concluded that self-efficacy is a feeling, belief, perception and confidence on the ability to address a particular situation that in turn will lead to the way the individual copes with the situation (Chen, Greene, & Crick, 1998; Noble, Jung, & Ehrlich, 1999).

**Internship program** refers to part-time field experiences that includes multiple academic disciplines and organizational settings with its primary goal to eventually make students become entrepreneurs (Dilts & Fowler, 1999; Gault et al., 2000).

**Business incubator** refers to a standard facility owned by the office which is further supported by the service of business resource development. The services provided may vary in terms of the provision of space, sharedness, consulting service, technology support, skills development, seed capital and synergy (Ministry of SMEs cited by Hasbullah et al., 2015). A developed business incubator generally has advanced facilities, such as conference rooms, canteen, security, office supplies, telephone, internet, library, rental vehicles, cleanliness and maintenance and lodging (Agustina, 2011; Sahban, M, & Liba, 2014).

**Entrepreneurial intention** is the struggle that one will make to perform entrepreneurial behavior. Thus, it considers three motivational aspects or antecedents, affecting the entrepreneurial behavior, which include the attitude toward starting up a business; perceived social pressure to carry out or not to carry out the business; and the perception of the ease or difficulty in dealing with the entrepreneurial job (Ajzen, 1991; Liñán & Chen, 2006).

## **1.8 Organization of Thesis**

**Chapter 1** consists of the study background, followed by research problem, the significance of this study and also its limitations. This chapter also presents the overall view of the research study and the issues that are investigated. The background of the study also highlights issues of entrepreneurship in general, and briefly explores the issues of entrepreneurship in universities. Besides, the problem of graduate unemployment is discussed in this chapter as well as the issue relating to entrepreneurial orientation, social support and self-efficacy among students in Indonesia. This chapter also discusses the

entrepreneurship program because it is also an important aspect in increasing the number of entrepreneurs.

**Chapter 2** is the most substantial section of this research where several topics related to entrepreneurship are discussed, followed by the characteristics of entrepreneurs. The study analyzes and explains the effects of five independent variables, i.e. entrepreneurial orientation, social support, self-efficacy, business incubation centers, entrepreneurial internship programme as well as entrepreneurial intention as the dependent variable.

**Chapter 3** comprises the explanation for each of the variables. This research identifies the research design along with the methodology and the method used in this study. The research framework and resulting hypotheses guide the choice of research design utilized in the study. This chapter also analyses the sample data to obtain effective results. The respondents chosen are business students in Indonesian universities. There are 381 respondents in this study.

**Chapter 4** presents the findings of the research calculated by using SPSS for Windows Version 20 and SEM, using AMOS Version 18. The first section shows the overall response rate and data screening. The next section attempts to accomplish the demographic analysis and the direct selling profile of respondents. The subsequent sections show descriptive statistics, assessment of normality and validity tests. This chapter ends with SEM results and mediating effects.

**Chapter 5** includes some discussions and conclusions. This chapter discusses the research results in relation to the three objectives of the study. The following section discusses theoretical, practical and policy implications and limitation of the study. This chapter ends with policy recommendations derived from the findings. Also suggestions for future research are described.

## 1.9 Chapter Summary

This chapter provides the study background, the main research issues in terms of entrepreneurial orientation, social support, entrepreneurial self-efficacy, entrepreneurial internship program and business incubation program, followed by problem statement, research questions, research objectives, significance and scope of the study. At the end of this chapter, this study presents the definition of key terms and the organization of the thesis.



## CHAPTER 2

### LITERATURE REVIEW

#### 2.0 Introduction

This chapter provides a discussion on the relevant entrepreneurship concepts and its importance for this research. Following that, the researcher discusses entrepreneurial intention, entrepreneurial orientation, social support, entrepreneurial self-efficacy, entrepreneurial internship program and business incubation program. The relationship between the variables and the moderating factor is also discussed to clearly identify its significance to this research.

#### 2.1 Concept of Entrepreneurship

According to Sternberg and Wennekers (2005), entrepreneurship essentially has at least two meanings. First, entrepreneurship refers to owning and managing a business. This is the occupational notion of entrepreneurship (Hebert & Link, as cited in Acs, 2006). Within this concept of entrepreneurship, a dynamic perspective focuses on the creation of new businesses, while a static perspective relates to the number of business owners. Second, entrepreneurship refers to entrepreneurial behavior in the sense of seizing an economic opportunity. This is the behavioral notion of entrepreneurship. Entrepreneurs in the behavioral sense need not be business owners. At the crossroads of behavioral entrepreneurship and the dynamic perspective of occupational entrepreneurship, a new focus has arisen that considers new venture creation as the hallmark of entrepreneurship (Cooper, 2003). According to Hisrich and Peters (1998), entrepreneurship refers to a process of

making a valuable thing that requires effort and time and psychological and social risks to generate income, personal satisfaction and freedom.

The term 'entrepreneurship' is widely deliberated under varied headings, such as entrepreneurial factors, functions of entrepreneurship initiatives, entrepreneurial activities and behavior of an entrepreneur, each searching for the right interpretation of the concept. According to Carre and Thurik (2002), entrepreneurship is the manifestation of the ability and willingness of individuals, either alone, in teams, inside or outside the organization to create new opportunities, and to introduce novel ideas to the market. This is done by facing the uncertainties and limitations, through effective decision-making and the utilization of resources and institutions. The entrepreneurship function is considered the way in which one discovers and exploits opportunities that facilitate the creation of an enterprise or developing new business opportunities. Churchill (1992) defined entrepreneurship as the process of generating values by developing and uncovering opportunities by taking advantage of opportunities without regard to human and capital resources. In other words, the term 'entrepreneurship' means seizing the opportunities which are uncertain, with better initiative and imagination as well as developing new opportunities for the nation (Knight, 1921).

## **2.2 Concept of Entrepreneurs**

As stated by Herbert and Link (as cited in Sulstyorini, 2013), an entrepreneur is someone who takes responsibility and makes decisions that can have an impact on the location, shape and use of products, resources or institutions. According to Schumpeter in Carre and Thurik (2002), an entrepreneur is an individual who performs entrepreneurial activities by creating new combinations. Lumpkin and Dess (1996) described that entrepreneurs are individuals who introduce new products or existing products to a new market or existing markets.

It has been argued that student entrepreneurs are unlike other entrepreneurs. This assertion is built on the argument that circumstances faced by student entrepreneurs are considerably uncertain terms of well-defined goals, faith, and values in comparison to a non-student entrepreneur. It is due to the non-students having had undergone more wide-ranging entrepreneurial encounters resulting in more well thought out and radical outlook, while student entrepreneurs have to play varied roles of being student and entrepreneur at same time compared to non-students with only one major role, i.e., to primarily focus on their business ventures (Robinson, Huefner & Hunt, 1991). In other words, the role of a student entrepreneur is different from a non-student entrepreneur, both in form and function.

### **2.3 Entrepreneurship Education Program**

The term, 'entrepreneurship education program' is conceptualized as a sort of pedagogical process of education for entrepreneurial attitudes and skills, which includes forming personal qualities. As such, it does not solely concentrate on the instant establishment of new ventures (Fayolle, Gailly, & Lassas-Clerc, 2006).

Linan (2004) said that the entrepreneurship education program can be distinguished into four different types. The first category is called "Entrepreneurial Awareness Education" that aims to increase knowledge regarding entrepreneurship and to encourage attitudes that may affect one's inclination to be involved in entrepreneurship activity. The second category is called "Education for Start-up." These kinds of programs are provided for those who have an entrepreneurial idea and need to address the practical questions in order to become real entrepreneurs. The third category is called "Education for entrepreneurial dynamism" which has been developed for those who already have become entrepreneurs and want to improve the quality of their behavior after going through the start-up phase.

The last category is called “Continuing Education for Entrepreneurs” which means life-long learning programs, paying more attention to qualified entrepreneurs (Liñán, 2004).

In addition, according to Béchar and Grégoire (2005), there are four research streams or opinions on entrepreneurship education. The first opinion concentrates on the role of entrepreneurship programs in the society. The second opinion focuses on the systemization of entrepreneurship programs, for instance, the usage of multimedia environments or curriculum development. The third stream is concerned with the content and its delivery, and the fourth stream focuses on the needs of participants in entrepreneurship programs (Béchar & Grégoire, 2005). Based on the above classifications, the context of this study can be placed under the first research opinion, i.e., the impact of entrepreneurship program on the entrepreneurial inclination of business students.

#### **2.4 Entrepreneurial Intention**

The term ‘entrepreneurial intention’ can be conceptualized as the initial step in the process for establishing a business that is generally long-term (Lee & Wong, 2004). Krueger (1993) said that entrepreneurial intention refers to one’s commitment to start a new business and is a central issue that needs to be considered to understand the process of establishing a new business. Entrepreneurial intention has recently started to receive attention because it is believed that a behavioral intention is a reflection of the actual behavior.

Mustikawati and Bachtiar (2008) defined intention as the intrinsic force that is able to inspire and motivate the individual to pay attention. It can also be defined as she/he is consciously interested in something outside himself with pleasure feeling. There are several ways by which one can recognize interest based on intention classification according to Super and Crities (as cited in Mustikawati & Bachtiar, 2008), such as asking about the most



favoured activities and least favoured activities (expressed interest); observe a hobby or other activity that is mostly done by the subjects (manifest interest); and asking the subject, whether or not he or she is happy in the number of activities or something (inventoried interest).

Therefore, entrepreneurial intention can be interpreted as the procedure for finding information that can be used to achieve the purpose of establishing a business (Katz & Gartner, 1988). An individual with the propensity start a business will have the willingness compared to one who does not have the desire to commence a new venture. Krueger, Reilly and Casrud (2000) pointed that intention is found to be a strong predictor of entrepreneurship behavior. Desirability can also be used as a fundamental approach to understand anyone who is in entrepreneurship (Choo & Wong, 2006). The study by Lee and Wong (2004) emphasizes that entrepreneurial desires or intentions are the initial steps in the long-term process of establishing and running a new venture. A person who has an interest in entrepreneurship will be more prepared and aggressive in efforts to set up a business than others who do not have the interest in entrepreneurship (Nastiti et al., 2010). Gurbuz and Aykol (2008) defined entrepreneurial intention as one's desire to engage in entrepreneurial activities, or in other words, to be self-employed.

Accordingly, based on the definitions of entrepreneurial intention above, it can be inferred that having an interest in entrepreneurship is a critical determinant in the formation of an individual's tendency to initiate and run a business. If a person does not have an interest in entrepreneurship, then everything that will be done related to the entrepreneurship process will be more severe than the one who has an interest in entrepreneurship (Segal, Borgia & Schoenfeld, 2005; Shane, Locke & Collins, 2003). Essentially, entrepreneurship is the same

thing as a job. If an individual likes the job, then of course, he or she will focus on running the processes as well as overcoming any hindrances and obstacles.

Indarti and Rostiani (2008) examined the entrepreneurial intentions by looking at three things: (i) personality characteristics; (ii) demographic characteristics; and (iii) environmental characteristics. Personality characteristics include the need for achievement and self-efficacy, whereas demographic characteristics include age, gender, educational background and individual work experience to determine one's entrepreneurial intention. Environmental characteristics include social relationships, physical infrastructure and institutional as well as cultural factors.

On the other hand, Mustikawati and Bachtiar (2008) adopted the theory of Meredith (2002). This study states that entrepreneurial intention refers to the entrepreneurial characteristics of a person. These features include confidence, task-orientation and the outcomes, risk taking, leadership and originality.

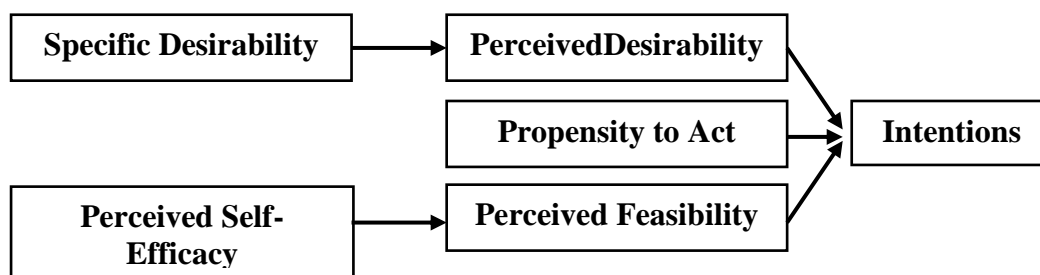
#### **2.4.1 The Entrepreneurial Intention Models and its Rationale**

Several studies related to entrepreneurship use many theoretical bases. Some previous experts like Ajzen (1991); Shapero and Sokol (1982); Elfving (2009); and Davidsson (1995) have developed entrepreneurial intention models. Each model shows distinctiveness and the authors also incorporated the rationale to explain how the entrepreneurial intention models were developed.

The model of entrepreneurial intention of Shapero and Sokol (1982) is recognized as the "entrepreneurial event formation" which considers a change in the flow of life and its effect on the individual's perception and desire for a new formation. This model assumes that the change of life will affect changes in a person's interest in entrepreneurship and subsequent

behavior. The move will lead to two things, negative or positive. Negative for instance, means there is a loss of job and so on; while positive refer obtaining financial support. Propensity to become entrepreneurs and create a new venture highly relies on one's perception of desirability, such as “do I desire to execute it?”; and feasibility, such as 'do I have the resources to perform it?’ Guerrero et al. (as cited in Gurbuz and Aykol, 2008), also stated the same thing that there are two approaches that influence the behavior of a person to perform a certain activity. The approaches are: the Shapero approach which is known as Shapero Entrepreneurial Event Formation (SEF) Model; and the TPB.

According to Shapero, there are two perceptions that influence a person's behavioral intention: (i) perceived desirability that refers to the perception of someone of a behavior that is attractive and desirable; and (ii) perceived feasibility that constitutes one's perception of his or her ability to perform the desired behavior. Krueger et al. (2000) then included three predictors as determination directly or indirectly toward the intensity of self-employed like propensity to act, which indicate a motivation in a person to behave. This is known as the Shapero-Krueger Model (Krueger et al., 2000). Figure 2.1 below depicts the Shapero-Krueger model:



**Figure 2.1**  
*Shapero-Krueger Model*

To determine how entrepreneurial goals are evident in ‘*Entrepreneurial Event Formation*’, Shapero and Sokol looked at life path changes and their influence on the individual’s

perceptions of both desirability and availability, leading to new business implementation. This framework considers that substantial life changes (displacement) precipitate a change in entrepreneurial desire and subsequent character. Displacement can happen in a negative form (e.g., divorce, loss of a job); or a positive form (financial support, good business partner). The desire to become an entrepreneur and start a new business (an entrepreneurial intention), therefore, depends on one's perceptions of both desirability and feasibility with regard to that activity (Mcstay, 2008).

A good character is determined by the choice an individual makes for a given situation (in this situation, to this decision maker) and the "propensity to act" (without which significant action may not be taken). "Credibility" requires a behavior to be seen as both desirable and feasible. Entrepreneurial events thus require the potential to start a business (credibility and propensity to act) to exist before the displacement and a propensity to act (Shapero & Sokol, 1982).

The entrepreneurial event formation model developed by Shapero and Sokol (1982) was extended by Elfving (2009). Elfving's model overcomes the inconsistency regarding the effect of social norms in predicting the intention to become an entrepreneur. Elfving (2009) argued that in order to understand the study of entrepreneurial intentions, a theoretical framework should include three aspects: (i) motivation; (ii) goals; and (iii) opportunity evaluation.

According to Elfving (2009), the entrepreneurial intention models developed by previous researchers (Krueger & Brazeal, 1994; Krueger, Reilly & Carsrud, 2000; Shapero & Sokol, 1982) exclude motivation, goals and opportunity in their models and are therefore limited frameworks. In order to address the lack of prior models, Elfving (2008) developed a theoretical framework that explains the formation of entrepreneurial intention by

incorporating motivation, goals and opportunity. The model is presented in Figure 2.2 below. The qualitative study made by Elfving (2008) was not able to confirm the connection between variables as precisely as in a quantitative study; it also failed to justify the strength between variable connections. Therefore, this model needs to be examined further and thus is still considered as a conceptual framework. Nevertheless, this kind of a conceptual framework is needed as a foundation for research progress and development (Elfving et al., 2009).

Elfving (2008) concentrated on the question of the characteristics of entrepreneurial intention and how the intention could emerge. The outcomes of that study are summarized in the context-specific entrepreneurial intentions model (context-specific EIM), graphically described below. This structure of the formation process of entrepreneurial intention has the power to lead to entrepreneurial behavior. Consequently, this model is helpful when one seeks to understand behavior in entrepreneurial activity. However, the role of social norms remains an indefinable one as it clearly impacts the model, but it may in fact be an indirect one via motivation, goals, desirability and self-efficacy.

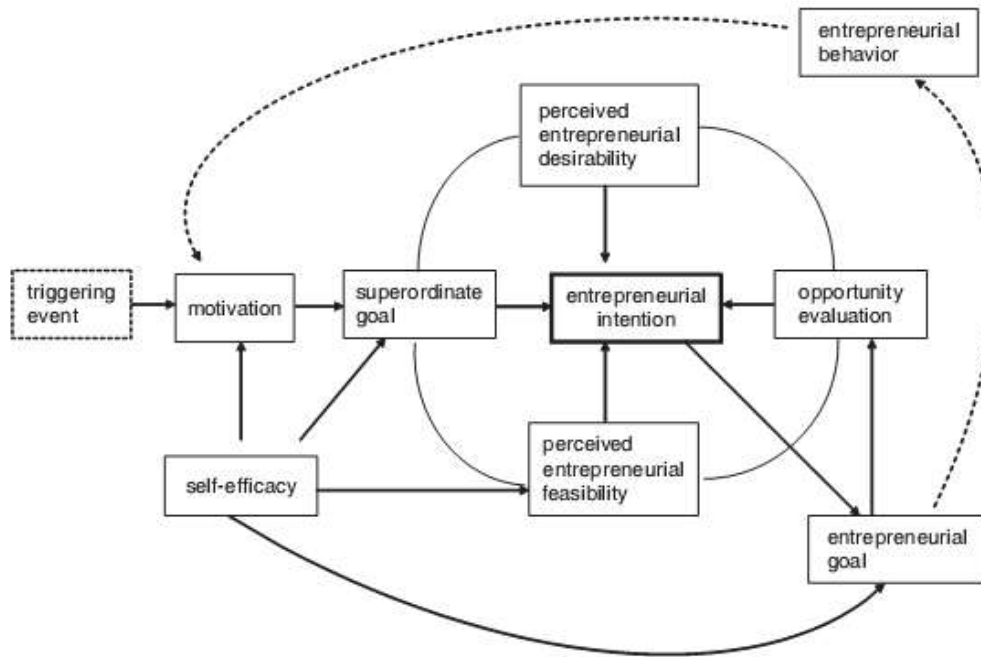


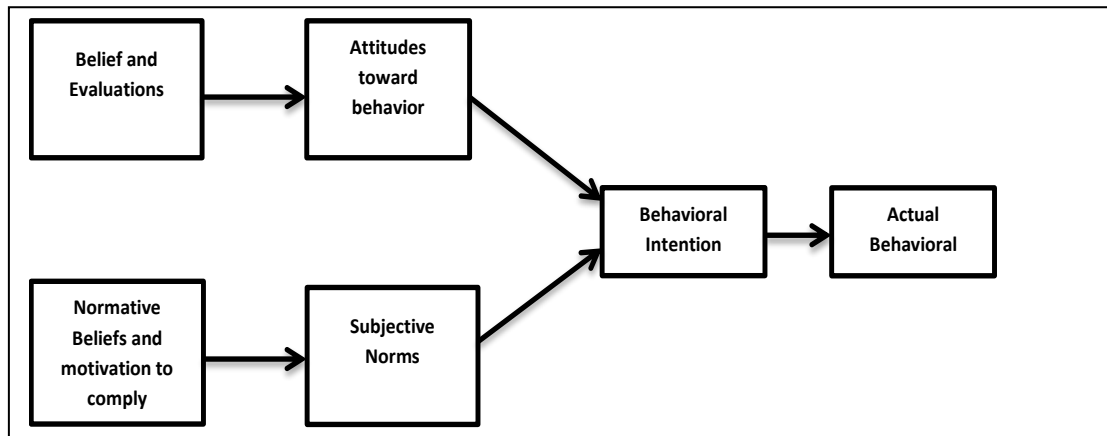
Fig. 2.2 The context-specific entrepreneurial intentions mode

Figure 2.2 above is a distinct model of entrepreneurial intentions that incorporates motivation, opportunity evaluation and goals which are pivotal to understand entrepreneurial behavior. This EIM model integrates the various cognitive elements of the entrepreneur into a more comprehensive model that connects intentions to behavior.

Another model of entrepreneurial intention is the TPB (Ajzen, 1991) which has been used often given its ability to reflect a person's behavior and interest in doing business. One's convictions, attitude and interests affect the behavior of the individual. From the perspective of entrepreneurship, this means that trust of being an entrepreneur and a person's attitude to entrepreneurship can be a strong platform for an individual to build a new business.

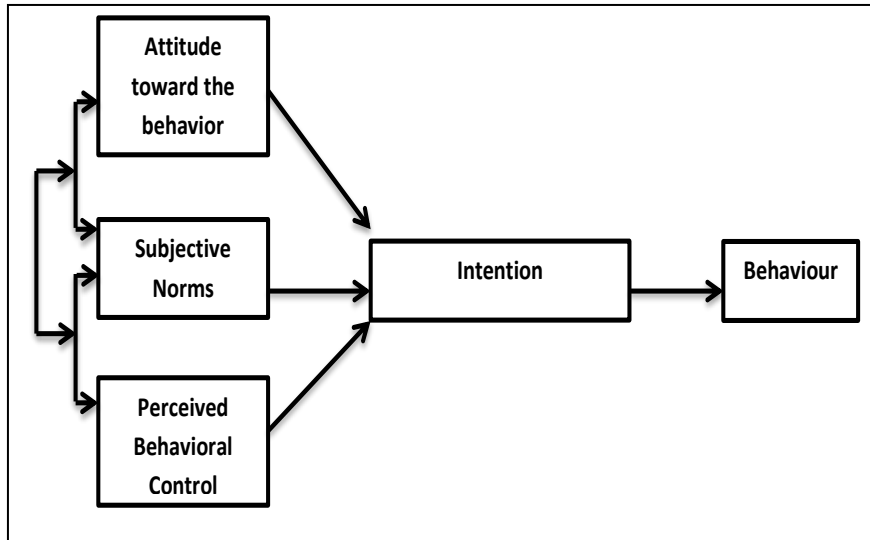
The TPB is derived from the Theory of Reasoned Action (TRA) (Ajzen & Fishbein, 1975). The TRA states that a person's behavioral interests may be shaped by attitudes toward the behavior and subjective norms of the individual. In other words, the attitude can be

influenced by others, such as parents, spouse, idol, and so on (Mcstay, 2008). Thus, either the attitude or the subjective norm is affected by the evaluation which means a motivation belief which is formed through one's environment. For more details, the TRA can be seen in Figure 2.3 below:



**Figure 2.3**  
*Theory of Reasoned Action*

On the other hand, the TPB assumes that human behavior is largely derived from the interest of individuals to display such behavior and their ability to decide or make a decision to do something (of their own willing). This theory explains that a person's interest depends on three elements : (i) a person's attitude toward the behavior (do I desire to perform it ?); (ii) subjective norm (do other people wish me to execute it ?); and (iii) perceived behavioral control ( do I think I am capable of doing it and have the resources to perform it?). Basically, the third element is the supplementary factor of the original TRA model. A person's attitude toward the behavior and subjective norms are also considered as motivational factors that can affect behavior. In contrast, the third element (perceived behavioral control) is considered as a non-motivational factor that can influence behavior. If these three factors are combined, then these would reflect the actual behavior of individuals and generally can be used to predict a person's interest or behavior (Ajzen, 1991).



**Figure 2.4**  
*Theory of Planned Behavior*

Figure 2.4 explains that attitude toward behavior, subjective norms and perceived behavioral control can affect a person's intention; while intention can affect a person's behavior. In the absence of attitude and subjective norm, if the support from perceived behavioral control is good, then it will also be able to influence the behavior of a person to make choices and take decisions. Attitude, subjective norms and perceived behavioral control can affect each other. Gurbuz and Aykol (2008) developed this model by taking several indicators to measure entrepreneurial intention: security and workload, avoiding responsibility, economic opportunity and challenge, autonomy, authority, self-realization, participation, social environment and career and perceived behavioral control. Table 2.1 below depicts the models of entrepreneurial intention developed by previous researchers:



**Table 2.1**  
*Entrepreneurial Intention Models*

<b>Authors</b>	<b>Model</b>	<b>Antecedents</b>
Shapero and Sokol (1982)	Model of Entrepreneurial Event Formation	<ul style="list-style-type: none"> <li>- Perceived Desirability</li> <li>- Propensity to Act</li> <li>- Perceived Feasibility</li> </ul>
Elfving et al. (2009)	Entrepreneurial Intention Model (EIM)	<ul style="list-style-type: none"> <li>- Perceived Entrepreneurial desirability</li> <li>- Perceived Entrepreneurial feasibility</li> <li>- Motivation</li> <li>- Superordinate goal</li> <li>- Opportunity evaluation</li> </ul>
Davidsson (1995)	Economic Psychological Model of entrepreneurial Intention	<ul style="list-style-type: none"> <li>- General attitude (willingness to change, competitiveness, money orientation, achievement, autonomy) and domain attitudes, such as payoff, social contribution, know-how as well as the current situation).</li> <li>- Domain attitudes ( payoff, social contribution, know-hows as well as the current situation).</li> </ul>
Gurbuz and Aykol (2008)	Gurbuz and Aykol Model	<ul style="list-style-type: none"> <li>- Demographic Factors (Gender, Family Background).</li> <li>- Component of TPB (attitudes, security, work load, social environment, avoid responsibility, career, economic opportunity, challenge, autonomy, authority, self-realization, participate in the whole process, subjective norm, perceived behavioral control).</li> <li>- Contextual (academic support, environment for entrepreneurship)</li> </ul>
Krueger and Carsrud (2000)	Model of Intention Basic	<ul style="list-style-type: none"> <li>- Attitudes</li> <li>- Behavior</li> </ul>
Robinson et al. (1991)	Model of Entrepreneurial Attitude Orientation	<ul style="list-style-type: none"> <li>- Attempts to predict the attitude of entrepreneur through four personal characteristics (achievement, self esteem, personal control, innovation) and two kinds of reactions (affective and cognitive).</li> </ul>
Bird's (1988)	Model of intentionality	<ul style="list-style-type: none"> <li>- Personality</li> <li>- Beliefs</li> </ul>

Ajzen (1991)	Model of TPB	<ul style="list-style-type: none"> <li>- Attitude toward the behavior</li> <li>- Subjective Norm</li> <li>- Perceived Behavioral Control</li> </ul>
Zhao et al. (2005)	Entrepreneurial Intention Model	<ul style="list-style-type: none"> <li>- Perceived learning from entrepreneurship courses</li> <li>- Previous entrepreneurial experience</li> <li>- Risk propensity</li> </ul>

The table 2.1 above clearly shows the models of entrepreneurial intention developed by previous authors. All the antecedents were found to be the best predictors to explain entrepreneurial intention.

It is practical to study intention because the actual behavior is difficult to measure (Wu, 2010). Entrepreneurial intention is closely associated with entrepreneurship behavior. Ajzen (1991) claimed that intention is a direct predictor of behavior. In addition, Krueger et al. (2000) explained that entrepreneurial behavior is intentional and planned. Since entrepreneurial behavior is intentional, many studies have agreed that entrepreneurial behavior can be predicted by entrepreneurial intention (Krueger, 1993). However, there are a few of studies that have concentrated on the influence of entrepreneurial orientation, social support and entrepreneurial self-efficacy, internship program and business incubation program toward entrepreneurial intention of students. Therefore, there is a need to explain the above variables to further the knowledge regarding the antecedents of entrepreneurial intention.

## 2.5 Entrepreneurial Orientation

Many previous studies have come up with various opinions regarding entrepreneurial orientation. However, the definition of entrepreneurial orientation is open to debate as it could vary which means that there is no fixed definition for the ‘entrepreneurial orientation’ term (Covin & Wales, 2012).

Entrepreneurial orientation at the organization level is defined by Rauch, Wiklund, Lumpkin & Frese (2009) as the process of strategy-making which provides a basis for organizations to make decisions and take action. Furthermore, this construct is explained by three to five aspects that have been built (Covin & Slevin, 1989; Miller & Friesen, 1983). Lumpkin and Dess (1996) stated that entrepreneurial behaviour comprises autonomy, innovativeness, risk-taking, proactiveness and competitive aggressiveness. According to them, most of the research in the area of entrepreneurial orientation has utilized three of these variables, i.e., innovativeness, proactiveness and risk-taking, while autonomy and competitive aggressiveness have been studied less often (Lyon, Lumpkin & Dess, 2000; Rauch et al., 2009). Researchers have discovered that the EO construct in general incorporating these all the five elements can be studied jointly (Lumpkin, Cogliser & Schneider, 2009; Runyan, Droge & Swinney, 2008) or individually (Lumpkin & Dess, 2001; Wang, 2008), depending on the context.

This study discusses the issues related to entrepreneurial orientation among students.. Generally, entrepreneurial orientation can be defined as a tendency to explore new business opportunities. The expression of this inclination has led to the creation of attributes, such as innovativeness, risk-taking, pro-activeness, competitive aggressiveness and autonomy (Lumpkin and Dess, 1996). They also acknowledged that the dimensions or attributes are exceptional to explicate entrepreneurial orientation across the sectors. From an individual’s

context, Pearce II, Fritz & Davis (2010) pointed out that the definition of entrepreneurial orientation consists of several distinctive behavioural aspects which are interrelated and that can help an individual in improving the above-mentioned attributes of entrepreneurs. Kumar (2012) pointed out that the young entrepreneurs with better entrepreneurial orientation will have better productivity and performance in business operations.

According to Covin & Slevin (1991); and Miller (1983), various dimensions of entrepreneurial orientation can be derived from a review and integration of the available literature. The study by Miller and Friesen (1983) conceptualizes three dimensions of entrepreneurial orientation that have been utilized often in research studies. The first dimension is innovativeness which includes the propensity to be involved in creative activities and experimenting new things in business, such as introducing new products and technological leadership in new processes through Research and Development (R&D). The second dimension is risk-taking which refers to the ability to take calculated yet bold actions, such as venturing into new areas of business, experimenting with new sources of finances and/or making significant resource commitments in new ventures in wake of uncertain environmental conditions. The third dimension is proactiveness which involves forward-looking and opportunity-seeking behavior ahead of the current competitive environment, such as the introduction of new products and processes in anticipation of demand in future.

The study by Lumpkin and Dess (1996) further explained that the above discussed three dimensions can be five dimensions, i.e., autonomy, innovativeness, proactiveness, risk-taking and competitive aggressiveness; they termed these aspects as entrepreneurial orientation. Their study defines entrepreneurial orientation as a process, practice and decision-making activity which together leads to innovation activities in business.

Autonomy is by Lumpkin and Dess (1996) as independent actions or activities of an individual or self-managed team to present a business idea or vision and then successfully carry it through to achieve desired results. According to Basri (as cited in Susanti, 2012), independence in terms of psychology, involves the individual's live condition that can be used to decide or perform something without the help of others. In addition to the above dimensions, another aspect which is important for describing entrepreneurial orientation is networking. The aspect of networking plays a substantial role to improve entrepreneurial orientation of individuals (Taatila & Down, 2012). Individuals will find it difficult to start-up a business if they do not socialize with their community, especially in the business environment. Thus, Jenssen and Greve (2002) argued that it is a fact that a business organization provides networking with members based on the business climate instead of a singular entity.

In the context of a business community, people need to develop a relationship and networking with other people to optimize their capacity, especially in conducting business. The networking can also be defined as a gateway that adds to the ability and resources of an individual (Davis, 1969; Hautama`ki, 2003; McAdam & McClelland, 2002; Myint, Vyakarnam & New, 2005); in turn, active networkers can benefit from the enterprise's network. Although a high level of interaction can be established through networking, it is crucial to sustain a platform of processes for interactive and sensible social networking in order to significantly achieve benefits of the existing resources from networking (Swan, Newell, Scarbrough, & Hislop, 1999).

## **2.6 Social Support**

Social support is a concept which is widely deliberated and discussed and has been described in the available literature as one of the determinants of an individual's behaviour.

A number of research studies (Sahban, Kumar & Ramalu, 2014; Astuti, 2009; Mustikawati & Bachtiar, 2008; Powell & Eddleston, 2013) have explained the role of social support systems in influencing young graduates to become entrepreneurs. In the context of Indonesia, however, there are only few studies that have identified and explained the determinants of entrepreneurship or entrepreneurial intentions of young graduates (Sahban, Kumar, & Ramalu, 2015).

Social support in the context of entrepreneurship means a group or network of people in the society who help and care for individuals. The resources that are given to individuals by the group can include financial resources, adequate business information and guidance. The phenomenon of social support thus involves the business-friendly social relationship among people and their readiness to give business advice and guidance (Sahban, Kumar, & Ramalu, 2015).

In literature on entrepreneurship, social support is defined as the emotional and psychological support by other persons in the entrepreneur's social network who he/she may trust and who can make him/her feel cared for, valuable and loved. Sarason et al. (1987) defined social support as the intensity of interaction of entrepreneur with his/her friends and family to whom he/she feels attached to. In other words, social support is the extent of assistance and attachment of an individual with the social group he/she interacts with directly or indirectly who make that individual feel loved and/or cared. Social support, therefore is considered as building blocks for social and psychological integration of entrepreneurs in the society. Much of the literature on entrepreneurship refers to social support as a potential entrepreneur's beliefs and expectations about the assistance and advice that he/she may receive from his/her social groups. These social groups include primary groups, such as parents, siblings, and spouse; and secondary groups, such as

reference groups, comprising friends, colleagues and teachers. Social support is supposed to help and assist the potential entrepreneur in setting up a business or running its activities (León, Descals & Domínguez, 2007).

Experts have classified social support into two main dimensions: support by family; and support by peer groups (Ismail et al., 2013; Zafar, Yasin & Ijaz, 2012). Social support from these sources tends to play various roles and functions in the entrepreneurial orientations of potential entrepreneurs and has different outcomes. Both family and friends' support needs to be considered distinctively because different cultures ascribe a different level of reliance on or benefits from both sources (Procidano & Heller, 1983).

### **2.6.1 Family Support**

According to Rani (2012), family support has a strong influence on opportunity recognition, new venture creation, business decision-making and resource mobilization. Families play a crucial part in the new venture creation process. The role of family support, therefore, needs more consideration by research studies focusing on understanding entrepreneurship. The family relationships serve as strongest business ties in the business networks. Thus, the family of an entrepreneur is considered as offering a number of resources, ranging from professional to non-professional resources, which have a strong effect on new venture creation and its activities.

Anderson and Jack (2005) argued that family takes a substantial part in new venture creation; this is due to the strong relationship among family members. Steward (2003) offered the most comprehensive assessment of the role of family support in the entrepreneurial circle. This study has observed the benefits of the family network which

include extensive tacit knowledge, commitment, access to information and ability to take risks in entrepreneurial efforts.

According to Granovetter (1973), the literature on entrepreneurship distinguishes between two elements of network ties which are required for a result oriented entrepreneurial circle. Those people who have close personal relationship and interact quite frequently with other are considered as strong ties network. On the other hand, those people who have a big gap emotionally and make interaction infrequently are considered as weak ties network. Strong relationship usually comes from friends or family, while weak links are mostly associated with business colleagues. According to Anderson (2005), strong relationship is believed to provide really high quality resources, particularly information support-which is seldom commercially available and which has a better focus on business needs (Singh, as cited in Anderson et al., 2005).

### **2.6.2 Peer Group Support**

A number of research studies (Sahban, Kumar & Ramalu, 2014; Astuti, 2009; Mustikawati & Bachtiar, 2008; Powell & Eddleston, 2013) have contributed to the understanding of the role of social support systems in influencing young graduates to become successful entrepreneurs. These studies, however, are limited to specific topical areas and are unable to integrate varied entrepreneurship models proposed by researchers in the field of entrepreneurship (Sahban, Kumar & Ramalu, 2015).

Mead (2001) explained peer support as an ecosystem of exchange of help based on principles of mutual respect and shared responsibility, and shared an understanding of resulting benefits. In this way, peer support is not just based on psychological models but it is more about expressing concerned understanding towards each other's issues. It is the



feeling of affiliation that individuals in the network have with each other and feel connected with others in a supportive manner. The feeling of being connected or affiliated is founded on a mutually respectful relationship which makes the members learn from each other without being limited by the constraints of traditional relationship.

It is therefore imperative that peer group is the point of social interaction between potential entrepreneurs and its advisors. Individual entrepreneurs tend to take decisions to create a new venture because of the influence of their peers. Peer groups consist of people who are already in business and they are supposed to provide technical advice and help to create a supportive environment for business start-up by potential entrepreneurs (Bönte, Falck & Heblich, 2009). The peer pressure in business results in positive influences by other social entities in the business eco-system, such as media and social networks. It therefore becomes easier for potential entrepreneurs to assume risk, experiment innovation and take business initiatives.

Manski (as cited in Falck et al., 2009) categorized effects of social interaction into two major forms. First is endogenous effects, which refer to the influence or prevalence of a certain group behaviour on individual behaviour. It is explained as the situation where peer group's entrepreneurial intentions influence an individual's intention to become an entrepreneur. Second, an exogenous effect, also termed as the contextual effect, which is the influence of reference groups on youth's behavioural intentions to become an entrepreneur. The model developed by Manski (as cited in Falck et al., 2009) explains the effects of peer group's contextual characteristics, such as their family and social situation influences on an individual's entrepreneurial intentions. These exogenous or contextual effects tend to arise from students spending time in their peers' homes or business offices and thus becoming

exposed to entrepreneurship. This influences them to consider entrepreneurship as a career option compared to those students who are not exposed to such influence.

## **2.7 Entrepreneurial Self-efficacy**

Bandura (1977) defined self-efficacy as one's conviction or belief in his/her ability to complete a job. In other words, the condition of one's motivation is built more on what one believes as against what is objectively true. Such individual insight plays a crucial function in the construction of one's intentions. The study by Chen et al. (1998) describes entrepreneurial self-efficacy as the extent of a person's belief in his or her capability to successfully perform various roles and functions of entrepreneurship. In addition, according to Boyd and Vozikis (1994); and Scherer et al. (1989), entrepreneurial self-efficacy is the extent of one's belief in himself/herself to accomplish entrepreneurial tasks and roles. According to Chen et al. (1998), entrepreneurial self-efficacy refers to students' confidence in their competencies to successfully develop new business ventures and perform related entrepreneurial activities.

In the entrepreneurship field, entrepreneurial self-efficacy refers to the degree of belief of a person that he/she is capable to successfully initiate new business venture (Campo, 2011). Chen et al. (1998) argued that entrepreneurial self-efficacy refers to the young graduates' self-judgment about their capacity and capability to create a new venture and perform the tasks and roles related to entrepreneurship. As such, it can be concluded that self-efficacy is a feeling, belief, perception and confidence toward the ability to address a particular situation that in turn will lead to the way the individual copes with the situation.

Because of the significant influence that self-efficacy exerts on young graduates' self-motivation and learning to become entrepreneur (Dinther, Dochy & Segers, 2011; Pajares

and Urdan, 2006, as cited in Pihie & Bagheri, 2011), many studies have utilized the concept of self-efficacy to examine entrepreneurial intentions, competence and behaviour of students (Barbosa, Gerhardt & Kickul, 2007; Segal et al., 2005; Wilson, Kickul & Marlino, 2007). Hence, students with high levels of self-efficacy tend to be more likely to find entrepreneurial opportunity and deal with uncertainties to achieve their business vision (Erikson, 2003; Zhao, Seibert, & Hills, 2005). Those students with low entrepreneurial self-efficacy, on the other hand, tend to disbelieve themselves, feel they lack entrepreneurial ability, and therefore, prefer avoiding going into business or find it easy withdraw when faced with difficulties or problems (Chen et al., 1998).

The student can develop and construct their entrepreneurial self-efficacy through training and learning about entrepreneurship (Fayolle et al., 2006; Rae & Carswell, 2000). Multiple entrepreneurial training programs have been conducted to create entrepreneurial self-efficacy of students. These training programs encourage students to gain experience by directly taking part in entrepreneurial activities. It is expected that their self-efficacy will improve once they master the experience (Erikson, 2003; Rae & Carswell, 2000). These programs moreover encourage the students to participate in solving a problem through solving case studies and/or arranging collaboration with entrepreneurs in their study course project. This significantly improves their sense of self-efficacy by providing them with vicarious learning and experiences (Erikson, 2003). By improving students' self-efficacy, it will enable them to put more effort over time, develop the business plans and strategies to achieve their entrepreneurial goals (Shane et al., 2003).

The entrepreneurial self-efficacy variable consists of six dimensions adopted from De Noble et al. (1999): (i) developing new product and/or looking for new market opportunities; (ii) creating an environment supportive of innovation; (iii) finding and strengthening

relationships with investors; (iv) defining business mission/purpose; (v) overcoming challenges; and (vi) gathering required human resources. According to Setiawan (2014), developing new product refers to the individual's belief in him/herself to develop a new product or capitalize new market opportunity becomes a strong foundation of his/her intention to be involved in entrepreneurship. The second dimension is "building an innovative environment" that includes a person's belief to be able to join with others or his or her team to try new ideas or take innovative action. The third dimension is "the initiating of investor relationships" that includes a person's trust to be able to find sources of funding for his or her business activities. The fourth dimension is "defining core purpose" which includes a person's belief towards his or her vision the ability to maintain his or her mission as well as clarify them to the investors or business team. The fifth dimension is "coping with unexpected challenges" which refers to an individual's belief towards the capability to tolerate and deal with uncertainty, especially during the start-up. The sixth dimension is "developing human resources", which includes a person's belief in the ability to recruit and select the teams (individual) who are gifted and have the same vision with high integrity to build and grow the business.

The current study is in line with Chen et al. (1998); De Noble et al. (1999); and Nwankwo et al. (2012) which stated that self-efficacy is influenced by previous experience. Therefore, those who gain knowledge through academic activities will obtain different relevant skills and abilities needed in the entrepreneurial world. Further, Nwankwo et al. (2012) stated that students with high level of self-efficacy always believe that they will succeed in any business activities they participate in. They will add value to to their efforts.

## 2.8 Entrepreneurial Internship Program

An analysis and review of the relevant literature regarding employment-based learning programs in higher education identify three types of such programs, namely internship, cooperative education and cooperative extension. Internship has a number of meanings. Davies (as cited in Yafang & Gongyong, 2008) stated that internship could be refers to an experiential learning where students take the opportunity to apply learned theories from schools in the real world situation, and it provides an opportunity for students to integrate and consolidate thinking and action. Fox (2001) considered internship as an opportunity to close the yawning gap between university-learnt theory and practical reality. Pauze et al. (1989) articulated that internship is equivalent to fieldwork, field experience, practicum, co-op or experimental learning with some variations. According to McMahon and Quinn (as cited in Chiang, 2014) internship refers to a 'supervised work experience' (SWE) and that students are under special guidance and attention during their internship instead of working alone by themselves in the industry.

It is observed that universities are extending several entrepreneurial internship programs to the students who aspire to become entrepreneurs. Two university terminologies, namely cooperative education and internship, are most frequently used to conceptualize the terms of field experience for students. According to Thiel & Hartley, (1997), cooperative education was initially constructed with the aim of helping students enrolled in professional programs to financially support their studies. "Co-op" students usually substitute full-time employment phases of career with full-time phases of the academic study. Hence, co-op students are allowed to apply for jobs at organizations which were located far from their university. Analysis of the pattern of an online search of business courses depicts that co-op educational programs are more often found in engineering and technical courses. The

internship programs, on the other hand, refer to the part-time field experiences. The internship programs are common among a wider variety of academic disciplines and organizations. Students take internships during their enrolment in academic studies to gain practical experience in their field of study (Thiel & Hartley, 1997). The role played by the entrepreneurial internship program to encourage students to become entrepreneurs cannot be neglected, especially in the Indonesian context. Internship refers to part-time field experiences, that include multiple academic disciplines and organizational settings with its primary goal to eventually make students to become entrepreneurs (Dilts & Fowler, 1999; Gault et al., 2000).

Internships refer to on-the-job training programs which provide students with field knowledge related to their academic field of study in a supervised learning environment. (Kuslivan & Kuslivan, 2000; Patton & Dial, 1988; Waryszak, 1999). Lorenzo-Aiss & Mathisen (1996) claimed that four features characterize an internship program, i.e., specific work hours, work can be both paid or unpaid, award of certificate and supervision provided by a faculty member along with a business personnel. More recently, internship program is defined as field experience in business or government organizations which amplifies the classroom learning of students (American Institute of Certified Public Accountants, 2006). According to Coco (2000), internship programs are a valuable part of higher education programs and are said to create a mutually beneficial situation for students, business organizations and universities/colleges.

The relationship between education and internship has been widely discussed. Shortt (1992) stated that education must meet the needs of the industry, not just through the use of first class academic staff but also under the provision of adequate practical facilities. Practical facilities do not necessarily mean a business setting or environment inside an educational

institution; it can be substituted and supported by industrial training to fulfil the business-oriented purposes (Collins, 2002).

The learning process of entrepreneurship should not only be confined just to the classroom discussions; interaction with today's dynamic business environment is vital because "critical entrepreneurial skills can only be developed and refined if they are practised" (Dilts and Fowler, 1999, p. 52). This is to enable students to gain hands-on experience by 'seeing, touching and feeling' the business world (Cooper, Bottomley, & Gordon, 2004; McIntyre & Roche, 1999). For this reason, entrepreneurial internship is seen as a good mechanism to provide students with such a learning experience in a real business milieu (Dilts & Fowler, 1999). Internship, according to Gault, Redington and Schlager (2000), is 'generally part-time field experiences and encompasses a wide variety of academic disciplines and organisational settings' with its main goal to eventually lead students to become self-employed (Dilts & Fowler, 1999). Mohd Shariff, Abdul Mutalib & Ahmad Fadzil (2000) highlighted the objective of having internship program is to expose students to the perspectives of industry work practices. It is a training strategy that transforms theoretical knowledge to application as well as develops individuals' working skills in the real career world (Dodge & McKeough, 2003).

Neill and Mulholland (2003) pointed out that the placement and/or work experience program is very crucial for undergraduates as it exposes and prepares them for the real working experience and as an external extracurricular learning activity. Entrepreneurial internship programs offer a lot of advantages to universities, organizations as well as students (Dilts & Fowler, 1999; Hildebeitel, Leauby, & Larkin, 2000). For instance, students with entrepreneurial internship experience tend to exhibit lower job dissatisfaction than those without internship experience (Hildebeitel et al., 2000). A study by Gault, Redington

& Schlager (2000) showed that interns who have participated in the internship programs tend to have higher career preparation for their jobs and higher level of intrinsic and extrinsic rewards satisfactions. Hence, acquiring applicable entrepreneurial experience does have a positive relationship with an individuals' intention and readiness in pursuit of business opportunities because of their early exposure to the business environments (Cooper, Bottomley, & Gordon, 2004).

The main objective of the internship and co-op program strategy is to embed the modernity characteristic to the students participating in this program, so that they can take risks, learn to be creative, innovative and dynamic. These programs can improve the professionalism of the participating students, either in the form of increasing expertise, responsibility and networking capabilities. It will definitely be of added value for university or college (Ruyadi, 2004).

## **2.9 Business Incubation Program**

A business incubator is a modern business assistance program with the goal of nurturing new and small-scale enterprises. According to Statistics Canada (2006) a business incubator refers to a real life simulative organizational unit which provides space and support services to help initiate new businesses and support the existing businesses to achieve growth and become more profitable. Business incubators are normally micro and small businesses; yet, these may be found in several government organizations and universities aimed at promoting entrepreneurial activities. A business incubation center may be referred to as key business support organizations which enable entrepreneurs to create new ventures by combining their entrepreneurial drive with necessary resources and technical advice which is normally not available to micro and small firms. Thus, business incubators enable nurturing of young and small firms, especially over the initial formative period during which



their vulnerability and chances of mortality are higher, thus enabling them to become profitable commercial ventures (Hamdani, 2006).

The incubation program could be defined as an economic and social program which provides support intensively to individuals seeking to start up a business and coach them to accelerate their business development through business assistance programs. such as management training, financial aid, networking access, providing facilities and consultation relating to business development (Mubarak, Al-Mubarak & Busler, 2013). Business incubation centers provide entrepreneurs with expert advice and network support they require to make their ventures commercially viable (Pena, 2004). There are many definitions of business incubator. However, there no accepted definition to interpret the business incubator in general. It depends on the objective of the incubation centers and the condition in which they are applied (Hamdani, 2006; Zasiadly, 2012).

In essence, the business incubator constitutes a standard facility owned by the office which is further supported by the business resource development services. The services provided may vary. A developed business incubator generally has advanced facilities, such as conference rooms, canteen, security, office supplies, telephone, internet, library, rental vehicles, cleanliness and maintenance and lodging (Agustina, 2011).

According to Campbell, as cited in Supangkat (2005), business incubator is divided into three types, that include industrial incubator, university-related incubator and for profit property development incubator. The industrial incubator refers to the incubator that is supported by government and nonprofit institutions which aims to create jobs and reduce the unemployment rate. The university-related incubator aims to apply science commercialization, technology and the right from the research finding. University incubations offer to the new ventures, services regarding laboratory, computer, library and

consulting with experts. This incubation is totally supported by university in cooperation with stakeholders. For Profit Property Development Incubator refers to an incubator that provides physical space, such as office, production space and service facility in one place. All the tenants share the office facilities and they have to pay for the services to the incubator provider.

The main goal of business incubation centres is to establish a successful start-up business that will make the incubator financially viable whereas the graduates of the business will be able to provide job creation, technology transfer, commercialize new technology and create welfare for economies. Panggabean (2006) further noted that the objectives of business incubator are: (i) helping a potentially new and small enterprise to be independent enterprise in order to be successful in dealing with local or international competition; (ii) promoting entrepreneurship by involving private companies that can contribute to the market economy system; (iii) transferring technology and commercialization processes from the experts; (4) creating an opportunity for new business development; and (5) applying technology commercially through study and review, but not time consuming and at relatively low cost.

According to the Cooperative Department and SMEs in Jakarta, in 2012, business incubator developed aspiring entrepreneurs to be independent entrepreneurs through a series of integrated development, including the provision of workplace or office with its facilities, guidance and management consulting, R&D assistance, training, funding support, and the creation of business networks, either locally or internationally.

Agustina (2011) stated that the business incubation centers provide several services or facilities that are summarized as the 5S system: service, support, skills development, seed capital and synergy. The service provides guidance and management consultancy, such as marketing, finance, production, technology, etc. Support refers to business development and access to the use of technology support. Skills development includes training to make a

business plan and other management training. Seed capital provides start-up funds as well as assists in gaining access to capital from financial institutions. Synergy includes creating a network of local and international businesses.

This concept is quite similar to Reith (2000); he incorporated space and sharedness in the incubator services. According to Reith (2000), a business incubator generally provides 7s services: space to start up a business; sharedness to share basic business services and equipment with other tenants, such as reception, conference room, communication system, fax and computer as well as sharing security; service that includes management consulting, market problem, the financial aspect and law, information on commerce and technology; support that can help access to researchers, professional networking, technology and investment; skills development that constitutes training in preparing business plans and other necessary skills; seed capital, such as providing an internal revolving fund or providing assistance to obtain financing from banking institutions; and synergy that emphasizes on coordination

In reality, the business incubator has clear systems and business models to provide assistance to the clients up to their graduation. Business incubators in Indonesia have different business models; for example, some incubators let their clients determine a suitable programme. This type of incubator provides the post-incubation program, so that the clients can still obtain such services after their graduation from the incubation program. On the other hand, other types of incubators have fixed programs and they invite the clients to participate.

## **2.10 Gender and Entrepreneurship**

The term 'gender' describes the socially created roles, norms, behavior, expectations and activities connected to women and men. Gender equality has been underlined as one of the

eight Millennium Development Goals and as a key to realizing the goals by the United Nations Population Fund (2013). There is a consensus among researchers that women can play a substantial role in business activities (Sarfaraz et al., 2014). Gender inequality exists in terms of economic development as well as the rates of entrepreneurial activity. There is a significant gender gap in the entrepreneurial activity rate worldwide (Allen as cited in Sarfaraz et al., 2014). A study by the Global Entrepreneurship Monitor (GEM) of 18 economies from 2002 to 2012 suggests that women's proactiveness in entrepreneurial activity is lower than that of their male counterparts at different stages of improvement (Kelley, Brush, Greene, & Litovsky, 2013). According to Pines et al. (2010) women's entrepreneurial activity in developed countries is likely to be lower compared to the ones in developing countries. Equal opportunities are of greater concern for women in developed countries than those in developing nations. Different measures of gender equality increase as per capita income increases (Dollar & Gatti, 1999).

The GEM Women's Report (as cited in Sarfaraz et al., 2014) states that the gender gap among entrepreneurs has gradually increased over time in some countries. Overall, as the economies move to a higher level of development, the rate of entrepreneurial activity decreases, regardless of gender. So, in more developed countries where both men and women have different preferences for dealing with employment, they are likely to be more interested in obtaining secured jobs rather than taking a risk in entrepreneurship activities. In contrast, the entrepreneurial gap between women and men generally decreases in developing countries (Kelley, Brush, Greene, & Litovsky, 2011). As the economies move from factor-driven stage to efficiency-driven stage and to innovation-driven stage, the gap between male and female entrepreneurs decreases. Sarfaraz et al. (2014) argued that gender equality may lead to an increasing number of female entrepreneurs. Consequently, one may conclude that in the economies where women are more likely to have equal opportunities

with men, the equality of women entrepreneurial activity is higher compared to the economies where women face a greater rate of gender inequality.

## **2.11 Theoretical Underpinnings**

The underlying theory used in this study is the Theory of Planned Behavior (TPB) developed by Ajzen (1991); and Experiential Learning Theory developed by Kolb (1984). The TPB consists of three main dimensions to predict intention that lead to the behavior namely: (i) attitude towards behavior; (ii) subjective norms; and (iii) perceived behavioral control. In an attempt to explain the attitude towards behavior, this study uses the variable of entrepreneurial orientation of the students. In order to explain the subjective norms, this study investigates the variable of social support. Entrepreneurial self-efficacy of the students describes the perceived behavioral control dimension.

On the other hand, the variables of entrepreneurial internship program and business incubation program attempt to interpret the experiential learning theory developed by Kolb (1984). In this study, the main idea of this theory is to gain entrepreneurial experience from the work-field while having a mentorship or guidance from classroom to perform the entrepreneurial activities.

### **2.11.1 Theory of Planned Behavior**

The main idea of the TPB is the individuals' intention to be involved in a particular behavior (Al-Swidi, Mohammed Rafiul Huque, Haroon Hafeez & Noor Mohd Shariff, 2014). Gurbuz and Aykol (2008) mentioned that TPB aims to explain how a person's interest may reflect the actions or behavior of an individual to do something. In other words, the TPB explains why the individuals behave in a particular way.

Generally, it is difficult to find a comprehensive definition for attitude but most of the researchers agree that attitude is considered to be a property of an individual's personality. Attitude is reinforced by beliefs or perceptions and these feelings lead to the particular type of behavior that forms the action (Behjati, Pandya & Kumar, 2012). Attitude can also be regarded as positive or negative assessments of behavior.

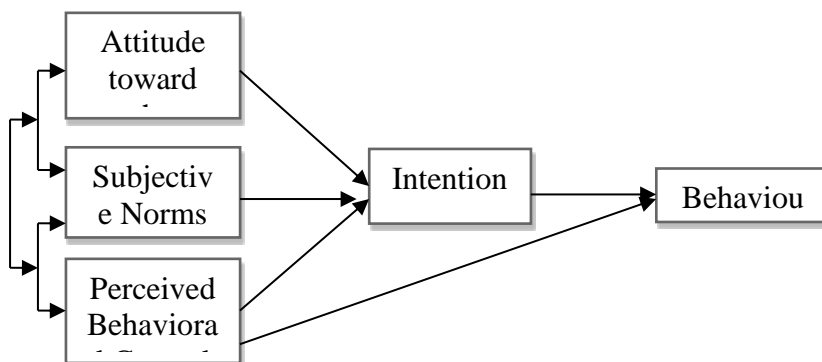
Subjective norms refer to one's beliefs about how other people may perceive the outcome behavior under consideration. These norms consist of an individual's perceptions of the social pressure that he/she may have to comply with and expectations about appealing behavior. In other words, subjective norms are described as a social force to let a person perform or refrain from performing a particular action. According to Ajzen (1991), perceived behavioral control refers to a person's belief that he/she has the capability to perform a certain behavior. Perceived behavioral control assesses whether one has access to the necessary resources and/or opportunities to exhibit a character. Intentions are presumed to offer some pointers on the manner by which people are eager to attempt to exhibit an attitude and the extent to which this attempt is exercised. The theory states that the behavioral intention is influenced by three factors, i.e. attitude, subjective norms and perceived behavioral control which thereby influence a person's behavior.

The TPB reveals that there are several factors that can shape a person's intentions and further impact on an individual's behavior. These factors include attitude and subjective norms. Therefore, if someone has the intention to deal with entrepreneurship, it can show that individual's tendency is to establish a business (Fishbein & Ajzen, as cited in Suharti & Sirine, 2011)

The available body of literature on a person's behavior has made considerable use of the TPB to understand a person's interest and behavior in starting a new venture. The theory

depicts that an individual's beliefs, attitude and self-efficacy tend to have a positive effect on his/her behavior. In the context of entrepreneurship, the TPB implicates that an individual's faith in himself/herself of becoming an entrepreneur and his/her attitude to entrepreneurship tend to influence that individual's intentions and decision to create and run a new venture.

According to the TPB, an individual's tendency to perform a certain behavior is significantly influenced by the personal interest of the individual to demonstrate this behavior and his/her capability to make decisions, i.e., willingness. The theory describes that an individual's behavioral intention depends mainly on three factors. First, an individual's attitude toward that behavior, i.e., his/her desire to perform this behavior. Secondly, subjective norms, i.e., belief that other people want him/her to perform this behavior. The third factor is perceived behavioral control, i.e., the individual's belief about his/her capability to perform that behavior. The third factor is derived from the Theory of Reasoned Action (TRA). The first two factors above are regarded as motivational factors which influence behavior; whereas the third factor, perceived behavioral control, is a non-motivational factor to influence behavior. All these factors together reflect the antecedents of a person's intention to perform a certain behavior (Ajzen, 1991).



**Figure 2.5**  
*The Theory of Planned Behavior (Ajzen, 1991)*

Figure 2.5 depicts the flow of relationships among variables in the TPB. It is clear from the model that an individual's attitude, subjective norms and perceived behavioral control influence his/her behavioral intention, while intention influences that individual's behavior. The model also depicts that compared to attitude and subjective norms, perceived behavioral control is directly able to affect an individual's decision-making behavior.

Suharti & Siren (2011) revealed that attitudinal factors which are postulated by the TPB also influence a person's desire or intention to become entrepreneurs. Further, Krueger (1993) tested the TPB in relation to an individual's interest and intention to initiate a new venture. Results of their study reveal that an individual's interest and intention in terms of entrepreneurship are significantly influenced by his/her attitude and perceived behavioral control.

### **2.11.2 Kolb's Experiential Learning Theory**

One of the most popular learning theories of internship and incubation practitioners is Kolb's experiential learning theory (Kolb, 1984). This learning theory contains four distinct learning styles (or preferences), which students may move through on a continuing basis in a four-stage learning cycle. Kolb's model may offer both a way to understand students' learning styles and also as an explanation of a cycle of experiential learning that is applicable to all students.

Kolb (1984) said that an individual learner moves through a spiral of immediate experience which leads to observations and reflections on the experience. These reflections are then absorbed and linked with previous knowledge and translated into abstract concepts or theories, which result in new ways and actions to adjust to the experience that can be tested and explored. Kolb described the four stages in the cycle of experiential learning as:



Concrete Experience - (CE)

Reflective Observation - (RO)

Abstract Conceptualization - (AC)

Active Experimentation - (AE)

### **Concrete Experience (CE)**

This stage of the learning cycle emphasizes personal involvement with people in everyday situations. In this stage, the internship and incubation students would tend to rely more on feelings than on a systematic approach to problems and situations. In a learning environment, the students rely on the ability to be open-minded and adaptable to change in the working environment.

### **Reflective Observation (RO)**

In this stage of the learning cycle, the student should understand ideas and situations from different points of view. In a learning situation, the students would rely on patience, objectivity and careful judgment but would not necessarily take any action. The students would rely on their own thoughts and feelings in forming opinions. As an example, after finishing the work in the internship and incubation program, the students reflect on what they did, make observations and discuss what they went through with their educator/mentor.

### **Abstract Conceptualisation (AC)**

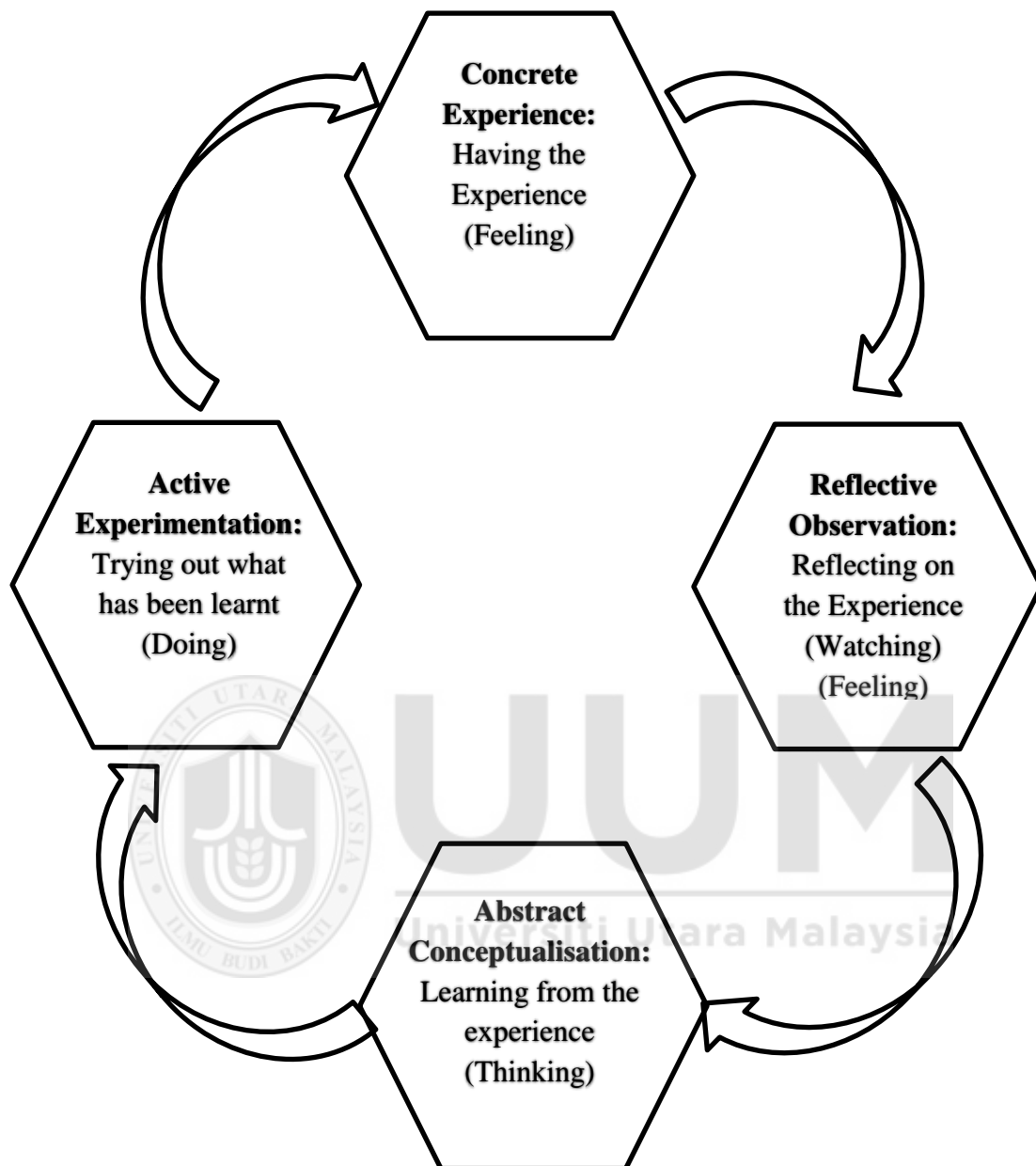
In this stage, learning involves using theories, logic and ideas, rather than feelings, to understand problems or situations. Typically, the students rely on systematic planning and develop theories and ideas to solve problems.

For example, the students then think about the process of entrepreneurship activities they went through and their performance of the activities and try to make links between previous experiences, and start to form any theories or knowledge they can apply.

### **Active Experimentation (AE)**

Learning in this stage takes an active form of experimenting with changing situations. The students may take a practical approach and be concerned with what really works, as opposed to simply observing a situation. For example, the student considers ways to improve, and tries out methods and strategies based on the previous stages of the cycle. Figure 2.6 below outlines Kolbs' four-stage learning cycle:





**Figure 2.6**  
*Theory of Experiential Learning (Kolb, 1984)*

Based on the cycle above, both internship and incubation students will have concrete experiences through their internship assignment as well as incubation assignment. Both on the job and when they return to the classroom, they will be given the opportunity to observe and reflect upon those experiences. Students will be asked to complete an assignment that is designed to heighten their observation and experience while doing the job and to reflect on

these experiences. Some authors, like Boud, Keogh and Walker (1985); and Schon (1983) have contributed to learning from experience. Further, researchers (Doel, 2009; Howard, 2009; Van Gyn, 1996) have demonstrated that this process can enhance student internship development and make assessment for learning more productive. Both the experience itself and the reflection in any post-placement assignment will give students the opportunity to form abstract concepts and generalization that will then be tested in subsequent experiences. Students can begin anywhere in the cycle. Students completing an academic term can formulate concepts to test in the entrepreneurial workplace during the next phase of the cycle. Students completing an internship work-term can formulate concepts for action and reflection during the next academic term as well as the next internship work assignment. This model is particularly useful in explaining how learning can be integrated in the classroom and the workplace. By this argument, learning would be reinforced through more than one internship and incubation placement in an engagement in each of the stages of the cycle. Similarly, assessment tools would be designed to fit this learning process.

## **2.12 Chapter Summary**

This present study explains factors correlated with entrepreneurial intention by observing its interaction effect with factors, such as entrepreneurial orientation, social support, self-efficacy and internship program as well as the business incubator program. The argument and discussions made in the review of the literature have provided deeper insight into many educational and contextual factors, like entrepreneurial orientation, social support, self-efficacy and issues related to the business incubation program. The assumptions formulated need to be tested with a quantitative approach in order to arrive at sound and reliable findings related to the entrepreneurial intention of business students in Indonesian universities. This chapter provides the literature review undertaken for this study as well as

related theoretical frameworks for all the variables and the hypotheses. The next chapter presents the development of the research methodology.



## CHAPTER 3

### RESEARCH METHODOLOGY

#### 3.0 Introduction

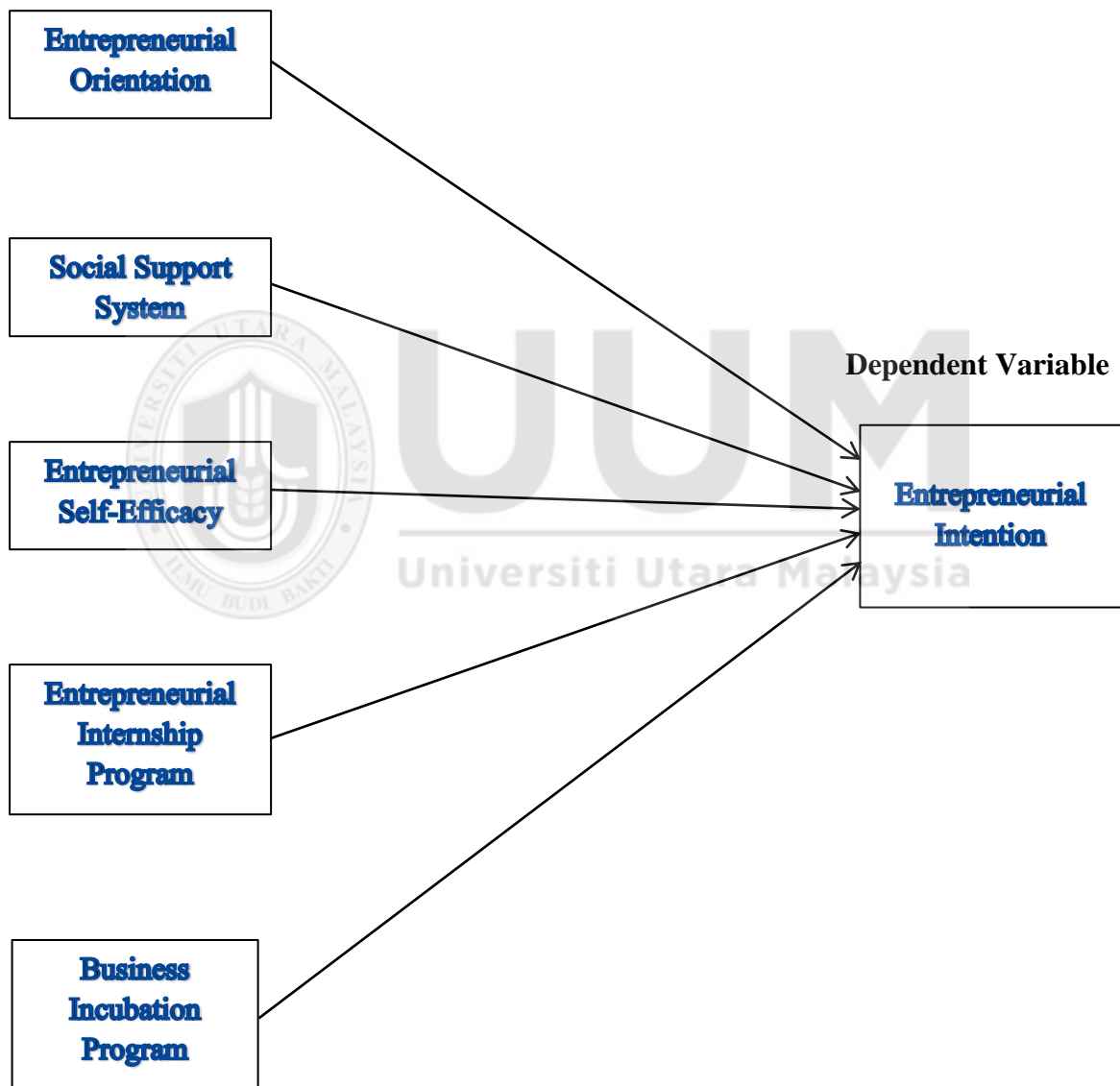
Chapters 1 and 2 provide an initial understanding of the concepts in relation to the topic of this study. Chapter 3 presents the details of the research methods, their rationale and how the study is designed and implemented. Deductive method is used in order to address the research questions posed in the study. The deductive method involves the application of quantitative research methods and techniques. This chapter thus provides details of the research methodology followed by how this study is designed and operationalized in order to answer the research questions. This chapter also incorporates the techniques of data collection as well as data analysis to describe how this study is conducted. Data was collected using SPSS version 20 and AMOS version 18.

#### 3.1 Research Framework

Smyth (2004) postulated that research frameworks are arranged from established general beliefs and concepts which aid a scholar to appropriately recognize the issues they are searching for, build their enquiries and locate appropriate information. The majority of scholastic studies have utilized a conceptual framework in the beginning to help the investigator to simplify his or her research problems and objectives. This framework contains ideas, their descriptions and previous concepts that have been applied. The framework provides an overview of the hypotheses and models that are important to the subject of the study and often compare it to the wider areas of knowledge one is undertaking. This study aims to examine the impact of entrepreneurial orientation, social

support, entrepreneurial self-efficacy, entrepreneurial internship and business incubation program on entrepreneurial intention of students. Each factor selected for the study is conceptually, operationally and theoretically connected through the framework to explain the phenomena under study.

### Independent Variables



**Figure 3.1**  
*Conceptual Framework*

As depicted in Figure 3.1 above, this study has five independent variables and one dependent variable. The independent variables are entrepreneurial orientation, social support, entrepreneurial self-efficacy, entrepreneurial internship program and business incubation program. The dependent variable is entrepreneurial intention. This study attempts to link the above framework with the theory of planned behavior (TPB) and how each of the variables can explain the elements within the TPB. In addition, the experiential learning theory is used to support this model.

## **3.2 Hypothesis Development**

### **3.2.1 Entrepreneurial Orientation and Entrepreneurial Intention**

It is a well-known fact that entrepreneurial orientation comprises risk-taking attitude, innovativeness and proactiveness of an individual or organization to run a business (Miller, 1982; Lumpkin & Dess, 1996). But there are debates on the findings when entrepreneurial orientation is linked to entrepreneurial intention. Remeikiene et al. (2013), argued that the propensity to act or proactiveness is associated with entrepreneurial intention. Researchers have found a strong relationship between entrepreneurial intention and innovativeness and risk-taking propensity as the most popular attributes influencing entrepreneurial aspirations of people (Begley & Boyd, 1987; Lee & Tsang, 2001).

Several universities in Indonesia are now becoming more inclined towards entrepreneurship by organizing entrepreneurial activities for students and staff, incorporating entrepreneurship courses in study programs and creating industry linkages with local entrepreneurs. The empirical case study among German university graduates revealed that the likelihood of choosing self-employment as a career is associated significantly with the entrepreneurial orientation of the university graduates (Krabel, 2013). Bolton and Lane



(2012); Janssen and Van (2004); and Yperen and Seibert et al. (2001) proposed that the entrepreneurial orientation of students is significantly related to entrepreneurial intention. According to entrepreneurship experts, the most important aspect of entrepreneurial learning method is to embed the entrepreneurial orientation because this attitude can drive a person to have an intention for entrepreneurship and finally engage in entrepreneurial activity (Sulistiyorini, 2013).

A report by the Organization for Economic Co-operation Development (OECD) in 2012 recorded that Indonesia was predicted to be the country which has the five highest number of graduates in the world by 2020 (Burhanuddin, 2014). However, according to Balwa (2014), the high number of university graduates in Indonesia today indicates that educational institutions are not more than institutions to create scholars without embedding necessary skills. Higher educational institutions should create innovative graduates in order to enable them to engage in entrepreneurship. Most of the universities still focus on the quantity of the graduates each year instead of their quality

Interest in entrepreneurship is equivalent to interest of a person to be involved and be willing to engage in entrepreneurship activities. These activities include taking risks to run a business, making use of business opportunities that exist to create new businesses with innovative approaches or to improve the number of venture creations (Mansyur, 2013).

The TÜBİTAK Science Fellowship Department (2014) in Turkey conducted an innovativeness competition. The main purpose of this competition was to embed a culture of entrepreneurship among young people. Another purpose of the competition was to help university students realize their business ideas. The competition was open to two-year degree students, undergraduates as well graduate students.

The Albert J. Simone Center for Student Innovation and Entrepreneurship (2012) enhances innovation and entrepreneurship activities at Rochester Institute of Technology (RIT) in the US through the Student Incubator Program and Venture Creation Incubator Program. These kinds of activities would definitely enhance the innovation skills among students in RIT.

Hamdan (2013) argued that the desire to be entrepreneurs, the courage to take risks and the ability to become an entrepreneur influence both partially and simultaneously, entrepreneurial intention. Risk-taking refers to the propensity of a person to work in an uncertain situation and take initiatives (Reardon, as cited in Remeikiene, Startiene & Dumciuviene (2013). The individuals with tolerance of high risk are generally more motivated to be involved in entrepreneurship compared to the ones with lower propensity to take risks and therefore, much less motivated to engage in entrepreneurial activities (Remeikiene et al., 2013).

Krabel (2013) stated that the likelihood of graduates becoming self-employed is significantly associated with the entrepreneurial orientation of the university. Hassan (2001) examined empirically the relationship between entrepreneurial proactiveness and entrepreneurial intention in the Malaysian context by using a sample of 421 business students in Malaysian Universities. His study indicated that an entrepreneur's proactive personality traits have a significant influence on entrepreneurial intention among Malaysian business students.

According to Bateman and Cram (as cited in Hassan, 2001), the scale of proactive personality may have implications for employment choice and entrepreneurship, in particular. They further suggested that the proactive personality scale may have implications for the vocational choice and entrepreneurship. Although past researchers have hinted at the link between entrepreneurship and proactivity, only Crant's 1996 (as cited in

Hassan, 2001) study empirically demonstrates that a proactive attitude is associated with entrepreneurial intention.

Among others, personal needs tend to be the major motivational factor behind the decision to initiate a new business venture. According to Ryan & Deci (2000), three needs are important for self-motivation and personality integration, i.e., the need for competence, the need for relatedness and the need for autonomy. The choices of occupation by around 8,000 university graduates who entered the job market after completion of their studies were analyzed in relation to their entrepreneurial orientation and regional business activity by Krabel (2013). According to Zampetakis, Kafetsios, Bouranta, Dawett and Moustakis (2009), innovation ability does not predict entrepreneurial intent if the ability is not supported by a proactiveness attitude to deal with entrepreneurship.

The above literature related to entrepreneurial orientation and entrepreneurial intention provide us with an idea about the influence of entrepreneurial orientation factors on entrepreneurial intention. Several factors, like innovation, proactiveness and risk-taking have a major role in developing entrepreneurial intention among students. Hence, this study proposes the first hypothesis of the research, which is mentioned below:

**H1:** Entrepreneurial orientation is positively related to entrepreneurial intention among business students in Indonesia.

### **3.2.2 Social Support and Entrepreneurial Intention**

Greeve and Salaf (2003) suggested in their study that a business takes more benefits from family members in the start-up phase. Other studies have described the strong positive impact of family members on entrepreneurial intention because they are the first source of sharing and discussing new business ideas and initial feedback (Aldrich, Reese & Dubini,

1990; Rosenblatt, de Mik, Anderson & Johnson, 1988). Leon et al. (2007) argued that social support significantly influences entrepreneurial intentions. A study by Fayolle et al. (2006) found that students having been exposed to entrepreneurship through their family have the good intention of entrepreneurship. On the other hand, Anderson et al. (2005) found that the support from families is not directly related to entrepreneurial intention. Their study found that more than a quarter of vital entrepreneurial support perceived by young entrepreneurs is outside the support from their family and colleagues.

When an individual intends to initiate a new venture, he/she seeks support from multiple sources. Sources of support for the entrepreneurship activity of individuals are usually family, partner and peers to whom they can trust to share the entrepreneurship ideas, the potential problems to be encountered along with the way and the means to handle these issues (Mustikawati & Bachtiar, 2008). Accordingly, as the closest environment, the support of family can synergize the interest in entrepreneurship. The family plays a pivotal role in inspiring children to choose entrepreneurial careers; parents also tend to encourage their children to take a more challenging career that allows self-freedom and independence (Buang & Yusof, 2006).

As mentioned by Davidsson and Honig (as cited in Baughn, Cao, Le, Lim & Neupert, 2006), social support by family and friends, as well as by parents owning a business, have been shown to be related to the occurrence of entrepreneurs. The role of close friends and family may be even more substantial than the general normative support in driving an individual's perceived desirability to commence a new venture. Greve and Salaff (2003) emphasized the prominence of the family in the entrepreneurial social circle.

Habsah and Faudziah (as cited in Rani, 2012) did a study among alumni students in Universiti Utara Malaysia. The respondents admitted that their spouse, parents and relatives

encouraged them to take up a business. Habsah and Faudziah also revealed that the students who are not interested in entrepreneurship can be influenced by people around them in making an entrepreneurial decision. Therefore, their kin play a substantial role in their entrepreneurial decision.

Mustikawati and Bachtiar (2008) conducted a study that aimed to demonstrate empirically whether there exists any association between social support (parents) and the entrepreneurial intention of vocational students. The results of their study indicated a significantly positive influence of social support (parents) on entrepreneurial intention among vocational students. The result of this study shows that the greater the social support provided by parents to their children, the greater the interest of vocational students to be involved in entrepreneurship. Further, Suharti and Sirine (2011) asserted that there is a strong potential role of contextual factors, such as academic support and social support, in entrepreneurial intention among the students.

In many cases, an entrepreneur's primary group members, such as family or extended family members provide him/her with the required capital along with other kinds of business support i.e., source of supply of materials, access to new markets and new product ideas and access to technology (Dyer & Handler, 1994; Zafar et al., 2012).

Another determinant of entrepreneurship attitude is prior exposure to business activity in the form of early exposure to the family business (Krueger, 1993). The study by Drennan, Kennedy and Renfrow (2005) identified that the perceptions about starting a new business are desirable for those who have expressed a positive posture of their family's business. Their study further described that early childhood experiences, such as adversity and frequent relocation, have significantly positive influence on an individual's attitude toward entrepreneurship. Other factors, such as prior exposure to business activities and prior

attempt to start a new business have positive effects on the attitude towards entrepreneurship.

Researchers who have studied the influence of familial factors on entrepreneurial intention seem to have focused on the modelling influence and the family history of entrepreneurial activities. Carr and Sequeira (2007) revealed that experiences from family business tend to have a substantial intergenerational effect on entrepreneurial intentions. McElwee and Al-Riyami (2003) found that children having parents in businesses tend to display a higher propensity to engage in entrepreneurship. Mueller (2006) also concurred that when putting all personal factors influencing a person's entrepreneurial intention together, parental role modeling seems to be the most significant. Another factor believed to have a direct bearing on entrepreneurial intention in the family is the financial resources in the family. This is due to the fact that family members in business have the potential of becoming a mentor and source of financial and non-financial help (Ahmed et al., 2010).

Sata (2013) explained that entrepreneurial experience is derived from one's perception of desirability in dealing with entrepreneurship which is influenced by one's attitude, peer groups, family members and even a professional atmosphere. Therefore, in the initial stage, a person is required to have the belief that commencing a new venture is very much required for shaping the intention to start a business.

An individual's opinion on the financial and other feasibilities of a new venture, are associated with that person's expectation about availability of knowledge, access to financial resources and relationship with business partners that will together influence the shaping of entrepreneurial intention. Ajzen (1991) identified subjective norms, such as social expectation and pressure from an individual's family, friends and peers as significantly influencing entrepreneurial intention in addition to the effect of attitude.

The above literature offers incisive insights into the influence of the social support factor on entrepreneurial intention. It is shown that family and peer group factors considerably affect the entrepreneurial intention of the youth. Direct experience is coming out with the power of social support system thus may or may not have an influence on young students who are undergoing entrepreneurial exposure. Therefore, this study proposes the second hypothesis of the research, which is mentioned below:

**H2:** Social support is positively related to entrepreneurial intention among business students in Indonesia.

### **3.2.3 Entrepreneurial Self-Efficacy and Entrepreneurial Intention**

According to Chen et al., (1998); and Krueger et al. (2008), entrepreneurial self-efficacy is a strong predictor of entrepreneurial intention. As mentioned by Indarti and Rostiani (2008), one of the factors that affects the strength of the entrepreneurial intention of students is derived from personal factors, namely the belief in oneself or also known as self-efficacy. Boyd and Vozikis (1994); and Saeed et al. (2013) described that entrepreneurial self-efficacy is an important variable in explaining the strength of entrepreneurial intention and the likelihood that this intention would lead to entrepreneurial actions. In addition, Boyd and Vozikis (1994) emphasized that self-efficacy is found to be a critical determinant of entrepreneurial intention.

Nastiti et al. (2010) conducted a study involving 241 students in Indonesia and China as respondents. The results of multiple regressions analysis and an independent sample t-test showed that there are dissimilarities regarding the factors that affect students' entrepreneurship intention between Indonesia and China. This study indicated that the entrepreneurial intention of Indonesian students is strongly affected by self-efficacy. This

study is in line with the research conducted by Indarti and Rostiani (2008) who showed that self-efficacy influences entrepreneurial intention among students in Indonesia and Norway.

Betz and Hackett (1986) argued that entrepreneurial self-efficacy towards one's career is a domain that describes the perception of a person in relation to the selection process and career adjustment. Thus, self-efficacy of an individual's career can be an essential factor in determining whether a person's entrepreneurial intention has been formed by the time a person starts his or her entrepreneurial career. Betz and Hackett argued that the higher the levels of self-efficacy of individuals in the early stage of their entrepreneurship career, the stronger their entrepreneurial intention.

Self-efficacy and feasibility tend to have a separate and independent influence on entrepreneurial intention (Armitage & Conner, 1999; Krueger, et al., 2000). Chen et al. (1998) stated in their study that entrepreneurial self-efficacy positively determines the intention towards new venture creation. Further, they identified the strong positive effect of entrepreneurial self-efficacy on entrepreneurial intention when tested with a sample of business and psychology students. Their study offered preliminary empirical evidence on taking ESE as a separate construct to determine the factor of EI.

Entrepreneurial Self-Efficacy (ESE) is defined as cognitive evaluations of an individual's capabilities to perform specific tasks of entrepreneurship. It thus achieves the entrepreneurial distinctiveness that is both individual and contextual. ESE is proposed to have a significantly positive influence on the entrepreneurial intention and competencies of students (Bayron, 2013; B. Bird, 1988; Boyd & Vozikis, 1994; Føleide, 2011; Li & Wang, 2008; Minglei & Yang, 2013). Boyd and Vozikis (1994) stated that students with higher entrepreneurial self-efficacy scores tend to exhibit a more positive attitude toward entrepreneurial activities and thereby higher intentions to start new businesses. Nwankwo et



al. (2012) described self-efficacy as a strong personal belief in skills and abilities to execute a task to enhance entrepreneurial desire and behavior. Self-efficacy is considered as a reliable predictor of the scope of career options that students consider and their occupational interests. It further determines their perseverance in difficult occupational fields, their personal effectiveness and a strong impact on the tendency towards entrepreneurial activity (Markman, Balkin & Baron, 2002; Urban, 2004). A person's perceived self-efficacy is found to be the strongest determinant of his/her career choice used to predict his/her entrepreneurial intention (Bandura, 1986; Chandler & Jansen, 1992; Urban, 2004). Zhao et al. (2005) also proved that entrepreneurial self-efficacy has a strong positive impact on entrepreneurial intention. Accordingly, there now has emerged a clear pattern that individuals who exhibit higher entrepreneurial self-efficacy tend to have higher entrepreneurial intentions (Chen et al., 1998; N. Krueger et al., 2000; Noble et al., 1999; Wang, Wong & Lu, 2002; Wilson et al., 2007).

It is interesting to understand from the above discussion that self-efficacy has a high influence on entrepreneurial intention among students. The ability to initiate, sustain that effort and the persistence the young students show towards entrepreneurial intention may have an influence on their intention to become an entrepreneur. Hence, this study proposes the third hypothesis of the research, which is mentioned below:

**H3:** Entrepreneurial self-efficacy is positively related to entrepreneurial intention among business students in Indonesia..

### **3.2.4 Entrepreneurial Internship Program and Entrepreneurial Intention**

Nowadays, internship programs have become a pivotal aspect of the educational curriculum in preparing university students for an entrepreneurial career (Raymond, McNabb &

Matthaei, 1993). Keat et al. (2011) revealed that the entrepreneurial intention of university students with working experience is higher than the ones without experience. By obtaining experience in the entrepreneurial world, students will be more inclined and ready to deal with entrepreneurship since they are already familiar with the business atmosphere (Cooper, Bottomley & Gordon, 2004).

As mentioned by Kolvereid and Moen (1997), university graduates who had chosen entrepreneurship courses, exhibited greater inclination towards becoming entrepreneurs compared to those who did not. In addition, Frazier & Niehm (2006) revealed that students' major, family occurrence of entrepreneurship and internship experience, influence entrepreneurial intention. In other words, graduates who had completed their internship were found to be more likely to make entrepreneurship a career choice compared to those who did not complete or join any internship programs. These findings show the importance of curriculum development by universities to disseminate business training across the universities' courses/disciplines. Also, this finding is in line with Petterman and Kennedy (as cited in Frazier & Niehm, 2006) which describes that prior work experience in business influences the attitude toward entrepreneurship. This study also points out that perceived desirability and feasibility of new venture creation increase as a result of enterprise education. In the same way, prior work experience in a family business has also been confirmed to have a positive effect on the perceived feasibility and desirability of new ventures (Reitan, as cited in Frazier & Niehm, 2006).

The outcomes of University of Maryland's Entrepreneurship Programs (2013) have led to the realization that students should experience entrepreneurship practically outside the classroom. Through their internship program, undergraduate students gained real-world experience while working in companies. This program placed students in a venture capital

firm and thus provided them a unique opportunity to experience high risk-taking entrepreneurship among venture capitalists and technology leader-entrepreneurs. The Private Equity and Venture Capital Clinic (PEVCC) is also an internship program which offers students the opportunity to work as financial analysts at a private equity fund company with over US\$100 million under the supervision of experienced professional fund managers. In the same way, the SAIC Practicum is known as an entrepreneurial consulting company. The projects at this firm are designed to provide real-life consulting experiences to entrepreneurship students working at the firm and make them learn to address emerging business challenges in real life. These programs, hopefully, could create entrepreneurship intention among students.

Neill and Mulholland (2003) identified that students' internship placement and work experience programs are vital as these programs expose and prepare them to take up real-world business challenges and enhance their entrepreneurial intention. Establishing multiple programs of entrepreneurship offers a number of benefits for not only the universities, but also for students (Dilts & Fowler, 1999; Hildebeitel et al., 2000). As mentioned by Hildebeitel et al. (2000), students who have participated in entrepreneurial internship programs tend to show higher job satisfaction than those who have no experience in the internship program.

Parental role models and work experiences are found by research studies to complement the university education in different ways. Work experience, for example, is found to be the source of entrepreneurial expertise and self-motivation. It is through work experience that students acquire practical learning in areas relevant to potential entrepreneurial careers, such as finance, human resource management and marketing. These programs also provide skills-based training in important areas of business management, such as selling, negotiation,

leadership, business planning, problem-solving and communicating (Shane, as cited in Walter & Dohse, 2009). Therefore, these firms inspire the students to think and act like entrepreneurs, thereby making these students to be more likely to recognize and exploit business opportunities.

A high internship experience of students indicates a high self-efficacy and entrepreneurial learning effect (Kumara, 2012; Wilson et al., 2007; Yemini & Haddad, 2010). The socialization of entrepreneurial behaviors and feedback from the work-integrated learning results in higher entrepreneurial intention. The entrepreneurial intention is positively related to the students' internship norms and internship attitude. The internship experiences, as derived from the socialization theory, significantly influence the formation of entrepreneurial intention (Kumara, 2012).

A study has revealed that the higher the quality of entrepreneurial internships, the greater the intention toward entrepreneurship. Therefore, universities must encourage their students to gain entrepreneurial experience before being offered a qualification in entrepreneurship (Chou et al., 2014).

Cooper, Bottomley and Gordon (2004) emphasized that entrepreneurial internship programs facilitate students to obtain real experience by observing, touching, seeing and feeling the business world. This earthworm approach of exposing potential entrepreneurs to the business environment through internship programs enables them to acquire practical experiences and skills since they learn to deal with actual entrepreneurial life. Many studies have argued for complete integration of internship programs in the business curriculum (Keat et al., 2011; Tau, 2012). These studies see the entrepreneurial internship program as an initiative that will strongly impact university students to have a better desire take up a new business. In addition to that, Mokhtar, Othman and Zainuddin (2010) conducted a

study of entrepreneurship programs in Universiti Utara Malaysia. They revealed that Malaysian University Students must be encouraged to take part in training, internship and entrepreneurship programs to apply high moral values and change their mindset to become self-reliant, imbued with an entrepreneurship spirit and intention.

Another issue is that most students who have received an entrepreneurial education do not mature their entrepreneurial intentions into new venture creation because of a number of reasons. Among the possible factors is the lack of practical entrepreneurial experience or exposure. This situation is similar to the one prevailing in other developing countries. A study by Abdullah, Osman and Rahim (2009) identified that students are unable to translate their acquired education or skills into self-employment because much less emphasis is placed on practical training, the absence of training environment and the lack of University-Industrial linkages. In addition to that, many students in Indonesia do not acquire any suitable skills after the completion of their internship program because the SMEs do not place the students according to their capabilities. As a result, this program has failed to increase the motivation of students to become entrepreneurs (Ruyadi, 2004).

The above literature clearly shows that entrepreneurial internship programs have more or less a direct influence on entrepreneurial intention among students. Especially in the Indonesian context, there are several internship programs which are organized for students like co-op program, in order to enhance their entrepreneurial skills. How far these skills have equipped students has not been adequately researched. Hence, this study proposes the fourth hypothesis of the research which is mentioned below:

**H4:** Entrepreneurial internship is positively related to entrepreneurial intention among business students in Indonesia.

### **3.2.5 Business Incubation Program and Entrepreneurial Intention**

Currently, many initiatives are underway to create university-affiliated innovation centers or business incubators aimed to help aspiring students to become entrepreneurs. It is yet to be seen whether these programs enable universities to function more effectively in promoting entrepreneurial intention among their graduates (Cooper, 1985). For instance, Udayana University's Business Incubator in Bandung, Indonesia has conducted comprehensive training and guidance for start-ups, either among students, alumni or society, to teach them to become strong and independent entrepreneurs (Amitaba, 2012). In its activities, the business incubator in Udayana University constantly synergizes all the faculties as well as various institutions or entrepreneurship associations. According to Sayu Ketut Sutrisna Dewi, the head of Udayana University's business incubator, this program has worked well in recent years, with more graduates now choosing to start their own businesses instead of applying to be civil servants (Nurhayati, 2014). In addition, Huffman and Quigley (2002) found that the Berkley business incubators in California provide resources that help students become self-employed. Business incubators run by the universities support students starting their own ventures. These incubators provide office space, equipment and advice from professors and successful entrepreneurs. In essence, a business incubation center uses several indicators (Reith, as cited in Sanjaya, 2011) which include space, shared, service, support, skills development, seed capital and synergy.

Hamdan (2013) developed a model of a business incubator that is oriented toward innovation. Hamdan further stated that several models were referred to. One of them was a business incubator model developed in University of Serang Raya (UNSERA) which allows entrepreneurial skills formation of the incubator participants. Indarti and Rostiani (2008) stated that the readiness instruments, including self-employment programs, such as business

incubation centres, are becoming significant determinants of entrepreneurship for students. Krabel (2013) further said that many universities that have entrepreneurship programs (such as business incubation centres) and created networks of local entrepreneurs, are becoming more entrepreneurial by supporting spin-off activities of students and staff. Otuya, Kibas, Gichira and Martin (2013) indicated that the students who have exposure to entrepreneurship courses, including business incubation centers, have higher intentions toward entrepreneurship than their counterparts who have no intention to attend entrepreneurship courses.

Saeed et al. (2013) explained that there are three components of a university's support for entrepreneurship activities, i.e., educational support, concept development support and business development support. Together with institutional support, all three components help to shape the students' entrepreneurial self-efficacy, and in turn, the entrepreneurial intention to start new ventures.

Papiashvili and Nasaridze (2014) conducted a study related to the business incubator in International Black Sea University (IBSU), Georgia. The study revealed that most IBSU students (70%) are planning to work in private businesses. It is not surprising because 84% of IBSU students already have the idea to start a business. It is only due to the lack of financial resources (about half of respondents) and other barriers (absence of business contacts, insufficient education, etc.) that they have not been able to realize their ambitions yet to start a business under the mentorship of a business incubator. Furthermore, they stated that nearly half of the surveyed students have got the information about business incubator services - 34% of all students and 39% of IBSU students are ready to start a business under the mentorship of university-based incubators (UBIs) but 10-15% of the surveyed youth are not willing to do business under any mentorship. Therefore, on one side, in Georgia, a

strong demand for business incubator services exists, on the other, the background for their establishment in terms of the university students' skills and their willingness to start their own business have been built.

There are many forms of Business Incubator services that might be offered to new start-ups. Scilitoe and Chakrabarti (2010) described the potential roles of business incubators in entrepreneurial education. By interacting with business incubator management and involving themselves in its business network, incubators may also contribute to enhancing the technical and social skills of entrepreneurs and making participants learn technological know-how (Löfsten & Lindelöf, 2002).

The literature above in connection with the varied models indicates that the facilities and the business incubation services provided by the universities may have an influence on the students' intention to become entrepreneurs. These incubation programs act as facilitators in the provision of infrastructure, networking, financial assistance and opportunities. It is in this context that these incubation programs may develop an interest in the young graduates to become entrepreneurs. As such, this study proposes the fifth hypothesis of the research, which is mentioned below:

**H5:** The business incubation program is positively related to entrepreneurial intention among business students in Indonesia.

### **3.3 Research Design**

The theory of science and methodology are the foundations on which a social scientist stands when conducting research (Jakobsen, 2013). The philosophy underlying this study is positivism which means philosophical positions that focus on empirical data and scientific



methods. In other words, this study utilizes quantitative analysis by gathering primary data to answer both research questions and objectives.

In order to gather the data, this study utilized a structured questionnaire and analyzed the data using SEM. According to Vidich and Lyman (1994), a quantitative researcher searches cases and facts from either an external perspective or universal perspective, which is how correlational studies are done in organizations (Sekaran & Bougie, 2010). This approach would certify that the study is conducted in a realistic or natural situation and avoids the necessity to construct the causal priorities of both dependent and independent variables (Niehoff, Enz & Grover, 1990). In addition, one of the advantages of empirical research design is that this design has higher external validity. In other words, the outcome can be generalized or extended to another scenario where efforts are made to establish cause-and-effect relationships through certain types of correlation or regression analysis (Sekaran & Bougie, 2010). Thus, the present study is a quantitative research design where primary data were collected using structured questionnaire design. Using SEM as a main analysis is most suitable and appropriate (Hair, Black, Babin & Anderson, 2010).

### **3.4 Operational Definition**

#### **3.4.1 Entrepreneurial Orientation**

In an attempt to operationalize the terms of entrepreneurial orientation, this study reviews the definition from previous relevant authors. According to Bolton and Lane (2012), entrepreneurial orientation is defined as a tendency to explore new business opportunities. The expression of this inclination has led to the creation of attributes, such as innovativeness, risk-taking and pro-activeness of an individual. Rauch, Wiklund, Lumpkin and Frese (2009) defined entrepreneurial orientation as the process of strategy-making

which provides a basis for organizations or individuals to make decision and take actions. Miller (1983) divided the entrepreneurial orientation into three dimensions: innovativeness, risk-taking and proactiveness. According to Miller (1983), innovativeness is defined as the propensity to be involved in creative activities and experimenting new things in business, such as introducing new products and technological leadership in new processes through R&D. Risk-taking includes the ability to take calculated yet bold actions, such as venturing into new areas of business, experimenting with new sources of finances and/or making significant resource commitments to new ventures in the wake of uncertain environmental conditions. Proactiveness involves forward-looking and opportunity-seeking behavior ahead of the current competitive environment, such as the introduction of new products and processes in anticipation of demand in future.

Based on the above definitions, this study operationalizes entrepreneurial orientation as one's attitude toward the ability to take bold actions by making changes in products or services, initiating the actions to anticipate future problems, taking up risky activities by trying any new and unusual entrepreneurship activities and the ability to plan ahead to establish new projects in an effort to develop and maintain his/her entrepreneurial career. This variable of entrepreneurial orientation is measured with 10 items using a five-point Likert scale. The next sub-section discusses the operational definition of social support

### **3.4.2 Social Support**

In literature on entrepreneurship, social support is defined as the emotional and psychological support by other persons in the entrepreneur's social network who he/she may trust and who can make him/her feel cared for, valued and loved. Sarason et al. (1987) defined social support as the intensity of interaction of an entrepreneur with his/her friends and family to whom he/she feels attached to. In other words, social support is the extent of

assistance and attachment of an individual with the social group he/she interacts with directly or indirectly, who make that individual feel loved and/or cared for. Social support, therefore, is considered as building blocks for social and psychological integration of the entrepreneur in the society. Experts have classified social support into two main dimensions, i.e., support by family and support by peer group (Ismail et al., 2013; Zafar, Yasin & Ijaz, 2012). Social support from these sources plays various roles and functions in the entrepreneurial orientation of potential entrepreneurs and has different outcomes for their adjustment.

Based on the above explanations, this study conceptualizes social support as the support students receive from their family and peers in terms of valuable information, instrumental support as well as emotional support to address entrepreneurial problems and make better decisions to start-up a business. The variable of social support is measured with 25 items using a 10-point Likert scale. The next sub-section discusses the operational definition of entrepreneurial self-efficacy.

### **3.4.3 Entrepreneurial Self-efficacy**

Authors have conceptualized entrepreneurial self-efficacy as the students' feeling, belief, perception and confidence toward the ability to develop new products or market opportunities, build an innovative environment, initiate investor relationships, define the core purpose, cope with unexpected challenges and develop critical human resources in an effort to achieve entrepreneurial success.

As stated by Setiawan (2014); and Nobe et al. (1999), developing new products or market opportunities is a person's belief in his or her ability to create a new product and find opportunities to have a firm foundation to get involved in entrepreneurship. Building an

innovative environment includes the student's belief to be able to join with others or his/her team to try new ideas or take creative action. Initiating investor relationships involves someone to trust and to be able to find sources of funding for business activities. Defining the core purpose includes the student's belief in his/her vision and maintaining the mission as well as clarifying the vision to the investors or business team. Coping with unexpected challenges refers to the student's belief in the ability to tolerate and deal with uncertainty, especially during the start-up. The critical development of human resources includes the student's belief in the capacity to recruit and select the teams or individuals who are gifted and have the same vision with high integrity to build and grow the business.

This variable of entrepreneurial self-efficacy is measured with 23 items using 10-point Likert scale. The next sub-section discusses the operational definition of entrepreneurial internship program.

#### **3.4.4 Entrepreneurial Internship Program**

According to Dilts and Fowler (1999); and Gault et al. (2000), internship refers to part-time field experiences that include multiple academic disciplines and organizational settings with its primary goal to eventually make students want to become entrepreneurs. Patton and Dial (1988) said internships refer to on-the-job training programs which provide students with field knowledge related to their academic field of study in a supervised learning environment. According to Coco (2000), internship programs are a valuable part of academic programs in higher education and are said to create a mutually beneficial situation for students, business organizations and universities/colleges. The American Institute of Certified Public Accountants (2006) defines internship program as field experience in a business or government organization which amplifies the classroom learning of students.

Based on the above definitions, this study defines entrepreneurial internship program as a program designed for those students who want to take part and gain experience in the entrepreneurship world in an effort to develop their confidence and ability to plan and organize entrepreneurial activity, formulate business ideas, problem-solving, communication skills as well as to increase practical business knowledge. This variable of entrepreneurial internship program is measured with 10 items using five-point Likert scale. The next sub- section discusses the operational definition of business incubation program.

### **3.4.5 Business Incubation Program**

Mubarak et al. (2013) defined the business incubation program as an economic and social program which provides intensive support to individuals seeking to start-up a business and coach them to accelerate their business development through business assistance programs, such as management training, financial aid, networking access, providing facilities and consultation related to business development. According to Statistics Canada (2006), a business incubator refers to a real-life simulation organizational unit which provides space and support services to help initiate new businesses and support the existing businesses to achieve growth and become more profitable. Thus, business incubators enable nurturing of young small firms especially over the initial formative period during which their vulnerability and chances of mortality are higher, and thus enable them to become profitable commercial ventures (Hamdani, 2006).

Based on the literature above, the author conceptualizes business incubation program as a place or an institution that provides a range of services, in terms of the provision of space, sharedness, services, support, skills development, seed capital and synergy in an effort to guide, assist and coach the students to start-up a business. This variable of business

incubation program is measured with 55 items using 10-point Likert scale. The next subsection discusses the operational definition of entrepreneurial intention.

### **3.4.6 Entrepreneurial Intention**

Entrepreneurial desire can be interpreted as the initial step of the establishment of a business that is generally long-term (Lee & Wong, 2004). Krueger (1993) mentioned that entrepreneurial intention reflects one's commitment to start a new venture and is a central issue that needs to be considered to understand the entrepreneurial process of new business establishment. Entrepreneurial intention has begun to receive attention because it is believed that a behavioral intention is a reflection of the actual behavior. A person with the intention to start a business will have the readiness and better progress than someone without intention to start a business (Sahban et al., 2014).

Based on the explanation above, the author conceptualizes the term 'entrepreneurial intention' as a student's readiness, efforts and determination to start a business venture and make this business as his/her professional goal to become an entrepreneur. The variable of entrepreneurial intention is measured with nine items using a five-point Likert scale.

### **3.5 Measurement of Variables**

As depicted in Table 3.1, the present study has six major constructs to measure, namely: the individual's entrepreneurial orientation, social support, entrepreneurial self-efficacy, business incubation program, entrepreneurial internship program and entrepreneurial intention. This section discusses the instruments used to measure the constructs of the model.

The instruments are made less subjective by paraphrasing them in the third party, i.e. referring to the behavior of another person and then asking how much the behavior of the

respondent is related to the described person. The questions were translated from English to Indonesian in a double back-translation process by a sworn and certified translator, Eko Tjahyadi. This procedure is subjected to the guidelines in terms of the equivalence in the translation of language in research projects (Brislin, 1980). The accuracy of the translation is pivotal since the results would be compared to other similar surveys.

**Table 3.1**  
*Measurement of Variables*

No.	Measurement	Items / Scale	Authors Chosen	Past Study Reliability	Pilot Test	Percentage of Variance
1	Entrepreneurial Orientation	10 items (5-point Likert scale)	Bolton and Lane (2012)	0.702 to 0.784	0.712 to 0.896	0.637
2	Social Support	25 items (10-point Likert scale)	Sahban et al. (2015)	0.753 to 0.851	0.802 to 0.843	0.642
3	Entrepreneurial Self- Efficacy	23 items (10-point Likert scale)	Noble et al. (1999)	0.782 to 0.894	0.801 to 0.823	0.619
4	Entrepreneurial Internship Program	10 items (5-point Likert scale)	Kusluvan and Kusluvan (2000). Waryszak (1999)	0.747 to 0.794	0.848	-
5	Business Incubation Centers	55 items (10-point likert scale)	Sahban et al. (2014)	0.751 to 0.892	0.795 to 0.892	0.863
6	Entrepreneurial Intention	9 items (5-point Likert scale)	Linan and Chen (2006, 2009)	0.773 to 0.943	0.784	0.640
<b>Total items</b>		<b>132 items</b>				

### 3.5.1 Entrepreneurial Orientation

The entrepreneurial orientation measurement was initially developed by Lumpkin and Dess (1966). However, it cannot be examined directly in student population because the questionnaire focuses on firm performance (Bolton & Lane, 2012; Taatila & Down, 2012). In order to measure the students' entrepreneurial orientation, the questions had to be adjusted so that the questions can be used to measure entrepreneurial intention at the individual level. Accordingly, the instrument of entrepreneurial orientation at the organization level was modified by Bolton and Lane (2012); as well as Taatila and Down (2012), to assess entrepreneurial orientation for the individual. One should keep in mind that although entrepreneurship refers to a wider concept than the actions of single entrepreneurs, the formation of firm-level entrepreneurial orientation is based on the behaviour of entrepreneurial individuals (Lumpkin & Dess, 1996; Miller, 1983).

Development of the individual entrepreneurial orientation scale was made under three dimensions: innovativeness, risk-taking and proactiveness. These dimensions were developed by Lumpkin and Des (1966) and have been mostly used by the researchers, while autonomy and competitive aggressiveness have been studied less often (Bolton & Lane, 2012). In addition, another dimension of networking has been used by Taatila and Down (2012).

The individual entrepreneurial orientation construct is measured by using a five-point Likert scale (1=strongly disagree to 5=strongly agree). The overall Cronbach's alpha met Nunnally and Bernstein's (1994) standard for scale development studies of 0.784.

The scale for measuring entrepreneurial orientation is adapted from Bolton and Lane (2012). Preliminarily, the validated measures provided by Lumpkin et al. (2009) were altered by



Bolton and Lane (2012) from ‘my firm’ and ‘managers of my firm’ to ‘I’ and the ‘business opportunities’ to ‘opportunities’ and so on. Any question on ‘business goals’ were turned into ‘project goals’ or ‘team goals’ and the term, ‘business objectives’ were changed to ‘project achievement objectives’.

To test the reliability, this instrument was subjected to pilot testing. The pilot testing was conducted among 30 students from each universities in Indonesia. The pilot study provided a reliable statistical result in which the result of the Cronbach’s alpha ranged from 0.712 to 0.896, fulfilling the eligibility to consider the factors of individual entrepreneurial orientation. The study further revealed that the presence of the three components with eigenvalues exceeding 1, explaining cumulatively 0.637 of the variance. Hence, this instrument could be considered for the data collection and analysis to explain the students’ entrepreneurial orientation. The 10 items of entrepreneurial orientation are displayed in Table 3.2 below:

**Table 3.2**  
*Entrepreneurial Orientation Construct*

<b>Coding</b>	<b>Items</b>
RT1	I like to take bold action by venturing into the unknown
RT2	I am willing to invest a lot of time and/or money on something that might yield a high return.
RT3	I tend to act “boldly” in situations where risk is involved.
INOV1	I often like to try new and unusual activities that are not typical but not necessarily risky.
INOV2	In general, I prefer a strong emphasis on projects in unique, one-of-a-kind approach rather than revisiting tried and true approaches used before.
INOV3	I prefer to try my own unique way when learning new things rather than doing it like everyone else does.
PRO1	I favor experimentation and original approaches to problem-solving rather than using methods others generally use for solving their problems.
PRO2	I usually act in anticipation of future problems, needs or changes.
PRO3	I tend to plan ahead on projects.
PRO4	I prefer to “step-up” and get things going on projects rather than sit and wait for someone else to do it.

### 3.5.2 Social Support

In order to measure the variable of social support, this study adopted the scale from Sahban, Kumar and Ramalu (2015). The items related to the source of social support, i.e., friends support and family support were used in this study.

Social support was measured using a 10-point Likert scale (1=strongly disagree to 10=strongly agree). Cronbach's coefficient alpha, a measure of internal reliability, was obtained for the scale as a whole as well as for each subscale. For the family and friends subclasses, the values ranged from 0.751 and 0.854, respectively. The reliability of the total scale was 0.882. These values indicated good internal consistency for the scale as a whole and for the two subscales.

To test the reliability, this instrument was subjected to pilot testing. The pilot testing was conducted among 30 students from five different universities in Indonesia. The pilot study provided a reliable statistic indicating the Cronbach's alpha ranged from 0.802 to 0.843, fulfilling eligibility to consider the factors of social support system. The study further revealed the presence of two components with eigenvalues exceeding 1, explaining cumulatively 0.642 of the variance. Hence, this instrument could be considered for the data collection and analysis to explain the students' social support. The 25 items of social support are presented in Table 3.3 below:

**Table 3.3**  
*Social Support Construct*

<b>Coding</b>	<b>Items</b>
FS1	Family provides useful information relating to business opportunities.
FS2	My family usually updates information related to changing business scenario.
FS3	I have clear advice from my family members on how to start-up and operate a new business.
FS4	Members of my family always support me with right suggestions on how to do business.

- FS5 My family always motivates me to become an entrepreneur.
- FS6 In making business plan, my family is always willing to share responsibilities.
- FS7 I can rely on my family for emotional support to start-up a business.
- FS8 My family always gives moral support to start-up a new business.
- FS9 My family members usually induce courage and confidence in me to start-up a new business.
- FS10 My family members are willing to provide financial support in case I start a new business.
- FS11 I will consult with my family in case I meet any business difficulties in future.
- FS12 I can trust my family members in providing solutions when I share my business problems.
- FS13 My family has good network with business people who can support in starting my business.
- FS14 My friends will provide good recommendations in terms of determining space/location if I start-up my own business.
- FS15 My friends and I have made an arrangement regarding the business I will be engaged with.
- PS1 My friends always support and motivate me to start my business.
- PS2 My friends give me useful information relating to the business I will run.
- PS3 My friends will help me to make decisions related to the business I will be engaged with.
- PS4 My friends are willing to share responsibilities relating to the business I will run.
- PS5 I trust my friends in getting right advice to become an entrepreneur.
- PS6 My friends induce self-confidence in me to start a new business.
- PS7 My friends give me useful advice when I share my business plan.
- PS8 My friends help me to have a better networking with several stakeholders in the business.
- PS9 My friends always give me recommendations in term of determining the right location to start a business.
- PS10 My friends are always willing to support me in coordinating my business activities.
- 

### 3.5.3 Entrepreneurial Self-Efficacy

In previous research, self-efficacy has frequently been measured through specific self-efficacy (Chen et al., 1998; Liñán & Chen, 2006; Noble et al., 1999; Zhao et al., 2005).

All the questions on entrepreneurial self-efficacy were adopted without modification from the questionnaire developed by Noble, Jung and Ehrlich (1999) and used by Wilson, Kickul and Marlino (2007); Pihie (2011); as well as Setiawan (2014). The Cronbach's alpha value

of 0.953 indicates that the questionnaire is reliable to measure the construct of entrepreneurial self-efficacy.

Entrepreneurial self-efficacy was measured through a 10-point Likert-type scale with 23 items (1=strongly disagree to 10=strongly agree) with six dimensions: developing new product or market opportunities; building an innovative environment; initiating investor relationships; defining core purpose; coping with unexpected challenges; and developing critical human resources.

To test the reliability, this instrument was subjected to pilot testing. The pilot testing was conducted among 30 students from five different universities in Indonesia. The pilot study provided a reliable statistic indicating the Cronbach's alpha ranged from 0.801 to 0.823, fulfilling the eligibility to consider the factors of entrepreneurial self-efficacy. The study further revealed the presence of six components with eigenvalues exceeding 1, explaining cumulatively 0.619 of the variance. Hence, this instrument could be considered for the data collection and analysis to explain the students' self-efficacy to deal with entrepreneurship. The 23 items of entrepreneurial self-efficacy are presented in Table 3.4 below:

**Table 3.4**  
*Entrepreneurial Self-efficacy Construct*

<b>Coding</b>	<b>Items</b>
DevNProd1	I can see new market opportunities for new products and services.
DevNProd2	I can discover new ways to improve existing products.
DevNProd3	I can identify new areas for potential growth.
DevNProd4	I can design products that solve current problems.
DevNProd5	I can create products that fulfill customers' unmet needs.
DevNProd6	I can bring product concepts to market in a timely manner.
DevNProd7	I can determine what the business will look like.
BIEnv1	I can create a working environment that lets people be more their own boss.
BIEnv2	I can develop a working environment that encourages people to try out something new.
BIEnv3	I can encourage people to take initiatives and responsibilities for their ideas and decisions, regardless of outcome.

BIEnv4	I can form partner or alliance relationship with others.
InInvRel1	I can develop and maintain favorable relationships with potential investors.
InInvRel2	I can develop relationships with key people who are connected to capital sources.
InInvREL3	I can identify potential sources of funding for investment.
DefCorP1	I can articulate vision and values of the organization
DefCorP2	I can inspire others to embrace vision and values of the company.
DefCorP3	I can formulate a set of actions in pursuit of opportunities.
CopUnxChal1	I can work productively under continuous stress, pressure and conflict.
CopUnxChal2	I can tolerate unexpected changes in business conditions
CopUnxChal3	I can persist in the face of adversity.
DevCriHR1	I can recruit and train key employees.
DevCriHR2	I can develop contingency plans to backfill key technical staff
DevCriHR3	I can identify and build management teams.

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### 3.5.4 Entrepreneurial Internship Program

Entrepreneurial internship program instrument was adapted from Kusluvan and Kusluvan (2000); and Waryszak (1999). This instrument has been used by Keat et al. (2011); and Zegeye (2013). The single dimension of the entrepreneurial internship program was measured by 10 items.

In order to measure the variable of the entrepreneurial internship program, this study used a five-point Likert scale (1=strongly disagree to 5=strongly agree). The overall Cronbach's alpha for entrepreneurial internship program met Nunnally and Bernstein's (1994) standard for scale development studies of 0.7.

To test the reliability, this instrument was subjected to pilot testing. The pilot testing was conducted among 30 students from five different universities in Indonesia. The pilot study provided a reliable statistic indicating the Cronbach's alpha of 0.848. Hence, this instrument could be considered for the data collection and analysis to explain the

effectiveness of entrepreneurial internship program among business students in Indonesia.

The 10 items of entrepreneurial internship program are displayed in Table 3.5 below:

**Table 3.5**  
*Entrepreneurial Internship Program*

<b>Coding</b>	<b>Items</b>
EIP1	Feel confident about tackling unfamiliar work-based problems.
EIP2	Good opportunity for self-development
EIP3	Able to develop my technical skills.
EIP4	Encouraging innovative ideas
EIP5	Interesting and challenging work
EIP6	Help to develop my problem-solving skills.
EIP7	Had lots of real business experiences that are not found in the classroom.
EIP8	Was used as expensive labor.
EIP9	Develop my communication skills.
EIP10	This activity broadens my practical business experience

### **3.5.5 Business Incubation Centers**

No study has empirically measured the concept of a business incubator. Previous researchers only undertook an exploratory study to categorize the variable of business incubation program. Hon Peter Reith (2000) suggested that business incubator generally provides a 7s service that includes Space, Sharedness, Service, Support, Skills development, Seed capital and Synergy. Agustina (2011) noted that in implementing the incubation program, there are at least 5s that must be provides: Service, Support, Skill, Seed Capital, and Synergy.

In this sense, in order to measure business incubation program, this study adopted a questionnaire developed by Sahban, Kumar and Liba (2014). However, this particular instrument was developed in the context of the education sector. The original instrument shows the Cronbach's alpha ranged from 0.795 to 0.892.

**Table 3.6**

*Items for the variables, theoretical range and Cronbach's Alpha - Business Incubation Program Effectiveness Instrument*

No	Factors	No of Items	Theoretical Range	Standardized Alpha
1	Space	8	8-80	0.795
2	Sharedness	9	9-90	0.822
3	Service	9	9-90	0.830
4	Support	9	9-90	0.892
5	Skills Development	7	7-70	0.812
6	Seed Capital	8	8-80	0.868
7	Synergy	5	5-50	0.836

The reliability test was conducted among the students of the university and the reliability statistics obtained are as follows:

**Table 3.7**

*Business Incubation Program among Five Groups: Factor Analysis Procedure (N=30)*

No	Constructs	Cronbach's Alpha % point Likert Scale	Indonesian University (30)	Brawijaya University (30)	Lambung Mangkurat University (30)	Multimedia Nusantara University (30)	UNM University (30)
1	Space	.795	.822	.708	.810	.724	.804
2	Sharedness	.822	.802	.798	.846	.855	.788
3	Service	.830	.785	.835	.804	.832	.792
4	Support	.892	.833	.896	.891	.811	.843
5	Skills development	.812	.801	.795	.844	.809	.866
6	Seed capital	.868	.879	.809	.890	.798	.833

7	Synergy	.836	.890	.796	.835	.896	.801
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To test the reliability, this instrument was subjected to pilot testing. The pilot testing was conducted among 30 students in five universities in Indonesia. The pilot study provided a reliable statistic indicating the Cronbach's alpha of 0.795, 0.822, 0.830, 0.892, 0.812, 0.868 and 0.836, respectively, fulfilling the eligibility to consider the seven factors of business incubation program. The study further revealed that the eigenvalues exceeded 1, explaining cumulatively 0.683 of the variance. Hence, this instrument could be considered for the data collection and analysis to explain the students' intention to deal with entrepreneurship. The 55 items of business incubation program are shown in Table 3.8 below:

**Table 3.8**  
*Business Incubation Program Construct*

<b>Coding</b>	<b>Items</b>
Space1	I believe that the space offered by the incubation centers is safe and free from any hazard.
Space2	The space offered by incubation centers provides basic equipment for the new start-ups in running a business.
Space3	This incubation center provides options for maximum use of resources.
Space4	This incubation center has a huge laboratory to support business activities of the students.
Space5	I believe that the working space is quite comfortable and huge.
Space6	I believe that the space offered by the incubation centers has a variety of sizes based on students' business requirements.
Space7	I believe that the place offered by the business incubation centers is quite close to the target market.
Space8	I believe that the space offered by the incubation centers is environmental friendly.
Shared1	I believe that this program has a central receptionist service that can be used for all students.
Shared2	I believe that this incubation center has a conference room that can be used for multi-purposes.
Shared3	The telephone and faxing in this incubation center can be used together.
Shared4	I believe that this incubation center provides security services for students to start-up new business.
Shared5	I believe that the incubation center provides equipment and utilities for all students.
Shared6	I believe that the incubation centers provide laboratories that can be utilized together.



- Shared7 I believe that the internet connection in this incubation center can be used together.
- Shared8 I believe that renting transportation is available for all students.
- Shared9 I believe that rooms, building and equipment in this incubation center are well maintained.
- Serv1 This center provides financial assistance for the selected students who have made a good business plan.
- Serv2 This incubation center provides education and training as well as research and development to enhance my potential in business.
- Serv3 The incubation center on this campus provides assistance to process various company legal services.
- Serv4 This incubation center provides assistance to do market opportunity analysis.
- Serv5 This incubation center provides administrative services, such as secretarial, word processing, desktop publishing, telephone answering, photocopy, fax system, etc.
- Serv6 This incubation center is very informative regarding current business issues that need to be avoided.
- Serv7 Incubation center provides technical guidance during the start-up
- Serv8 Incubation center provides guidance on how to seek potential investors or capitalists.
- Serv9 This incubation center provides effective mentorship for early stage businesses.
- Supp1 This incubation center assists students in identifying business advisers and professionals who suit my business expertise.
- Supp2 This incubation center provides access to the updated technology to orient my work to become an entrepreneur.
- Supp3 This incubation center provides education and training for the students regularly.
- Supp4 I believe that this incubation center has created social contact with banking institutions and government institutions to obtain capital and technology.
- Supp5 I believe that the government regulations really support business incubator activities.
- Supp6 I believe that the incubation management always gives emotional support I need.
- Supp7 This incubation program provides useful information regarding the business I will run.
- Supp8 I believe that this incubation center has many connections to business industries that can support business activities.
- Supp9 I believe many students have made a number of products from research findings in this incubation center.
- SkillDev1 Incubation center helps students with strategic planning, business plan development, financial planning, management team development, etc.
- SkillDev2 Education and training provided by the incubation center can build my character/personality.
- SkillDev3 This incubation center provides a number of techniques for students to address difficult situations.
- SkillDev4 I believe this incubation center provides training to make the students be more creative.
- SkillDev5 This incubation center holds workshops / training with the theme "how to

	develop communication and presentation skills for the students.
SkillDev6	This incubation center regularly holds training on "how to maintain a relationship with stakeholders.
SkillDev7	The incubation center provides training to the students who want to improve their negotiation ability.
SeedCap1	Before meeting the venture capitalists, the incubation staff assist the students in effective preparation.
SeedCap2	This incubation center helps students to raise bank finance, grants, venture capital, etc.
SeedCap3	I believe this incubation center provides initial funding for the start-ups.
SeedCap4	This incubation center has capital access to banks or other financial institutions.
SeedCap5	This incubation center provides a long-term soft credit for the students.
SeedCap6	This incubation center implements profit sharing system between incubation management and the students.
SeedCap7	I believe that this incubation center maintains good relationship with all financial institutions to support students.
SeedCap8	The incubation staff assist students to allocate the funds according to the business needs.
Syn1	I believe there is a coordination among students and incubation center to build a networking with higher education institutions, research institutions, entrepreneurs, professionals and international community.
Syn2	I believe the students here are also sharing their business experience with other entrepreneurs or freelancers.
Syn3	I believe this incubation center has many business contacts from the stakeholders to support business activities.
Syn4	In this incubation center, there is a group of students who has commitment to establish new business together.
Syn5	I believe this incubation center works together with local government and industries to accelerate economic activities.

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### 3.5.6 Entrepreneurial Intention

All the entrepreneurial intention questions were adopted from the study conducted by Liñán and Chen (2006, 2009). The questionnaire has been used by Liñán (2008); Guerrero et al. (2009); Chen et al. (1998); and Zhao et al. (2005).

The construct of entrepreneurial intention was measured using a five-point Likert scale (1=strongly disagree to 5=strongly agree). The use of five-point Likert scale was also found in previous entrepreneurial intent studies done by Gupta, Turban, Wasti and Sikdar (2009); Schwarz, Wdowiak, Almer-Jarz and Breitenecker (2009); and Malebana and Swanepoel

(2011). The Cronbach's alpha for the entrepreneurial intent scale was 0.903 which met Nunnally and Bernstein's (1994) standard for scale development studies of 0.7.

To test the reliability, this instrument was subjected to pilot testing. The pilot test was conducted among 30 students from five different universities in Indonesia. The pilot test provided a reliable statistic, indicating the Cronbach's alpha of 0.925, fulfilling the eligibility to consider the factors of entrepreneurial intention. The study further revealed that the eigenvalues exceeded 1, explaining cumulatively 0.640 of the variance. Hence, this instrument could be considered for the data collection and analysis to explain the students' intention to deal with entrepreneurship. The nine items of entrepreneurial intention are described in Table 3.9 below:

**Table 3.9**  
*Entrepreneurial Intention Construct*

<b>Coding</b>	<b>Items</b>
EI1	I am ready to do anything to be an entrepreneur.
EI2	My professional goal is to be an entrepreneur.
EI3	I will make every effort to start and run my own business.
EI4	I am determined to create a business venture in the future.
EI5	I do not have doubts about ever starting my own business in the future.
EI6	I have very seriously thought of starting a business in the future.
EI7	I have a strong intention to start a business in the future.
EI8	My qualification has contributed positively towards my interest in starting a business
EI9	I had a strong intention to start my own business before I started with my qualification.

### **3.6 Pre-test**

It is important to pre-test the instrument to ensure that the questions are understood by respondents and that there are no problems with the wording or measurement (Sekaran & Bougie, 2010). The initial questionnaire was given to 10 business students and 10 entrepreneurship lecturers to review, in order to ensure that the concepts used are clear and

relevant for predicting the entrepreneurial intention of business students as well as for supporting face validity.

### **3.7 Pilot Study**

A pilot study is planned as part of the scale development methodology for the following reasons: (1) to ensure a comprehensive analysis for a range of perspectives; (2) to detect any possible problems associated with the format, wording and measurement; and (3) to ensure that the respondents comprehend the instructions, questions and scales. As indicated above, a pilot study was conducted with a sample size of 30 respondents in five universities (30 respondents each university) in Indonesia. This could indicate if each item has good internal consistency to measure the constructs and has met the requirement of reliability after analysis of pilot data. The data was analyzed using SPSS to obtain the reliability results and factor analysis (convergent validity).

#### **3.7.1 Factor Analysis for Pilot Study**

This study examines five exogenous latent variables and one endogenous latent variable with eigenvalues above 1. An exploratory factor analysis using principal component extraction method and Promax rotation with Kaiser Normalization was used to test for sample adequacy in running this factor analysis. The result revealed that the Kaiser Meyer Olkin (KMO) or Measure of Sampling Adequacy (MSA) of each variable is more than the threshold value of 0.5 and Bartlett's Test of Sphericity stands at a significant level of 0.000 ( $\text{sig} < 0.05$ ), thus making the following factor analysis permissible (Hair et al., 2010). The details of the factor analysis of each variable are described below:

Factor one which represents entrepreneurial orientation (EO) contains ten (10) items and the factor loading of each item exceeds the threshold value of 0.50. Therefore, all the items are

selected and it cumulatively explains 80.276% of the variance. In other words, all items are consistent with this construct. The factor analysis of entrepreneurial orientation construct is presented in Table 3.10 below:

**Table 3.10**  
*Factor Analysis of Entrepreneurial Orientation (EO)*

CODE	FACTORS		
	INOV	RT	PRO
INOV2	.923		
INOV1	.918		
INOV3	.887		
INOV4	.856		
RT1		.912	
RT3		.898	
RT2		.872	
PRO1			.904
PRO2			.878
PRO3			
Eigenvalue	3.062	2.201	1.624
VE %	31.702	18.811	13.203
Reliability	0.896	0.712	0.814
KMO	0.702		
Overall VE%	63.716		
Chi-square	20.625		
Significance	0.001		
RT	: Risk Taking		
INOV	: Innovativeness		
PRO	: Proactiveness		

Factor two represents social support (SS). The 25 items were retained since every item had factor loading more than 0.5 and consistently predicted the construct. In addition, these items explained 59.991% of variance cumulatively. Therefore, these items were not dropped. The factor analysis of social support construct is presented in Table 3.11 below:

**Table 3.11**  
*Factor Analysis of Social Support*

CODE	FACTORS	
	FS	PS
FS10	.887	
FS5	.832	
FS6	.826	
FS14	.819	
FS2	.806	
FS3	.794	
FS12	.793	
FS8	.763	
FS11	.761	
FS7	.708	
FS9	.692	
FS4	.685	
FS13	.672	
FS15	.647	
FS1	.628	
PS6		.837
PS9		.835
PS3		.832
PS7		.806
PS4		.802
PS1		.793
PS8		.787
PS10		.776
PS2		.752
PS5		.736
Eigenvalue	8.356	4.364
VE %	39.103	25.158
Reliability	0.802	0.843
KMO	0.937	
Overall VE%	64.241	
Chi-square	547.068	
Significance	0.000	
FS	: Family Support	
PS	: Peers Support	

Factor three represents entrepreneurial self-efficacy (ESE) consisting of twenty three (23) items and the factor loading of these items exceeded the threshold value of 0.50. In

addition, social support indicated a 66.542% variance explained cumulatively. The factor analysis of the construct of entrepreneurial self-efficacy is presented in Table 3.12 below:

**Table 3.12**  
*Factor Analysis of Entrepreneurial Self-Efficacy*

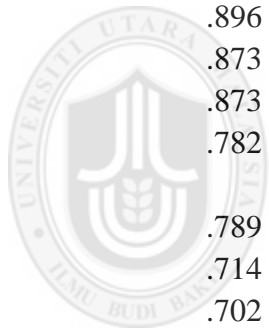
CODE	FACTORS					
	DevNProd	BIE	CopUnxChal	InInvRel	DefCorP	DevCriHR
DevNProd2	.907					
DevNProd4	.834					
DevNProd6	.799					
DevNProd3	.768					
DevNProd5	.712					
DevNProd1	.707					
DevNProd7	.688					
BIEnv2		.902				
BIEnv1		.887				
BIEnv3		.824				
BIEnv4		.784				
CopUnxChal2			.761			
CopUnxChal1			.727			
CopUnxChal3			.714			
InInvRel2				.924		
InInvRel1				.807		
InInvREL3				.768		
DefCorP2					.843	
DefCorP1					.725	
DefCorP3					.704	
DevCriHR3						.861
DevCriHR1						.668
DevCriHR2						
Eigenvalue	5.165	12.232	11.153	10.15	6.23	4.976
VE %	19.764	11.623	9.867	9.821	7.875	3.992
Reliability	0.814	0.823	0.801	0.805	0.816	0.721
KMO	0.745					
Overall VE%	61.942					
Chi-square	31.345					
Significance	0.000					
DevNProd	: Developing New Product					
BIEnv	: Building Innovative Environment					
InInvRel	: Initiating Investor Relationship					

DefCorP : Defining Core Purpose  
 CopUnxChal : Coping with Unexpected Challenge  
 DevCriHR : Developing Critical Human Resources

The fourth factor, entrepreneurial internship program (EIP) retained ten (10) items and the variance explained is 68.353% cumulatively. Similarly, no items were dropped under this construct due to high factor loading ( $> 0.5$ ). The factor analysis of Entrepreneurial Internship Program construct is presented in Table 3.13 below:

**Table 3.13**  
*Factor Analysis of Entrepreneurial Internship Program Construct*

CODE	FACTOR
	EIP
EIP2	.904
EIP7	.897
EIP3	.896
EIP4	.873
EIP9	.873
EIP5	.782
EIP8	
EIP6	.789
EIP1	.714
EIP10	.702
Eigenvalue	5.324
VE %	68.353
Reliability	0.848
KMO	0.912
Overall VE%	68.353
Chi-square	317.345
Significance	0.000



EIP : Entrepreneurial Internship Program

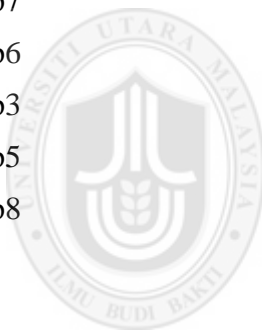
The fifth factor is business incubation program (BIP) consisting of fifty five (55) items that were retained since the factor loading was above 0.50 and the overall variance explained 77.31% of this construct. The factor analysis of Business Incubation Program construct is presented in Table 3.14 below:



**Table 3.14**  
*Factor Analysis of Business Incubation Program*

CODE	FACTORS						
	Shared	Serv	Support	SkillDev	Space	SeedCap	Syn
Shared6	.918						
Shared7	.904						
Shared3	.877						
Shared5	.868						
Shared4	.851						
Shared9	.818						
Shared8	.814						
Shared1	.807						
Shared2	.786						
Serv7		.922					
Serv6		.918					
Serv2		.907					
Serv5		.896					
Serv4		.893					
Serv9		.887					
Serv3		.882					
Serv8		.878					
Serv1		.857					
Supp4			.937				
Supp7			.937				
Supp2			.908				
Supp6			.889				
Supp1			.876				
Supp8			.893				
Supp9			.886				
Supp3			.849				
Supp5			.817				
SkillDev7				.943			
SkillDev3				.921			
SkillDev4				.918			
SkillDev2				.904			

SkillDev6								.904
SkillDev1								.895
SkillDev5								.887
Space2								.947
Space3								.946
Space7								.932
Space4								.879
Space5								.875
Space1								.868
Space6								.859
Space8								.815
SeedCap1								.932
SeedCap4								.926
SeedCap2								.974
SeedCap7								.887
SeedCap6								.871
SeedCap3								.779
SeedCap5								.843
SeedCap8								.816
Syn5								.965
Syn2								.932
Syn4								.878
Syn1								.836
Syn3								.798



**UUM**  
Universiti Utara Malaysia

Eigenvalue	10.231	8.976	5.325	4.687	4.343	2.846	1.642
VE %	20.457	12.457	12.142	9.855	6.124	6.125	1.147
Reliability	0.795	0.822	0.830	0.892	0.812	0.868	0.836
KMO	0.835						
Overall VE%	68.307						
Chi-square	36.969						
Significance	0.000						

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Supp : Support  
Shared : Sharedness  
Serv : Services  
SkillDev : Skills Development

Space : Space  
 SeedCap : Seed Capital  
 Syn : Synergy

Table 3.15 shows the result of the KMO or MSA of dependent variable of 0.879 (>0.5) is above the minimum requirement and Bartlett's Test of Sphericity stands at significant level of 0.000 (sig < 0.05). As described in Table 3.15, the pilot study's result shows one endogenous latent variable with Eigenvalues above 1. The factor EI had nine items at the initial stage. After analyzing the construct using factor analysis, it was found that its factor loading was above 0.50 and the items cumulatively explained 68.30% of the variance. Therefore, all the items consistently measure the construct of EI. The factor analysis of Entrepreneurial Intention construct is presented in Table 3.15 below:

**Table 3.15**  
*Factor Analysis of Entrepreneurial Intention*

CODE	FACTOR EI
EI3	.936
EI4	.927
EI5	.918
EI1	.904
EI7	.886
EI8	.778
EI9	.761
EI6	.753
EI2	.748
Eigenvalue	4.547
VE %	65.243
Reliability	0.925
KMO	0.879
Overall VE%	65.243
Chi-square	207.486
Significance	0.000

EI : Entrepreneurial Intention

To conclude, the exploratory factor analysis (EFA) indicated six factors (five exogenous latent variables and one endogenous latent variable) are the likely constructs of each measure. The internal consistency of each construct is somewhat substantiated.

### 3.7.2 Reliability test of the Pilot Study

Cronbach's alpha is the measure of reliability that ranges from 0 to 1, with values of 0.60 to 0.70 deemed the lower limit of acceptability (Hair et al., 2010). All measures of the pilot study (132 items) achieved a Cronbach's alpha level beyond the recommended level of 0.60, thus passing the minimum requirement. As presented in Table 3.16, reliability analysis of the pilot study measures its stability over various conditions.

**Table 3.16**  
*Reliability Test for the Pilot Study*

Name of Variable	Item	Cronbach's Alpha
Entrepreneurial Orientation	10	0.712 – 0.896
Social Support	25	0.802 – 0.843
Entrepreneurial Self-Efficacy	23	0.801 – 0.823
Entrepreneurial Internship Program	10	0.733 – 0.867
Business Incubation Program	55	0.795 – 0.892
Entrepreneurial Intention	9	0.784
Total	132	Items

Thus, this current study utilizes six factors comprising 132 measurement items, which are adopted from the literature and also self-developed. It used standard psychometric scale development procedures which achieved a Cronbach's alpha level of 0.60. Furthermore, the pilot study was conducted with 150 business students at five different universities. It ensured that the EFA of all six factors were the likely constructs of each measure. All the

items achieved Cronbach's alpha level of 0.60. Therefore, all the items are proven to consistently measure the constructs.

### **3.8 Population and Sampling**

#### **3.8.1 Population Frame**

The population of the study can be defined as the generality of a group of people, things or events that are of interest to the researcher which he/she wishes to investigate (Sekaran & Bougie, 2010). Neuman, (2005) defined population as the aggregate or totality of all the objects, subjects or members that conform to a set of specifications.

In essence, higher education institutions in Indonesia are classified into five segments that include academy (992 units), politech (201 units), college (2,179 units), institute (98 units) and university (493 units) (PDDIKTI, 2014). Since this study only focuses on the public higher educations that own business faculty and business incubation program, it was observed that as many as 31 higher educations met the criteria which cover 40,162 students who are currently studying in the business faculty. However, only 10,824 students were participating in the internship and business incubation program (Forlap Dikti, 2014)

Hence, the population frame in this research covered 10,824 students from 31 universities that own business faculty, internship as well as a business incubation program in the academic setting. This population frame would provide a proper representation of students who can have a say on entrepreneurial orientation, social support, entrepreneurial self-efficacy, entrepreneurial internship program, business incubation program and entrepreneurial intention.

### 3.8.2 Sample/Sampling Technique

According to Trochim (2007) and Thompson (2012), in order to obtain an unbiased sample, it is necessary to ensure the evaluation of the appropriateness of the sample. Sampling is a method that allows researchers to infer information about a population, without having to investigate every individual. Reducing the number of individuals in a study reduces the cost and workload, and may make it easier to obtain high quality information, but this has to be balanced against having a large enough sample size with sufficient power to detect a real association (Barratt, 2009).

Several sampling techniques exist in the research area such as simple random sampling, stratified sampling, cluster sampling, convenient sampling, purposive sampling, etc. This study used convenience sampling to determine the sample from the entire population. In essence, the convenience sampling relies on data collection from population members who are conveniently available to participate in this study (Boxill, Chamber, & Wint, 1997; Farrokhi & Mahmoudi-Hamidabad, 2012).

In all forms of research, it would be ideal to test the entire population, but in most cases, the population is too large that is impossible to include every individual. This is the reason why most researchers rely on convenience sampling (Boxill et al., 1997; Farrokhi & Mahmoudi-Hamidabad, 2012). Many researchers prefer this sampling technique because it is fast, inexpensive, easy and respondents are ready available (Sedgwick, 2013). However, this technique is a type of non-probability sampling, which is different from the probability sampling technique. In this type of sampling, the population does not have the same opportunity to be chosen. While with probability sampling, the population has an equal chance to be chosen (Thompson, 2012).

In order to arrive at the sample frame, of the 31 public universities, only 19 universities were conveniently selected that covered 8,141 students who participated in the internship and business incubation program. Based on the Krejcie and Morgan table (1970), the population of 8,141 requires a minimum sample of 367. Hence, this study conveniently distributed the questionnaires to at least 367 students in the selected universities.

### **3.8.3 Sample Size Requirement for SEM**

The minimum sample size requirements may vary depending on statistical techniques used. The recommended sample size for SEM analysis is 100-400 sample size or 10 times the number of observed variables (Hair et al., 2010). This means a minimum of 380 (38x10) sample sizes is needed for analysis in SEM.

### **3.9 Unit of Analysis**

The unit of analysis is defined as the level of accumulation of the data gathered during the stage of subsequent data analysis (Sekaran, 2003). Zikmund (as cited in Ramaniya, 2014) described that the unit of analysis can be a particular group of people, an individual or the whole organization.

Business students from several universities in Indonesia are defined as the unit of analysis in this study; in other words, the unit of analysis is the individual. To be more specific, the unit of analysis of this study includes the students who are enrolled in the department of management, economics and accounting in the faculty of economics and business. The students who are in the second and third year were the unit of analysis of this study.

### 3.10 Data Collection Procedures

As mentioned by Polit and Hungler (1999), data is described as information gathered or attained from any inquiries. Zikmund et al. (2012) proposed that there are multiple ways or procedures for the researchers to gather data from the respondents. Some of these procedures include email, self-administered, online, post, etc. This research adopted a self-administered procedure to distribute and retrieve the distributed questionnaires from the respondents. According to Zikmund et al. (Zikmund et al., 2012), the self-administered questionnaire is considered suitable for this kind of study because it has a numerous advantages, such as speed in distribution and response. The questionnaire design was close-ended as the respondents were expected to select from strongly disagree to strongly agree based on the Likert scale format.

In order to distribute the questionnaire to the business students in the selected universities, several procedures had to be followed, such as seeking legal permission from the universities. First, the letter of permission for data collection from Universiti Utara Malaysia was applied and then submitted. Secondly, after getting the approval from the manager of the department of education and training, the number of questionnaires to be distributed to each faculty within the universities was decided. However, the author sometimes did not follow the procedure given by university. The questionnaires were simply distributed at the time the students get out from the course. In order to meet the efficiency of the questionnaire distribution, the author collaborated with the citizens of each region in three different parts of Indonesia. Advanced planning was also done in order to give better understanding about the important points in the questionnaires, so that everything was arranged properly.

The questionnaires were distributed to selected universities after determining the number of the questionnaires. Further, an appointment was made in order to collect the questionnaires



back from all faculties. The data collection plan took around three months in total. The author successfully collected more than 70% of questionnaires to support the statistical validity.

### **3.11 Techniques of Data Analysis**

Prior to executing the fundamental analysis and hypothesis testing, this study employed a series of analysis, such as data screening analysis, missing data and outlier detection, normality testing, factor analysis as well as validity and reliability of each construct.

This study used SPSS version 20 and AMOS version 18 to analyze the data as well as to test the various hypotheses for this study. Some of the analysis utilized were the reliability test and exploratory and confirmatory factor analysis which are used to determine the goodness of measures. This study employed descriptive analysis to initially summarize the data quantitatively.

Apart from the analysis techniques mentioned, multiple regressions were utilized in this study. This analysis technique works beyond the correlation analysis technique in that it is used not only to test the effects of all independent variables on the dependent variable, but also to determine the relationship between the independent and dependent variables under investigation in a study (Pallant, 2001). Before conducting the multiple regressions analysis in this study, the author ensured that the basic conditions, such as linearity (this shows the extent in which the changes caused by the independent variable are linked to the dependent variable), normality (continuous variation in the distribution of error terms), homoscedasticity and multicollinearity are met (Hair et al., 2010).

This checking was immediately preceded by the multicollinearity test and how it influences the finding of this study. Multicollinearity refers to a situation where two or more of the

independent variables are highly correlated (Cooper & Schindler, 2003). Multicollinearity problems cause the ability to define any variable's effect to diminish, owing to their interrelationships (Hair et al., 2010)

### **3.11.1 Structural Equation Modeling (SEM)**

SEM is a multivariate technique combining aspects of factor analysis and multiple regressions that enable the researcher to simultaneously examine a series of interrelated dependent relationships among the measured variable and latent constructs (variables) as well as between several latent constructs (Hair et al., 2010; Kline, 2010). SEM is used as the main analysis method in this study because the hypotheses was tested through this analysis. Since SEM uses variance-covariance analysis method, it is able to analyze causal relationships between and amongst latent constructs.

### **3.11.2 The Justification for Using SEM**

There are several of reasons why this study adopted SEM as a fundamental analysis of this study. First, advanced multivariate analysis methods, such as SEM has seldom been used in past studies. SEM is normally used when the research involves the measurement of multiple latent predictor variables, indirect effects and path analysis. SEM is also used when the research is measuring something that is highly hypothetical and conceptual.

Most social science studies are hypothetical and conceptual in nature (perceptive measures like satisfaction, happiness, tiredness etc.). Regressions are for more metric scales (e.g., price, cost, temperature, etc.). Further, SEM allows more flexible assumptions to be made (Hair et al., 2010; Kline, 2010). SEM uses confirmatory factor analysis to reduce measurement error by having multiple indicators per latent variable, greater recognition being given to the validity and the reliability of observed scores from measurement

instruments (Hair et al., 2010; Loehlin, 2004). It is undeniable that measurement error has become a major issue in many disciplines; however measurement error and statistical analysis of data have been analyzed separately. SEM techniques explicitly take measurement error into account when statistically analyzing data. SEM analysis tests a structural model overall rather than the coefficients individually. Therefore, SEM offers an appropriate and most efficient estimation technique for a series of separate multiple regression equations estimated at the same time (Hair et al., 2010; Kline, 2010; Loehlin, 2004).

### **3.11.3 Types of Analysis**

As explained in the previous section, this study utilizes two statistical tools: SPSS software version 20 and AMOS software version 18. In this section, this study specifically elaborates some of the analysis used in this study.

#### **3.11.3.1 Factor analysis**

This analysis is used to reduce the data size in order to determine which of these measurement items actually measure what they intend to measure. The use of factor analysis gives the researcher the idea of how many items determine and how a variable is structured (Hair et al., 2010). Based on these reasons, both exploratory and confirmatory factor analyses were conducted on all the variables, in order to ascertain the number of items to be used for each variable. In terms of exploratory factor analysis, this study utilized the software of SPSS version 20. Promax rotation is used to explain the acceptability limit of the items. For performing the confirmatory factor analysis (CFA), this study made use of AMOS software version 18 in order to calculate whether the proposed factor solutions fit the data and show whether the model fits the data very well.

The goodness of fit is the decision to see the model fits into the variance-covariance matrix of the data set. The CFA measurement and structural model have a good fit with the data based on assessment criteria, such as GFI, CFI, TLI, PNFI, RMSEA (Bagozzi & Yi, 1988).

### **3.11.3.2 Descriptive Analysis**

According to Johnson and Christensen (as cited in Auwalu, 2014), descriptive analysis is the method of describing, organizing, displaying and explaining the characteristics of the sample in a tabular and graphic form to provide summarized measures. Descriptive analysis helps in providing a summarized form of examining data being collected.

The process of explaining the phenomena of interest is referred to as descriptive analysis.

The descriptive analysis provides and analyzes how many times a particular phenomenon occurs (frequency). It also explains the average score or mean and the standard deviation.

The main reason for using descriptive analysis is to explain the sample characteristics that are used in the study.

### **3.11.3.3 Correlation analysis**

This analysis is used to check the correlation between the variables. The correlation was done in order to determine if entrepreneurial orientation, social support, self-efficacy, entrepreneurial internship program and business incubation program factors (independent variable) have correlation or association with entrepreneurial intention (dependent variable).

Even though it does not explain the variable that causes the relationship, it definitely explains the existence of the association (Pallant, 2005). Cohen (1988) stated that 0.10 to 0.29 correlation is considered weak, 0.30 to 0.49 is seen as a moderate relationship while 0.5 and above is regarded as a strong relationship.

#### **3.11.3.4 Multiple Regressions**

This analysis is used to determine the relationship between the independent variable (IV) and the dependent variable (DV). According to Neuman (2005), multiple regressions analysis is used for two main purposes, which are calculating the R-Squared and the contribution of each variable. R-Squared explains the extent to which IV explains the DV. The use of this analysis technique helps in defining the nature and direction of the IV (entrepreneurial orientation, social support, self-efficacy, entrepreneurial internship program and business incubation program) and DV (entrepreneurial intention) relationship.

Chapter 4 includes the details of analysis and interpretation which was made soon after data from the respondents was obtained. In this chapter, this study incorporates the descriptive statistics, like the percentages of the sample population, the application of measures of central tendency like the mean and standard deviation, correlation, regression and hierarchical regression. Furthermore, based on the table availability, this study interprets the quantitative data into the findings, discussions, implications and finishes up with the conclusion.

#### **3.11.3.5 Chi-Square Difference Test**

All the six constructs were examined to exhibit their discriminant validity. To verify that they are separate factors, the chi-square difference test was employed. In order to achieve this objective, a series of chi-square values were generated for the constraint model by constraining the correlation parameter between all pairs of constructs to one. In other words, the chi-square tests compare the constrained models assuming that the pair of constructs was identical with the unconstrained model in which the correlation among all pairs were not constrained.

Based on these tests, the discriminant validity between any pair of constructs is achieved if the chi-square difference (with one df) between the unconstrained and constrained models is significant. If the difference is significant, it can be concluded that the two constructs are correlated, yet distinct (Anderson & Gerbing, 1988). The discriminant validity is met once the chi-square value has exceeded the threshold value of 10.828.

### **3.12 Chapter Summary**

This chapter provides the research methodology. It presents research design, research framework, hypothesis as well as operational definitions. Subsequently, this chapter discusses the measurement in detail, questionnaire design, pretest, pilot study, sampling and data analysis method used in this study, such as data screening techniques (normality, reliability and validity). The description of the procedures for data collection includes a discussion of population, sample size and the survey procedure. In the data analysis section, AMOS-SEM analysis is the main analysis method used to test the hypothesis, supported by SPSS software version 20.

## CHAPTER 4

### RESEARCH FINDING

#### 4.0 Introduction

This chapter presents the output of the data analysis and testing of hypotheses for this study based on the research design and methodology. The first section shows the overall response rate and data screening. The next section is on the validity of measures which was analyzed using factor analysis and the internal consistency procedure of reliability analysis, correlation estimation, convergent validity analysis and discriminant validity. The next section includes confirmatory factor analysis (CFA) and structural model results using SEM. Finally, this chapter provides the result of hypotheses.

#### 4.1 Data Screening

Several screening tests were conducted to prepare data for analysis. These included missing data, detecting outliers, normality testing and multicollinearity. The results of each screening method are presented next.

##### 4.1.1 Missing Data

The issue of missing data means the existence of bias in the dataset. Some respondents tend not to answer certain questions in a survey-based study due to some common issue. Identifying the missing data is the first step of data screening procedure prior to detecting the outliers (Hair et al., 2010). Overall, 381 survey instruments could be utilized from 412 questionnaires collected. Thirty-one entries (7.5%) were excluded from the analysis because

the participants did not complete most sections of questionnaire resulting in missing data of more 50%.

#### **4.1.2 Detecting Outliers (Mahalanobis Distance)**

Within data screening contexts, outliers have unique characteristics and thus are different distinctly from other observations in the data set (Hair et al., 2010). Outliers can be detected using various techniques, such as univariate, bivariate and multivariate techniques. One of the most commonly used technique for detecting outliers is Mahalanobis distance measure. In this method, Hair et al. (2010) described that one has to measure the distance of every observation from the center of mean across the observation. In the present study, the AMOS software detected the outliers. The finding from this technique describes that Mahalanobis distance for the observations in data set ranges between 32.460 and 99.065. Mahalanobis values which have a p-value below .05 is from 81.823 to 99.065, indicating the existence of outliers.

This study only found five observations of the 381 observations with p-value less than .05 with Mahalanobis distances ranging between 81.823 and 99.065 were considered as outliers. Based on the suggestion by Coakes and Steed (2003), one needs to eliminate the outlier observations if their number is large enough to affect the reliability of the results analyzed from the data set. As a result, this study chose to keep the detected outliers because of their insignificant proportion to total observations. The next sub-section examines the normality and multicollinearity testing of the study variables.

#### **4.1.3 Normality Testing**

Several graphical and statistical methods were used to examine the normality distribution of the observed variables using SPSS. The graphical methods consist of frequency histograms,



normality plots and expected normal probability plots or Q-Q Plots. A visual inspection of these graphical methods did not reveal any violations of normality assumptions. The frequency histograms and the normality plots for each variable are depicted in Appendix D. The plots indicate the dots of data are close to the lines, meaning that the data approximately achieved the normality requirement.

The statistical methods used to assess the normality distributions of the variables are skewness and kurtosis as well as Kolmogorov-Smirnov and Shapiro-Wilk test. Skewness is the measure of the symmetry of a distribution and kurtosis is the measure of the peakedness or flatness of a distribution (Tabachnick & Fidell, 2001). A distribution is assumed to be normal when the skewness and kurtosis measures are as close to zero as possible. However, there are no formal cut-off points on the levels of skewness and kurtosis to indicate when variables are no longer regarded as normal (Curran, West & Finch, 1996). A small departure from zero is therefore a non-issue, as long as the measures are not too large compared to their standard errors. Consequently, the measures should be divided by its standard error in order to obtain the z-value of the skewness and kurtosis. The skewness and kurtosis z-values should be in the range of -1.96 to +1.96 when the variables are normally distributed (Cramer & Howitt, 2004; Cramer, 1998; Doanne & Seward, 2011). The result of the skewness and kurtosis is as in Appendix E. The result reveals that the data are approximately normally distributed for all variables with the z-values within +/- 1.96 (Cramer & Howitt, 2004; Cramer, 1998; Doanne & Seward, 2011).

Another statistical method used to confirm the normality assumption is the Kolmogorov-Smirnov and Shapiro-Wilk test. The results depicted in Tables 4.1 reveals that the p-value in each variable is above 0.05; therefore, the null hypothesis is not rejected. In terms of the Shapiro-Wilk test, it can be assumed that the data distribution of each variable is not

different and thus, is approximately normally distributed (Razali & Wah, 2011; Shapiro & Wilk, 1965).

**Table 4.1**  
*Test of Normality for Independent and Dependent Variables*

	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
EOav	.052	381	.132	.870	381	.082
SSav	.188	381	.198	.907	381	.136
ESEav	.069	381	.176	.782	381	.142
EIPav	.175	381	.114	.882	381	.076
BIPav	.086	381	.018	.761	381	.193
EIav	.131	381	.187	.755	381	.154

a. Lilliefors Significance Correction

Based on the above discussion, a conclusion can be drawn that this study confirm the normality of the error terms. The data testing process need to further process after confirming the normality testing. This is discussed in the next sub-section.

#### 4.1.4 Multicollinearity

Multicollinearity refers to the extent to which the impact of a variable is accounted for by other variables in the dataset. In other words, there is a linear relationship between the independent variables in the regression model (Hair et al., 2010). The existence of multicollinearity raises questions about the interpretation of the effect of different variables. In this study, the tolerance value and Variance Inflation Factor (VIF) were used in order to analyze the existence of multicollinearity among the study variables.

The result of the test in Table 4.3 demonstrates that the tolerance values range between 0.318 and 0.676 for the study variables. Also, the VIF values are within the range of 1.712 and 3.898 for all the variables. In other words, these results show that the tolerance values of all the study variables are more than 0.1, and as a result, the VIF is below the threshold

value of 10 (<10) as suggested by Hair et al. (2010) in measuring multicollinearity. To sum up, the tolerance and VIF values of the study variables are within the suggested threshold values. It can therefore be concluded that there is no existence of multicollinearity in this study.

**Table 4.3**  
*Multicollinearity Based on the Assessment of Tolerance and VIF Values*

<b>Relationship</b>	<b>Tolerance Value</b>	<b>VIF</b>
Risk Taking	0.552	1.822
Innovativeness	0.614	1.712
Proactiveness	0.576	1.761
Family Support	0.488	2.876
Peers Support	0.423	2.329
Developing New Product	0.609	1.647
Building Innovative Environment	0.613	1.682
Initiating Investor Relationship	0.318	3.116
Defining Core Purpose	0.464	2.592
Cope with Unexpected Challenge	0.567	1.121
Developing Critical Human Resources	0.676	4.164
Entrepreneurial Internship Program	0.503	2.897
Space	0.426	2.424
Sharedness	0.579	1.688
Service	0.602	1.435
Support	0.386	3.898
Skill development	0.557	1.779
Seed capital	0.464	2.675
Synergy	0.622	1.766

## **4.2 Distribution of the Respondents**

In order to support the generalization of the outcome, this study classified the distribution of the respondents according to the regions where the selected universities are located. This

study made a collaboration with the citizens who are mainly from the capital of each region and have a good understanding regarding the questionnaires. They visited all the selected universities in each city and met the students, then conveniently distributed the questionnaires. They also clarified some of the questions from the respondents, if any. Since this study requires a minimum sample of 367 students, we distributed proportionally in each selected university. As a result, up to 381 questionnaires were successfully returned and usable. Table 4.4 below shows the distribution of the respondents.

**Table 4.4**  
*Distribution of Respondents*

<b>Universities</b>	<b>Location</b>	<b>Students Under Internship and Incubation Program</b>	<b>Returned and Usable</b>
Universitas Indonesia	Jakarta	427	22
Universitas Hasanuddin	Makassar	279	17
Universitas Lambung Mangkurat	Kalimantan	312	16
Universitas Brawijaya	Malang	567	17
Universitas Udayana	Bandung	380	12
Universitas Airlangga	Surabaya	556	22
Universitas Sebelas Maret	Surakarta	342	18
Universitas Jenderal Soedirman	Purwokerto	410	21
Universitas Gajah Mada	Yogyakarta	378	12
Universitas Diponegoro	Semarang	508	32
Universitas Negeri Yogyakarta	Yogyakarta	204	25
Universitas Padjadjaran	Bandung	352	17
Universitas Lampung	Lampung	374	22
Universitas Sumatera Utara	Medan	468	16

Universitas Negeri Andalas	Padang	402	19
Universitas Jambi	Aceh	638	32
Universitas Riau	Riau	682	22
Universitas Negeri Malang	Malang	450	18
Universitas Mulawarman	Samarinda	412	19
<b>Total 19 higher educations</b>		<b>8.141</b>	<b>381</b>

*Source: Forlap Dikti, 2014*

The Table 4.5 and 4.6 below explain the classification of the respondents based on gender and the study program. As stated earlier, the data were collected from students in each selected university. Table 4.5 shows that 56.9 % of the respondents are male, while 43.1% are female. Table 4.6 shows the distribution of the respondents based on program of study; 63% of the respondents are studying economics, while the rest of the respondents are studying management and accountancy with the proportion of 26% and 21%, respectively.

**Table 4.5**  
*Distribution by Gender*

<b>Gender</b>	<b>Frequency</b>	<b>Percentage</b>
Male	217	56.9
Female	164	43.1
<b>Total</b>	<b>381</b>	<b>100%</b>

**Table 4.6**  
*Distribution by Gender Based on Study Program*

	Management (28%)	Economics (53%)	Accountancy (19%)	Total male / female
Male	86	112	19	217
Female	21	89	54	164
<b>Total</b>	<b>107</b>	<b>201</b>	<b>73</b>	<b>381</b>

### 4.3 Factor Analysis

To ensure the validity and reliability of the results as well as the appropriate subsequent drawn conclusions, this study executed rigorous steps to test the goodness of the measure. The author employed EFA by using SPSS version 20 and Confirmatory Factor Analysis (CFA) by using AMOS version 18 in order to test the goodness of the measures. In order to identify a set of parsimonious, distinct and non-overlapping variables underlying the items of each construct, the EFA technique was utilized. EFA was executed to extract the dimensions of EO, SS, ESE, EIP, BIP and Entrepreneurial Intention. In fact, EFA approach has been used in organizational studies and social sciences, especially when the relationships between the observed variables and latent variables are not ascertained (Sureshchandar, Rajendran, & Anantharaman, 2001).

Before undertaking the EFA of the data, this study checked the factorability of the dimensions. The factorability of the data can be determined through the measure of sampling adequacy, KMO and the Bartlett's test of sphericity. Both measures measure the existence of a correlation between items and test that the correlation matrix among items is significantly different from the identity matrix. Therefore, for the data to have an acceptable level of multicollinearity among items, KMO has to be more than 0.5 (Hair et al., 2010) and the Bartlett's test of sphericity has to be significant (sig. <0.05). In fact, many recommendations have been made on how to identify the acceptable KMO. For example, Field (2000) recommended 0.5 – 0.7 as mediocre, 0.7-0.8 as good and 0.8-0.9 as super. Since the KMO for all the constructs of the study range between 0.708 and 0.948 as illustrated in Table 4.7 through Table 4.12, this study proceeded to conduct factor analysis as reported in the following.

### 4.3.1 Factor Analysis of Entrepreneurial Orientation (EO) Construct

EFA was undertaken to capture the dimensions underlying the EO construct. It was found that KMO is 0.708 which exceeded the recommended limit of 0.5 indicating that the data meet the requirement of EFA. The factor loadings of the items on the omitted factors revealed that three factors are omitted. These three factors can explain 86.093% of the overall variance in the EO construct. Therefore, the underlying factors of EO construct encompassing three dimensions namely: Innovativeness, Proactiveness and Risk Taking, are found to be the same as the measure adopted in the literature (Miller, 1983). It is worth noting that, INOV3 and PRO3 were removed since they had cross-loading and low loading factor below 0.5. Having performed EFA, the factor loadings of EO construct are above 0.63, meaning the factor could explain 40% of its variance (Tabachnick & Fidell, 2007). However, the INOV3 and PRO3 were dropped since they had low factor loading of below 0.5. To show the fixed order of items and factors, Table 4.7 illustrates the results of the factor analysis of the EO construct.

**Table 4.7**  
*Factor Analysis of Entrepreneurial Orientation (EO)*

CODE	FACTORS		
	INOV	RT	PRO
INOV2	.959		
INOV1	.933		
INOV4	.911		
RT1		.958	
RT3		.904	
RT2		.878	
PRO1			.958
PRO2			.900
Eigenvalue	3.168	2.304	1.826
VE %	37.843	26.660	21.591
Reliability	0.952	0.937	0.925
KMO	0.708		

Overall	86.093
VE%	
Chi-square	20.625
Significance	0.001

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RT : Risk Taking  
 INOV : Innovativeness  
 PRO : Proactiveness

### 4.3.2 Factor Analysis of Social Support (SS) Construct

This study captured the dimensions of SS by using Principle Component Analysis (PCA) with Promax rotation. KMO of the construct is 0.948. However, 25 items, initially meant to measure two dimensions of SS, loaded on two factors with eigenvalues > 1 and overall variance explained of about 63.189 %, as illustrated in Table 4.8. It is worth noting that FS7, FS13 and PS8 were eliminated since there were cross-loading and low factor loading.

Table 4.8 depicts the two factors underlying the SS items. According to the factor loadings, the factors identified are labeled as Family Support (FS) and Peer Support (PS).

**Table 4.8**  
*Factor Analysis of SS*

CODE	FACTORS	
	FS	PS
FS10	.843	
FS5	.842	
FS6	.830	
FS14	.817	
FS2	.803	
FS3	.794	
FS12	.793	
FS8	.791	
FS11	.767	
FS9	.756	
FS4	.751	
FS15	.740	
FS1	.730	
PS6		.847
PS9		.830
PS3		.830



PS7		.805
PS4		.798
PS1		.787
PS10		.776
PS2		.752
PS5		.748
Eigenvalue	9.299	5.328
VE %	40.584	22.605
Reliability	0.955	0.939
KMO	0.948	
Overall VE%	63.189	
Chi-square	547.068	
Significance	0.000	

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FS : Family Support  
PS : Peers Support

### 4.3.3 Factor Analysis of Entrepreneurial Self-Efficacy (ESE) Construct

To conduct the factor analysis for entrepreneurial self-efficacy, all the 18 items were examined to identify the factors underlying the construct. As expected, the items in ESE construct loaded in one factor with the KMO of 0.810. Further, the construct can be explained by all the items about 71.169%. However, the items of DevNProd6, BIE1, InInvRel1, DefCorP3 and DevCriHR2 were removed since there were cross-loading and low factor loading. Table 4.9 below illustrates the result of factor analysis of ESE construct:

**Table 4.9**  
*Factor Analysis of ESE*

CODE	FACTORS					
	DevNProd	BIE	CopUnxCha 1	InInvRel	DefCorP	DevCriHR
DevNProd2	.925					
DevNProd4	.898					
DevNProd3	.885					
DevNProd5	.844					
DevNProd1	.833					
DevNProd7	.830					
BIEnv2		.913				
BIEnv3		.875				
BIEnv4		.803				

CopUnxChal 2							.795
CopUnxChal 1							.790
CopUnxChal 3							.730
InInvRel2						.946	
InInvREL3						.820	
DefCorP2							.863
DefCorP1							.768
DevCriHR3							.848
DevCriHR1							.684

Eigenvalue	5.232	2.537	2.262	2.180	1.357	1.011
VE %	27.699	11.961	10.063	9.483	8.119	3.844
Reliability	0.949	0.897	0.814	0.873	0.802	0.739
KMO	0.810					
Overall VE%	71.169					
Chi-square	31.345					
Significance	0.000					

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DevNProd	: Developing New Product
BIEnv	: Building Innovative Environment
InInvRel	: Initiating Investor Relationship
DefCorP	: Defining Core Purpose
CopUnxChal	: Cope With Unexpected Challenges
DevCriHR	: Developing Critical Human Resources

#### 4.3.4 Factor Analysis of Entrepreneurial Internship Program (EIP) Construct

EFA was undertaken to capture the dimensions underlying the EIP construct. It was found that KMO of 0.931 highly exceeded the recommended limit of 0.5 and Bartlett's test was significant showing that all the items meet the requirement of EFA. The factor loadings of the items on the omitted factors revealed that only one factor was omitted. The EIP construct were explained by the factors around 70.070%. Therefore, the underlying factor of EIP construct is the same as the measure adopted by Keat et al. (2011) that had only a single dimension.

To show the order of items and factor labels, Table 4.10 illustrates the results of the factor analysis of the EIP construct. However, EIP8 was removed since it had low factor loading. The result is illustrated below.

**Table 4.10**  
*Factor Analysis of EIP Construct*

CODE	FACTOR
	EIP
EIP2	.908
EIP7	.903
EIP3	.902
EIP4	.886
EIP9	.858
EIP5	.797
EIP6	.793
EIP1	.733
EIP10	.729
Eigenvalue	6.591
VE %	70.070
Reliability	0.953
KMO	0.931
Overall VE%	70.070
Chi-square	317.345
Significance	0.000

EIP : Entrepreneurial Internship Program

#### 4.3.5 Factor Analysis of Business Incubation Program (BIP) Construct

The items representing BIP construct were examined to identify the underlying factors. The KMO was found to be 0.895, far above the recommended limit of 0.5 and the Bartlett's test was significant (Hair et al., 2010). The results also show that there are seven factors underlying the items of the BIP construct. According to the factor loadings, the factors identified are labeled as space, sharedness, service, support, skills development, seed capital and synergy. However, some of the items were removed, such as Space5, Space7, Serv2,

Supp1, Supp2, SkillDev4, SeedCap2, SeedCap3 and Syn2, as there were cross-loading and low factor loading. Table 4.11 shows the result of the factor analysis of BIP construct.

**Table 4.11**  
*Factor Analysis of BIP*

CODE	FACTORS						
	Shared	Serv	Support	SkillDev	Space	SeedCap	Syn
Shared6	.936						
Shared7	.933						
Shared3	.892						
Shared5	.884						
Shared4	.852						
Shared9	.822						
Shared8	.815						
Shared1	.803						
Shared2	.754						
Serv7		.946					
Serv6		.942					
Serv5		.913					
Serv4		.893					
Serv9		.892					
Serv3		.892					
Serv8		.881					
Serv1		.857					
Supp4			.941				
Supp7			.937				
Supp2			.912				
Supp6			.899				
Supp8			.893				
Supp9			.875				
Supp5			.825				
SkillDev7				.954			
SkillDev3				.953			
SkillDev2				.952			
SkillDev6				.938			

SkillDev1								.935
SkillDev5								.907
Space2								.953
Space3								.935
Space4								.91
Space1								.879
Space6								.859
Space8								.823
SeedCap1								.951
SeedCap4								.926
SeedCap7								.897
SeedCap6								.891
SeedCap5								.843
SeedCap8								.82
Syn5								.955
Syn4								.881
Syn1								.845
Syn3								.802
Eigenvalue	10.567	9.136	5.527	4.973	4.164	2.923	1.436	
VE %	21.409	19.412	12.044	10.483	8.28	6.688	2.911	
Reliability	0.959	0.972	0.966	0.978	0.956	0.958	0.959	
KMO	0.895							
Overall VE%	81.227							
Chi-square	36.969							
Significance	0.000							
Supp	: Support							
Shared	: Sharedness							
Serv	: Services							
SkillDev	: Skill Development							
Space	: Space							
SeedCap	: Seed Capital							
Syn	: Synergy							

### 4.3.6 Factor Analysis of Entrepreneurial Intention (EI) Construct

The items representing EI construct were examined to identify the factors underlying the construct. The KMO was found to be 0.900 which is far above the recommended limit of 0.5 and the Bartlett's test was significant (Hair *et al.*, 2010). The results also revealed that there was only one factor underlying the construct of EI. Table 4.12 below shows that the EI factor has high Cronbach's alpha reliability of 0.944, indicating high internal consistency among its items. However, EI1, EI4 and EI9 were removed since there were cross-loading and low factor loading.

**Table 4.12**  
*Factor Analysis of EI Construct*

CODE	FACTOR
	EI
EI3	0.953
EI5	0.952
EI7	0.949
EI8	0.792
EI6	0.777
EI2	0.762
Eigenvalue	4.828
VE %	75.452
Reliability	0.944
KMO	0.900
Overall VE%	75.452
Chi-square	207.486
Significance	0.000

EI : Entrepreneurial Intention

After employing factor analysis to identify the factors underlying each construct, the next step was to test the construct validity and reliability before undertaking SEM analysis to test the hypotheses of the study.

#### **4.4 Construct Validity and Reliability**

Construct validity refers to the extent to which a combination of measured variables theoretically explains a latent variable they were originally designed to measure (Hair *et al.*, 2010). Steenkamp & Van Trijp (1991) claimed that the criteria for achieving construct validity are unidimensionality, within-method convergent validity, reliability, stability, across method convergent validity and discriminant validity. This study used convergent validity, discriminant validity, nomological validity and criterion or face validity. As discussed in the previous section, content validity was ensured through deep discussions with academics and practitioners at the time of instrument development. Content validity ensures that the items used to measure the construct cover all the conceptual dimensions of that construct (Hair *et al.*, 2010). In the following sections, this study examines and establishes the construct validity and reliability using the results of CFA with AMOS for Windows version 18.0. The results of the construct validity and reliability are also discussed and presented.

##### **4.4.1 Unidimensionality**

Checking the dimensionality is the first step to ensure the appropriateness of the measures of the study. Therefore, it is necessary to ensure that all the items designed to measure one construct are consistent in measuring that construct. In other words, there should be only one factor underlying a set of measured variables. If this is satisfied, then the next step is to assess the reliability of the construct (Dunn, Seakier, & Waller, 1994). Unidimensionality of a set of measured variables can be examined using various procedures, such as Item-total correlation and Cronbach's alpha coefficient (Lin, 2007). It is calculated by the formula:

$$\frac{K}{K-1} \left( 1 - \frac{\sum_{i=1}^K \sigma_{Y_i}^2}{\sigma_X^2} \right)$$

Where K is the number of items,  $\sigma_{Y_i}^2$  is the variance of the item, i is the current usable responses and  $\sigma_X^2$  is the variance of the summated scores of the factors.

To measure the internal consistency of items measuring their respective factors, the coefficient alpha of all factors should be higher than 0.7 (Nunnally, 1978). Moreover, Hair *et al.* (2010) suggested that the minimum acceptable limit for internal consistency is Cronbach's alpha coefficient of 0.6. However, the data in Table 4.14 shows that Cronbach's alpha coefficient for all the factors range between 0.801 and 0.955, providing a substantial evidence of unidimensionality and high internal consistency.

#### 4.4.2 Convergent Validity

Convergent validity is defined, according to Hair *et al.* (2010), as the extent to which the items used to measure a construct share a high proportion of common variance. According to Churchill (1979), it is the extent to which different means of data collection produce the same results. In other words, convergent validity indicates the degree to which multiple items measure the same construct. There are several related methods to check the convergent validity among items of a construct, such as testing factor loading of items on the respective construct, examining the Composite Reliability (CR) and finally, the Average Variance Extracted (AVE) (Hair *et al.*, 2010). It is also demonstrated when standardized factor loading is between 0.50 and above on their associated factors (Fornell & Larcker, 1981).



This study subject to factor analysis procedures to examine the convergent validity of the construct. Table 4.13 and Table 4.14 show the results of the exploratory and confirmatory factor analysis. Various items were deleted due to their low factor loadings on their respective constructs. More specifically, Table 4.13 shows the items deleted throughout the process of developing the fit of the measurement model and through the modification indices. Overall, 23 observed variables were deleted from the data to achieve the desired construct validity and reliability.

**Table 4.13**  
*Items deleted through EFA procedures*

Construct	Numbers of Items Deleted	Item Code
Innovativeness	1	INOV3
Proactiveness	1	PRO3
Family Support	2	FS7, FS13
Peers Support	1	PS8
Developing New Product	1	DevNProd6
Building Innovative Environment	1	BIEnv1
Initiating Investor Relationship	1	InInvRel1
Defining Core Purpose	1	DefCorP3
Developing Critical Human Resources	1	DevCriHR2
Entrepreneurial Internship Program	1	EIP8
Space	2	Space5, Space7
Service	1	Serv2
Support	2	Supp1, Supp3
Skills Development	1	SkillDev4
Seed Capital	2	SeedCap2,SeedCap3
Synergy	1	Syn2
Entrepreneurial Intention	3	EI1, EI4, EI9

In the following, factor loadings, composite reliability and AVE are reported to ensure the convergent validity of the measures.

#### 4.4.2.1 Factor Loadings

Prior to undertaking further statistical procedures to test the validity of the construct, it is imperative to ensure that items load highly on their respective constructs (Ahire, Golhar & Waller, 1996; Anderson & Gerbing, 1988).

The magnitude of the factor loadings of items on their theoretically associated constructs is the main indicator of construct convergent validity (Hair *et al.*, 2010). As recommended by Anderson and Gerbing (1988), all the factor loadings of a construct should be statistically significant. More specifically, standardized loading estimates should be 0.5 or higher and ideally 0.7 or higher (Hair *et al.*, 2010). As presented in Table 4.14, the loading of all the items exceed the recommended level. Thus, the high loading of the items on their respective factors indicate the power of these items in explaining the variance in intended constructs. Besides that, Table 4.14 reports the Cronbach's alpha coefficients for all the factors under study. The Cronbach's alpha coefficients range between 0.807 and 0.955, indicating an acceptable level of internal consistency among the items of each construct (Hair *et al.*, 2010).

**Table 4.14**  
*Reliability and Convergent Validity of the constructs*

Construct	Items in Average	Internal Reliability Cronbach's Alpha	Convergent Validity		
			Loading	Composite Reliability	Average Variance Extracted
Entrepreneurial Orientation	RTav		0.892		
	INOVav		0.719		

	PROav	0.801	0.673	0.908	0.586
Social Support	FSav		0.649		
	PSav	0.889	0.674	0.896	0.812
Entrepreneurial Self-Efficacy	DevNProdav		0.910		
	BIEenAV		0.928		
	InInvRelAV		0.883		
	DefCorpAV		0.915		
	CopUnxChalAV		0.919		
	DevCriHRav	0.902	0.894	0.966	0.825
Entrepreneurial Internship Program	EIPav	0.955	0.821	0.964	0.752
Business Incubator Program	SpaceAV		0.923		
	SharedAV		0.898		
	ServAV		0.879		
	SuppAV		0.917		
	SkillDevAV		0.911		
	SeedCapAV		0.703		
	SynAV	0.918	0.893	0.959	0.770
Entrepreneurial Intention	EIav	0.891	0.798	0.948	0.755

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RT	: Risk Taking
INOV	: Innovativeness
PRO	: Proactiveness
FS	: Family Support
PS	: Peers Support
DevNProd	: Developing New Product
BIE	: Building Innovative Environment
InInvRel	: Initiating Investor Relationship
DefCorp	: Defining Core Purpose
CopUnxChal	: Cope With Unexpected Challenge
DevCriHR	: Developing Critical Human Resources
Serv	: Service
Supp	: Support
Syn	: Synergy
EIP	: Entrepreneurial Internship Program
EI	: Entrepreneurial Intention

Based on Table 4.14 above, the results show high factor loadings, indicating that the convergent validity of the measures is established.

#### 4.4.2.2 Composite Reliability Analysis

The previous relevant statistical literature reveals that despite the importance of Cronbach's alpha in measuring the internal consistency among items, this index has been reported to have many limitations. The first limitation is that it tends to underestimate the validating of the scale (Steenkamp & Van Trijp, 1991). Besides that, it assumes the equal reliabilities of all items but this assumption is rarely true (Bollen, 1989).

To overcome some of the limitations of using Cronbach's alpha, CR is suggested in the SEM literature (Anderson & Gerbing, 1988). CR refers to the extent to which the items consistently represent the same latent construct (Hair *et al.*, 2010). CR can be calculated using the formula, according to Hair *et al.* (2010):

$$CR = \frac{(\sum_{i=1}^n \text{standardized loading})^2}{(\sum_{i=1}^n \text{standardized loading})^2 + (\sum_{i=1}^n \epsilon_i)}$$

Where  $\epsilon_i$  is the error variance of each construct. The standardized loading can be obtained from the AMOS output and the error variance is what remains after subtracting the squared standardized loadings from one. As suggested by many researchers (e.g., Hair *et al.*, 2010; Shook *et al.*, 2004), the acceptable threshold for CR is 0.70. It has been also suggested that CR between 0.60 and 0.70 may be accepted provided that all other conditions of construct validity are satisfied. Since the AMOS output can produce the reliability for all the items through squared multiple correlations, it is suggested, however, that the reliability of each item should be at least 0.50 (Fornell & Larcker, 1981).

The results in Table 4.14 reveal that the CR of all the constructs is higher than the recommended level of 0.70. More specifically, the CR of all the constructs ranges between 0.808 and 0.966, indicating a high level of consistency among the items of each latent construct.

#### 4.4.2.3 The Average Variance Extracted (AVE)

The AVE refers to the average percentage of the variance extracted commonly among the observed variables of a construct. AVE is an indicator of convergent validity (Fornell & Larcker, 1981).

Generally, it is calculated, as suggested by Hair *et al.* (2010), according to the following formula:

$$AVE = \frac{\sum_{i=1}^n \lambda_i^2}{n}$$

Where  $\lambda_i$  is the standardized factor of the item and n is the number of items measuring the respective construct. According to Hair *et al.* (2010), AVE of 0.5 or higher can suggest a good convergence. However, if the AVE is less than 0.5, this indicates on average that the construct explains less variance in the items than that which remains (in error) unexplained.

As can be seen in Table 4.14, the AVE of the constructs of the study ranges between 0.586 and 0.825. Therefore, the AVE of all constructs of the study exceeds the recommended level of 0.5, indicating a good level of convergent validity of the measure.

To sum up, the results in Table 4.14 imply the convergent validity of the measure used in the study. Thus, it can be confidently concluded that the measure used in this study has convergent validity that was established based on the high factor loadings, high CR of constructs and AVE that exceeds the recommended levels suggested in the relevant

multivariate analysis literature. In the following sub-section, discriminant validity is established and justified.

#### **4.4.3 Discriminant Validity**

Discriminant validity is the third aspect of assessing construct validity. It refers to the degree to which a set of items estimate only one construct and how this construct is distinctly estimated. In other words, high discriminant validity indicates that a construct is unique in measuring a phenomenon in such a way that cannot be captured by other constructs (Hair *et al.*, 2010). Moreover, discriminant validity, in addition to ensuring distinctiveness, indicates that there are no cross loading issues related to the measured items. Following the suggestion of Venkatraman (1989), this study examined the discriminant validity by running the CFA on each pair of the constructs of the study. In the following sub-sections, further discussion is provided to establish the discriminant validity of EO, SS, ESE, EIP and BIP factors in the model.

All the six constructs were examined to exhibit their construct discriminant validity, i.e., to verify that there are separate factors, the chi-square differences test was employed. In order to achieve this objective, a series of chi-square values were generated for the constraint model by constraining the correlation parameter between all pairs of constructs to one. In other words, the chi-square tests compared the constrained models assuming that the pair of constructs is identical with the unconstrained model in which the correlation among all pairs are not constrained.

Based on the tests, the discriminant validity between any pair of constructs is achieved if the chi-square difference (with one df) between the unconstrained and constrained models is significant. If the difference is significant, it can be concluded that the two constructs are correlated, yet distinct (Anderson & Gerbing, 1988). The results in Table 4.15 reveal that

the chi-square differences range from 20.831 through 53.430, and all these values are significant since they all exceed  $\chi^2(1) = 10.828$  at the 0.001 level of significance. Thus, discriminant validity among the constructs is supported.

**Table 4.15**  
*Discriminant Validity of the entire model*

Construct Pair	Unconstrained Model $\chi^2(1440) = 2382.996$	
	Constrained Model $\chi^2(1412)$	Chi-Square Difference $\Delta\chi^2$
EO ↔ SS	2403.827	20.831
EO ↔ ESE	2407.900	24.904
EO ↔ EIP	2436.426	53.430
EO ↔ BIP	2417.266	34.270
SS ↔ ESE	2407.999	25.003
SS ↔ EIP	2414.566	31.570

\*\*\*:  $p < 0.001$

Besides assessing the discriminant validity using chi-square difference test, this study also examined the discriminant validity using AVE. The result is shown in Table 4.16 below:

**Table 4.16**  
*Correlation in each construct and Average Variance Extracted (AVE)*

	EO	SS	ESE	EIP	BIP	EI
EO	<b>0.586</b>					
SS	0.523	<b>0.812</b>				
ESE	0.585	0.708	<b>0.825</b>			
EIP	0.242	0.628	0.703	<b>0.752</b>		
BIP	0.406	0.801	0.802	0.721	<b>0.770</b>	
EI	0.402	0.637	0.160	0.409	0.677	<b>0.755</b>

Based on Table 4.16 above, it is clear that every construct has good discriminant validity. It is due to the fact that almost all the correlation values are lower than the AVE of each

construct. Thus, it can be concluded that each of the constructs is unique and able to capture the phenomenon that it intends to measure.

Having established the discriminant validity of the measure, this study proceeded to exhibit the criterion validity of the measure as reported in the following.

#### 4.4.4 The Criterion-Related Validity

In general, criterion-related validity refers to the significant relationship among the predictors and the criterion they are used to measure. That is the extent to which independent variables are related to the dependent variable of the study (Badri, Davis & Davis, 1995; Flynn *et al.*, 1994). Following the common methodology to examine the criterion validity (Ahire *et al.*, 1996; Hair *et al.*, 2010; Saraph, Benson, & Schroeder, 1989), this study examined the criterion-related validity by testing the correlation between each construct and entrepreneurial intention. This is justified by the fact that the ultimate goal of implementing any strategy is to enhance the overall entrepreneurial intention. Based on the results reported in Table 4.17, all the constructs undertaken in this study are highly correlated with the criterion variable, supporting the criterion-related validity. In other words, all the constructs used in the model are significantly correlated with entrepreneurial intention at the 0.01 level of significance. These results support the existence of criterion-related validity of the measures.

**Table 4.17**  
*Test of Criterion-Related Validity*

Constructs	Correlation with Entrepreneurial Intention
RTav	0.521**
INOav	0.459**
PROav	0.392**
FSav	0.368**



PSav	0.380**
DevNProdav	0.355**
BIEenAV	0.416**
InInvRelAV	0.290**
DefCorpAV	0.310**
CopUnxChalAV	0.356**
DevCriHRav	0.433**
EIPav	0.398**
SpaceAV	0.279**
SharedAV	0.405**
ServAV	0.355**
SuppAV	0.416**
SkillDevAV	0.433**
SeedCapAV	0.398**
SynAV	0.279**

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Throughout the processes of model refinement and construct validity establishment, it was noticed that the EO construct has three dimensions; the SS was found to have only two factors underlying its items; the ESE construct covered six dimensions; the EIP construct had only one dimension; and BIP construct had seven dimensions.

Based on the result of EFA and CFA above, the dimensional structure of the study's constructs remained the same, and therefore, this study did not require the restatement of the hypotheses. However, before undertaking the hypotheses testing procedures, this study performed the descriptive statistics analysis to have an initial summary of the level of EO, SS, ESE, EIP, BIP practices and EI practices in Indonesia higher education.

#### 4.5 Descriptive Analysis of the Constructs

To get an initial summary of the data, this study utilized a descriptive analysis to describe the general situation of entrepreneurial orientation (EO), social support (SS), entrepreneurial self-efficacy (ESE), entrepreneurial internship program (EIP) and business incubation program (BIP) in the Indonesian business schools. In Table 4.18, the mean, standard deviation, maximum and minimum of the constructs are reported. These results reflect the level of implementation of each entrepreneurial orientation (EO), social support system (SS), entrepreneurial self-efficacy (ESE), entrepreneurial internship program (EIP) and business incubation program (BIP) factors. These results also show the perceived level of entrepreneurial intention of business students in the Indonesian context.

Table 4.18 shows the minimum value of most of the constructs is 1.00 and the maximum value is 10.00, which are the minimum and maximum levels in the Likert scale used in this study. In addition, the same data reveals that innovativeness has the maximum mean value among EO factors with the second lowest standard deviation. These results indicate that the business students highly emphasize the importance of creating novelty and building innovative environment in achieving better entrepreneurial intention. The standard deviation value shows that the business students are not significantly different in their opinions regarding the importance of innovativeness to their entrepreneurial intention.

Coming next in importance, from the business students' perspective, are Proactiveness (PRO) and Risk Taking (RT). The means of these practices are 3.98 and 3.97 with standard deviations at 3.87 and 3.96, respectively. In general, the results in Table 4.18 indicate the emphasis business students place on business practices that lead to enhancing the overall entrepreneurial orientation through proactive and risk-taking attitude in order to improve their entrepreneurial intention on a continuous basis. In other words, this result indicates

that the importance of Innovativeness, Proactiveness and Risk-Taking are highly perceived by the Indonesian business students.

**Table 4.18**  
*Descriptive Statistics of the Constructs (n=381)*

Construct	Mean	Standard Deviation	Min	Max
EO	3.96	0.68	1.23	4.76
Risk Taking	4.04	0.76	1.00	5.00
Innovativeness	3.96	0.71	1.00	5.00
Proactiveness	3.87	0.81	1.50	5.00
SS	4.18	0.73	1.00	10.00
Family Support	4.19	0.67	1.00	10.00
Peers Support	4.16	0.78	1.00	10.00
ESE	3.73	0.75	1.00	10.00
Developing New Product	4.02	0.76	1.00	10.00
Building Innovative Environment	3.68	0.74	1.00	10.00
Initiating Investor Relationship	4.06	0.69	1.00	10.00
Defining Core Purpose	3.32	0.87	1.00	10.00
Cope with Unexpected Challenges	3.34	0.76	1.00	10.00
Developing Critical Human Resources	3.98	0.83	1.00	10.00
EIP	3.48	0.81	1.00	5.00
BIP	3.77	0.73	1.00	10.00
Space	3.38	0.77	1.00	10.00
Sharedness	3.62	0.76	1.00	10.00
Service	3.98	0.78	1.00	10.00
Support	4.07	0.81	1.00	10.00
Skills Development	3.82	0.72	1.00	10.00
Seed Capital	4.11	0.76	1.00	10.00
Synergy	3.44	0.62	1.00	10.00
EI	3.93	0.69	1.00	5.00

Similarly, the data in Table 4.18 reveals that among the social support (SS) dimensions, Family Support is reported to have highest mean value of 4.19 with lower standard deviation at 0.67, indicating the propensity of business students to start-up a business depends highly on the support of their family instead of their peers.

Regarding the Entrepreneurial Self-Efficacy (ESE) construct, the results in Table 4.18 reveal that the business students have a common agreement that initiating investor relationship (InInvRel) and developing new product (DevNProd) are the most important aspects to enhance entrepreneurial self-efficacy. On the other hand, defining core purpose (DefCorP) and coping with unexpected challenges (CopUnxChal) have the lowest mean value at 3.32 and 3.24, respectively with a standard deviation of more than 0.82. In other words, these results reflect that the roles of defining core purpose and coping with unexpected challenges are not fully appreciated by the business students in Indonesia.

In terms of business incubation program, the results in Table 4.18 reveal that Space dimension in the business incubation program has the lowest mean value at 3.58 with a standard deviation of 0.73. The synergy (Syn) construct has the second lowest mean value among business incubation center factors at 3.44 with the lowest standard deviation. These results indicate the availability of space in business incubation program is not an urgent thing to make students entrepreneurially inclined. This is because a few people in Indonesia, including business students, have commenced their business by using online shopping or social media. In other words, they mostly act as a reseller in the online shop; so the seller only purchases the product when there is an order from the customer.

As expected, the results in Table 4.18 reveal that the entrepreneurial intention of business students is above average. As it is always the case with self-assessment, the respondents

tend to express their entrepreneurial intention. Numerically, the mean value of entrepreneurial intention is 3.63 with 0.69 df. These results generally reflect the common low perception of the Indonesian business students in terms of entrepreneurial intention. Moreover, the small standard deviation indicates that this is the common perception of most of the business students in Indonesia.

Throughout the preceding sections of this study, various aspects of the construct validity of the measure used in this study are established. More specifically, the measures of this study are reported to possess convergent and discriminant validity. In addition, the criterion-related validity is also proven. As discussed in the previous section, the face or content validity of the measure has been taken care of through the process of measure development. In the following sections, the focus is on testing the hypotheses of the study through the analysis carried out using Pearson correlation and multiple regressions analysis using SPSS as well as employing SEM Analysis in AMOS.

#### **4.6 Confirmatory Factor Analysis (CFA)**

The final CFA of all measurement models of this study for each variable: exogenous and endogenous measurement model, indicates that goodness of fit indices show adequate fit (Table 4.19). All final CFAs of constructs produced a relatively good fit as indicated by the goodness of fit indices, such as CMIN/df is below 2.0; p-value should be above 0.05; goodness of fit index (GFI = above 0.90); comparative fit index (CFI = above 0.95) (greater than 0.90 has traditionally been considered acceptable fit) (Mueller and Hancock, 2001); Tucker-Lewis index (TLI = 0.95); parsimony normed fit index (PNFI = above 0.5) that are considerably lower than other goodness of fit indices. While no threshold levels have been recommended for these indices, Mulaik et al. (1989) noted that it is possible to obtain parsimony fit indices within the 0.50 region while the other goodness of fit indices achieve

values over 0.90. Root mean square error of approximation (RMSEA) of value less than 0.080 (< 0.80). The RMSEA is an example of an absolute fit index which takes into consideration the complexity of the model when determining model fit (Hair et al., 2010). The model fit was achieved after reducing the modification indices (MI) by co-varying the error terms which have values more than 30. Prior to co-varying the error terms, the CFI was 0.072, TLI value was 0.711 and RMSEA was 0.092. After reducing the modification indices, the final model showed better values, such as CFI was 0.962, TLI was 958 and RMSEA was 0.52, etc. The final CFA results are presented in Table 4.19, showing that the factor loading of all final items, for which goodness of fit indices have values above 0.5. The remaining items consist of entrepreneurial orientation (8 items), social support (22 items), entrepreneurial self-efficacy (18 items), entrepreneurial internship program (9 items), business incubation program (46 items) and entrepreneurial intention (6 items).

**Table 4.19**  
*Summary of Measurement Model Assessment and Modifications*

Model	Chi Square	Relative Chi Square	CFI	TLI	RMSEA
Proposed Model	7235.33	2.94	0.692	0.68	0.098
First Model	6361.23	2.83	0.072	0.711	0.092
Second Model	2300.79	2.39	0.836	0.823	0.083
Third Model	1042.43	2.08	0.901	0.889	0.054
The final Model	959.19	1.54	0.962	0.958	0.052
Recommended Value*	N/A	< 3.0	≥ 0.9	≥ 0.9	< 0.08

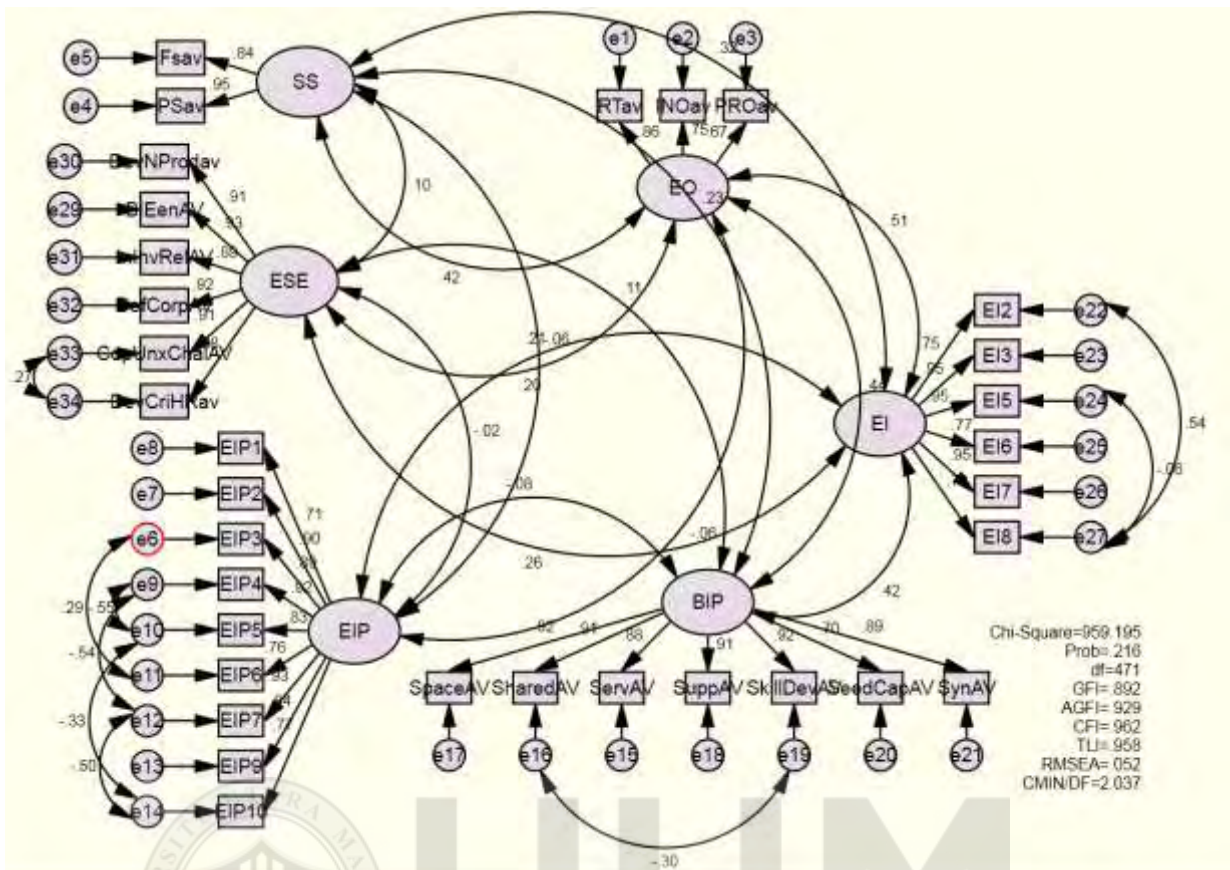


Figure 4.1  
The Final Measurement Model

#### 4.7 Independent Sample T-test

Prior to conducting the hypothesis testing, this study attempted to analyze the difference of entrepreneurial intention between male and female students. In order to perform this analysis, independent sample T-test was employed and the result reveals that the entrepreneurial intention between both groups is different. Tables 4.20 and 4.21 below describe the comparison of entrepreneurial intention between male and female students as follows:

**Table 4.20**  
Group Statistics

Group Statistics					
	Gender	N	Mean	Std. Deviation	Std. Error Mean
EI <sub>av</sub>	Male	211	3.8544	0.64374	0.04432
	Female	170	3.7175	0.62214	0.04772

**Table 4.21**  
*Independent Sample T-Test*

		Independent Samples Test								
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper	
EI	Equal	1.448	.230	2.093	379	.037	.13683	.06536	.00831	.26535
-	variances									
av	assumed			2.101	366.716	.036	.13683	.06512	.00877	.26489
	Equal									
	variances									
	not assumed									

As depicted in Table 4.20 above, the mean value of male students is slightly higher than female students. However, Table 4.21 depicts that there is a difference in both male and female students in terms of their intention to engage in entrepreneurial career. To interpret the output, the first row in Table 4.21 is used since the significance value in Levene's Test is more than 0.05. It is clearly seen that the significance (2-tailed) is .037, showing that there is a difference between the two groups.

#### 4.8 Hypotheses Testing Procedures

To test the hypotheses in order to achieve the research objectives, this study started with Pearson Correlation analysis before undertaking hypothesis testing. Pearson correlation analysis was used to get an initial picture of the relationships between the dimensions of EO, SS, ESE, EIP, BIP and entrepreneurial intention. To test the hypotheses regarding the direct hypotheses of this study, the SEM analysis technique was employed. It is worth mentioning that all the subsequent analysis in this study used the variables from the refined model through the measurement model fit processes as detailed in section 4.6. In the following



sections, the results of Pearson correlation and SEM analysis as well as multiple regressions analysis are reported.

#### 4.8.1 Pearson Correlation Analysis

To illustrate the relationships between EO, SS, ESE, EIP, BIP and the entrepreneurial intention of Indonesian business students, the Pearson correlation analysis was used. As illustrated in Table 4.22, all the relationships between EO, SS, ESE, EIP, BIP and the entrepreneurial intention of business students in Indonesia are found to be statistically significant at the 0.01 level of significance.

In order to determine the strength of association between each independent and the dependent variable, according to Hair *et al.* (2010), the value of correlation of 0 indicates no relationship, whereas the value of correlation of  $\pm 1.0$  indicates a perfect relationship between two variables. This study followed Cohen's (1988) criterion in order to interpret the correlation between 0 and 1.0. When the correlation ( $r$ ) is between  $\pm 0.1$  and  $\pm 0.29$ , the relationship is said to be small; when  $r$  is between  $\pm 0.30$  and  $\pm 0.49$ , the relationship is referred to medium; and when the correlation is more than 0.50, and then there is a strong relationship with entrepreneurial intention.

**Table 4.22**  
*Pearson correlation Analysis*

Construct	Correlation with Entrepreneurial Intention
EOav	0.600**
SSav	0.637**
ESEav	0.360**
EIPav	0.409**
BIPav	0.677**

\*\* :  $p < 0.01$  (2-tailed)

Based on the results in Table 4.22 all the Pearson correlation coefficients are found to be significant at the 0.01 level of significance. In other words, the data of this study supports the existence of significant relationships between EO, SS, ESE, EIP and BIP constructs and entrepreneurial intention of business students in Indonesia. Table 4.23 below provides the summary of the obtained results.

**Table 4.23**  
*Summary of the correlation analysis*

<b>Relationship</b>	<b>Correlation Coefficient ( r )</b>	<b>Hypothesis</b>
Entrepreneurial orientation is positively related to entrepreneurial intention among students in Indonesia.	0.600**	Significant
Social support is positively related to entrepreneurial intention among business students in Indonesia.	0.637**	Significant
Entrepreneurial self-efficacy is positively related to entrepreneurial intention of business students in Indonesia.	0.360**	Significant
Entrepreneurial internship program is positively related to entrepreneurial intention among business students in Indonesia.	0.409**	Significant
Business incubation program is positively related to entrepreneurial intention among business students in Indonesia.	0.677**	Significant

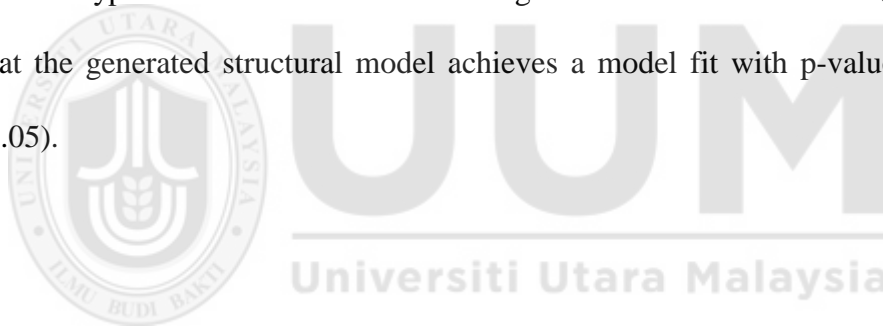
\*\* :  $p < 0.01$  (2-tailed)

#### 4.8.2 Generated Structural Model

Based on theoretically fit and empirically fit, an absolute fit index takes into consideration the complexity of the model when determining model fit (Hair et al. 2010). Thus, in the process of EFA, this study dropped 23 items to improve the model fit (revised model), such

as two items of entrepreneurial orientation (INOV3 and PRO2), three items of social support (FS7, FS13 and PS8), five items of entrepreneurial self-efficacy (DevNProd6, BIEnv1, InInvRel1, DefCorP3 and DevCriHR2), one item of entrepreneurial internship program (EIP8), 10 items of business incubation program (Space5, Space7, Shared9, Serv2, Supp1, Supp3, SkillDev4, SeedCap2, SeedCap3 and Syn2) and two items of entrepreneurial intention (EI1, EI4). The final generated model shows that 109 items remain.

The generated structural model is a modeling strategy that compares the proposed model with a number of alternative models in an attempt to demonstrate that no better-fitting model exists. Using modification indices, the study developed a generating model in an attempt to ensure a better fitting and possibly a more parsimonious model. Hence, the explanation of hypotheses result is based on the generated or revised model (Figure 4.2). It shows that the generated structural model achieves a model fit with p-value of 0.114 (p-value > 0.05).



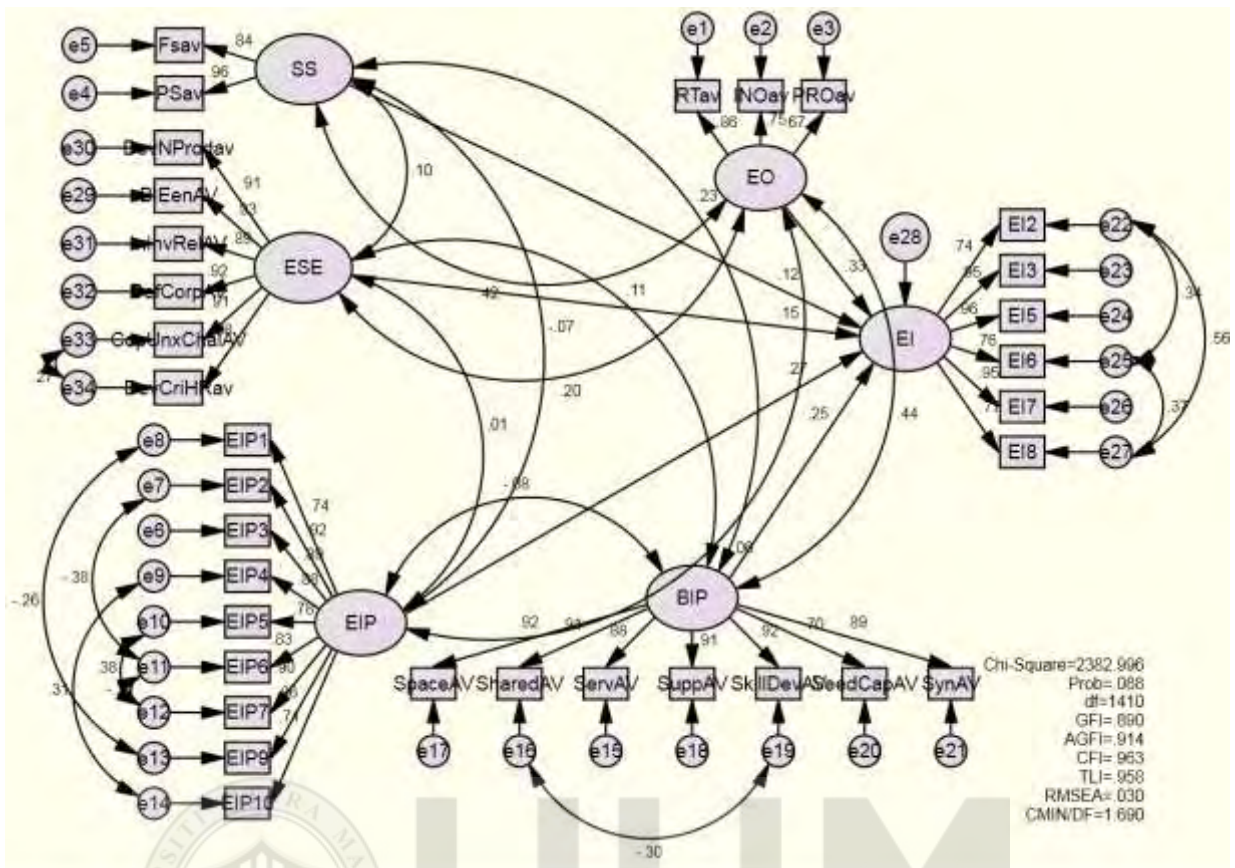


Figure 4.2  
Generated Structural Model with Standardized Estimates (hypothesis testing)

#### 4.8.3 Goodness-of-Fit indices (Generated Model)

The result of the goodness-of-fit (GOF) of the generated model is presented in Table 4.24. The absolute fit indices (AFI) indicate a df of 1410, chi-square ration (CMIN/df) of 1.680 and a p-value of 0.088. The goodness of fit index (GFI) is 0.890 and RMSEA is 0.030. Therefore, all AFI achieved threshold values.

The incremental fit indices (IFI) also showed a sufficient level of fit well above the threshold value levels of above 0.90 (Absolute goodness fit index, AGFI = 0.914; comparative fit index, CFI = 0.963; TLI = 0.958; normed fit index, NFI = 0.923). The parsimonious fit indices (PFI) indicate an adequate level of fit, parsimony goodness of fit index (PGFI) = 0.709 and parsimony normed fit index (PNFI) = 0.814. The generated

structural model also shows an  $R^2$  value of 0.547 for explaining entrepreneurial intention (Table 4.24)

**Table 4.24**  
*Generated Model (Goodness of Fit indices)*

Measures	Fit Indices	Threshold Value
<b>Absolute Fit Index Level</b>		
DF	1410	
RMSEA	0.030	Less than 0.08
GFI	0.890	0.90 and above
P-Value	0.088	p-value > 0.05
<b>Incremental Fit Level</b>		
		0.90 and above
AGFI	0.914	0.90 and above
CFI	0.963	0.90 and above
TLI	0.958	0.90 and above
NFI	0.923	0.90 and above
<b>Parsimonious Fit Level</b>		
X /df	1.248	Less than 2.0
PGFI	0.709	Higher better
PNFI	0.814	Higher better
<b>SMC (R2)</b>		
SMC(R2) Entrepreneurial Intention	0.547	Bigger better

#### 4.8.4 Hypothesis Testing of Generated Model for Direct Effect on Entrepreneurial Intention

The result of hypothesis testing of generated model for a direct effect on entrepreneurial intention is presented in Table 4.25. This study found four significant direct effects on entrepreneurial intention. First, the result demonstrates that entrepreneurial orientation has a direct significant impact on entrepreneurial intention ( $\beta = 0.328$ ;  $CR = 5.329$ ;  $p < 0.05$ ) or

H1 is asserted. Next, social support was positively related to entrepreneurial intention ( $\beta = 0.124$ ; CR = 2.483;  $p < 0.005$ ) or H2 is asserted. Subsequently, H3 is supported, i.e., the direct impact from entrepreneurial self-efficacy to entrepreneurial intention is positively significant ( $\beta = 0.148$ ; CR = 3.377;  $p < 0.001$ ). The other variables, entrepreneurial internship program ( $\beta = 0.270$ ; CR = 6.071;  $p < 0.001$ ) and business incubation program ( $\beta = 0.253$ ; CR = 5.030;  $p < 0.001$ ) also have significant effect on entrepreneurial intention. Thus, these hypotheses (H4 and H5) are supported. The result details are described in the Table below:

**Table 4.25**

*Hypothesis Testing Result of Generated Model (Direct Effect on Entrepreneurial Intention)*

H	From	To	Estimate	SE	C.R.	P	Hypothesis Support
H1	EO-av	EI-av	0.328	0.089	5.329	0.013	Supported
H2	SS-av	EI-av	0.124	0.031	4.783	***	Supported
H3	ESE-av	EI-av	0.148	0.024	3.377	***	Supported
H4	EIP-av	EI-av	0.270	0.050	6.071	***	Supported
H5	BIP-av	EI-av	0.253	0.028	5.030	***	Supported

In order to obtain a rigorous result, this study did not only test the hypothesis using SEM analysis, but also tested the hypothesis using multiple regressions analysis. The following section explores the multiple regressions analysis using SPSS.

#### 4.9 Multiple Regressions Analysis

This study also employed multiple regression analysis to confirm the above hypothesis. This analysis is used to conclude the predictive power of each independent variable on the

dependent variable. It was used to identify and compare the predictive power of the dimensions of EO, SS, ESE, EIP constructs on entrepreneurial intention.

According to the hierarchical regression performed and its results reported in Table 4.26, it can be concluded that EO, SS, ESE, EIP and BIP have significant positive impact on the entrepreneurial intention at the 0.001 and 0.05 levels of significance, respectively. Additionally, the results reveal that EO has the greatest impact on the entrepreneurial intention compared to other constructs, meaning with an increase of one point of EO, the inclination of students increases by up to 44.8%. Entrepreneurial internship has the second highest impact to groom the business students to become entrepreneurs. The entrepreneurial intention of students increases up to 18.9% with an increase of one point of the entrepreneurial internship program. Therefore, the result supports the hypothesis H1 and H4 in which the impact of EO and EIP on entrepreneurial intention (EI) are claimed to be significant.

**Table 4.26**  
*Examining Variables' predictive power*

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-0.286	0.212	-	-1.347	0.179
EO-av	0.448	0.058	0.417	7.306	0.000
SS-av	0.167	0.017	0.112	3.104	0.016
ESE-av	0.078	0.014	0.104	3.152	0.000
EIP-av	0.189	0.042	0.173	4.543	0.000
BIP-av	0.173	0.032	0.134	3.604	0.000

\* :  $p < 0.05$ ; \*\*:  $p < 0.01$ ; \*\*\*:  $p < 0.001$

On the other hand, Table 4.24 reveals that the social support (SS) and entrepreneurial self-efficacy are found to be weak predictors of entrepreneurial intention of the business students in Indonesia. However, these results, support H2 and H3, respectively. Lastly, the impact of BIP is at a moderate level. The BIP contributes to the entrepreneurial intention of the

students by up to 17.3% with the indicators of  $\beta = 0.173$ ,  $t = 3.604$ ,  $p < 0.01$ , that support hypotheses H5.

To summarize the results regarding the hypotheses related to the predictive power of EO, SS, ESE, EIP and BIP on entrepreneurial intention, it can be concluded that hypotheses H1 through H5 are supported.

#### **4.11 Chapter Summary**

This chapter presents the data analysis which provides a presentation and output of hypothesis testing for the study. The summary of the demographic profile, distribution of respondents and statistics are presented. This study also employed data screening to figure out the missing data, identifying outliers, and tests for the assumptions underlying normality and validity were also conducted prior to the actual data analysis and their results are shown.

The generated model results show incremental fit level, CFI (0.963) and TLI (0.958) are above 0.90 (threshold value), and sufficiently appropriate for the model fit. Other fit measures also indicate the GOF of the model to the data ( $\chi^2$  (chi-square) is 1440, df is 114, cmin/df is 1.162, RMSEA = 0.030, GFI = 0.899, AGFI = 0.914, NFI = 0.923, PGFI = 0.709, and PNFI = 0.814). The hypothesized structural model also shows an  $R^2$  value of 0.545 for explaining entrepreneurial intention.

The entrepreneurial orientation, social support, entrepreneurial self-efficacy, internship program and business incubation program are significantly positive antecedences of entrepreneurial intention with p-value  $< 0.05$ . In other words, the hypothesis for that relationship is supported. The next chapter discusses about the discussion and conclusion of this study.



## CHAPTER 5

### DISCUSSION AND CONCLUSION

#### 5.0 Introduction

This chapter provides a summary of the hypothesis testing in relation to the findings obtained from the quantitative data analysis in Chapter 4. The discussion of the hypothesis testing is based on the 5 research questions outlined in Chapter 1. This chapter reports the consistency and inconsistency of the research findings and ends with a summary of the chapter.

#### 5.1 Discussion of Results

This section discusses the results of the critical factors of entrepreneurial intention of business students to achieve the following main objectives of the study:

1. To examine the direct effect of entrepreneurial orientation (EO) on entrepreneurial intention (EI) among business students in Indonesia;
2. To examine the direct effect of social support (SS) on entrepreneurial intention (EI) among business students in Indonesia;
3. To examine the direct effect of entrepreneurial self-efficacy (ESE) on entrepreneurial intention (EI) among business students in Indonesia;
4. To examine the direct effect of business incubation program (BIP) on entrepreneurial intention (EI) among business students in Indonesia;
5. To examine the direct effect of entrepreneurial internship program (EIP) on entrepreneurial intention (EI) among business students in Indonesia;

## **5.2 To Examine Direct Relationship toward Entrepreneurial Intention**

The critical factors of entrepreneurial intention in this study specified in the model are entrepreneurial orientation, social support, entrepreneurial self-efficacy, entrepreneurial internship program and business incubation program. It aims to expand the ever growing knowledge stream on direct antecedents of entrepreneurial intention of business students by examining the empirical structural model. The discussion is based on the generated structural model since it achieved GOF in this study. The results show eight significant determinants of entrepreneurial intention (H1,H2, H3, H4, H5, H6, H7, H8) and two insignificant factors (H9 and H10).

### **5.2.1 Entrepreneurial Orientation and Entrepreneurial Intention**

In this study, it was hypothesized that entrepreneurial orientation is positively related to entrepreneurial intention. The results indicate that entrepreneurial orientation is positively related to entrepreneurial intention among business students. Past studies support this relationship (Bolton & Lane, 2012; Janssen & Yperen, 2004; Krabel, 2013; Seibert et al., 2001; Sulistyorini, 2013) that the higher the entrepreneurial orientation, the higher the entrepreneurial intention of students to become entrepreneurs.

It is rightly pointed out by several researchers that the desire to be entrepreneurs depends on the ability to take risks and ability to be innovative and proactive towards business engagement (Hamdan, 2013; Remeikiene et al., 2013). According to Begley and Boyd (1987); and Lee and Tsang (2001), several factors in relation to EO, like ability to take risk, innovation and creativity and proactiveness of people are directly linked to EI.

In line with the above discussion, Hamdan (2013) asserted that the desire to be entrepreneurs, the courage to take risks and the ability to become an entrepreneur influence

both partially and simultaneously the entrepreneurial intention. Risk-taking is the tendency of an individual to take risks (Reardon, as cited in (Remeikiene et al., 2013). The person who can tolerate higher risks is more motivated to be involved in entrepreneurship, while the ones who have a lower risk attitude are less motivated to engage in entrepreneurship (Remeikiene et al., 2013). Further, the authors reinforced previous statements that the propensity to act, or usually known as proactiveness, is associated with entrepreneurial behavioral intention. Other researchers have found a strong relationship between innovativeness and risk-taking propensity as the most popular attribute influencing entrepreneurial aspiration of people (Begley & Boyd, 1987; Lee & Tsang, 2001). It is clear from the above discussion that risk taking, proactiveness and innovative ability of people are directly connected to their intention to become entrepreneurs. The present finding of students' entrepreneurial orientation is also similar, substantiating the past findings which used real entrepreneurs as respondents. Similar findings can also be observed with students and their intention to become entrepreneurs, especially in the Indonesian context.

The concept of entrepreneurial orientation appears to be in line with the attitude toward behavior in the TPB that should be possessed or a tendency to explore new business opportunities in order to become successful in the field of entrepreneurship. Miller and Friensen (1983); and Lumpkin and Dess (1996), stated that “the behavior that should be possessed includes innovativeness, proactiveness, risk-taking, autonomy and competitive aggressiveness”. Three of these factors (innovativeness, proactiveness, risk-taking) have been utilized in many entrepreneurial orientation studies, while autonomy and competitive aggressiveness have been studied less often (Lyon et al., 2000; Rauch et al., 2009). Researchers have discovered that the EO construct in general can be studied jointly (Lumpkin et al., 2009; Runyan et al., 2008); or individually (Lumpkin & Dess, 2001; Wang, 2008), depending on the context. The present findings once again are supported by the

observation of Sulistyorini (2013); according to her, the most important aspect of entrepreneurial learning method is to embed entrepreneurial orientation because this attitude can drive a person to have an intention for entrepreneurship and finally get involved in entrepreneurial activity (Sulistyorini, 2013).

Under these circumstances, universities which facilitate entrepreneurial development programs emphasize the EI factor to develop student entrepreneurs. The ability to take risks is one of the important factors as well as entrepreneurial training and learning development opportunities. In order to support risk-taking ability, the students should be trained to be proactive and they should be bold enough to be creative and innovative to become young entrepreneurs in future. The result of the study indicates a strong correlation between students' EO and their intention to become entrepreneurs.

### **5.2.2 Social Support and Entrepreneurial Intention**

The second hypothesis of this study is that social support is positively related to entrepreneurial intention of the business students in Indonesia. Empirical evidence from this study shows a significant and positive direct relationship between SS and EI. Therefore, H2 is supported in this study. It is similar to several past findings (Buang & Yusof, 2006; Davidsson, as cited in Baughn et al., 2006; Mustikawati & Bachtiar, 2008). The findings of this study imply that the higher the social support, the higher the entrepreneurial intention of the students to start-up a business.

Several studies (Rani 2012, Singh, 1999, Anderson & Jack, 2005, León, Descals, & Domínguez, 2007, Procidano & Heller, 1983) have reported similar findings, showing strong positive correlation between family support system and entrepreneurial intention. According to Rani, family support has a strong correlation with the occurrence of a new

venture, opportunity recognition, decision-making as well as resource mobilization. Families play a crucial part in the venture creation process and thus their influence deserves better consideration in the research on entrepreneurship. In addition, a few related aspects, like environmental support and parental support, play an important role in influencing a person's desire for entrepreneurship (Indarti & Rostiani, 2008; Lee, Wong, Foo, & Leung, 2011; Suharti & Sirine, 2011). This opinion is reinforced by Kasmir (2006), who stated that the support of family, especially parental support, is imperative to increase the motivation to become an entrepreneur. Encouragement in the form of high motivation from the family to move forward is a core requirement to become a real entrepreneur. Thus, family support is of course the primary driving force to boost students' mentality and motivation (Kasmir, 2006). Parents with entrepreneurial professions, are also role models for their children's career choice after graduating from the University.

Anderson and Jack (2005) rightly asserted that family takes a substantial part in new venture creation, due to the strong relationship among family members. Steward (2003) offered the most comprehensive assessment of work on the function of members of family in entrepreneurship environment. Steward observed the benefit of the family network, which includes extensive tacit knowledge, commitment, access to information, willingness to make sacrifices of time, money as well as effort

The social support system has been shown to be paramount in developing entrepreneurial intention. The kinship relationships work as the strongest ties in entrepreneurial networks. Therefore, it is undeniable that parents play a significant role in providing support and motivation that will make their children become socially competent, confident and responsible in realizing their intention to become entrepreneurs.

Social support is a concept which is widely deliberated and discussed across the globe and is considered as an important variable to predict the person's behavior, especially in terms of subjective norms according to the TPB. In the TPB, subjective norms refer to the belief about whether most people approve or disapprove one's behavior. In the entrepreneurship area, the approval from community, especially from family and peers, is considered to be crucial for those who wish to engage in entrepreneurship activities.

Based on these circumstances, people should develop a relationship and networking with other people to optimize their capacity, especially in conducting business. The network can also be a gateway that adds to competency ability and supplementary resources of an individual. Although a high level of interaction is established through networking, it is crucial to sustain a platform of processes for interactive and sensible social networking in order to significantly achieve benefits of the existing resources from networking. In addition, the young graduates are supposed to get appropriate guidance and information from their peers and family members in order to get a better understanding about starting a business with appropriate resources. The students basically do not have too many ideas about how to run a business; they do not yet know how to look into aspects like finance management, pooling of resources, marketing the products, identifying right business opportunities, accessing better business networks and establishing business in right locations. These young students need to be given appropriate guidance from their family. According to this research, the higher the support the students get from their family, the higher the EI will be. The result of the study thus indicates a strong correlation between students' SS and their intention to become entrepreneurs.

### 5.2.3 Entrepreneurial Self-Efficacy and Entrepreneurial Intention

In this study, it is hypothesized that entrepreneurial self-efficacy is positively related to entrepreneurial intention. The results of the analysis reveal that entrepreneurial self-efficacy is positively related to entrepreneurial intention among students. This finding is in line with several previous studies (Boyd & Vozikis, 1994; Chen et al., 1998; Indarti & Rostiani, 2008; N. Krueger et al., 2000; Nastiti et al., 2010; Noble et al., 1999; Nwankwo et al., 2012). This finding is also reinforced by other researchers, which include Bayron (2013); Betz and Hackett (1986); Føleide (2011); Minglei and Yang (2013); as well as Li and Wang (2008). The findings of the current study imply that the higher the ESE, the higher the EI of the students to start-up a business.

This study is also consistent with other previous scholars (Erikson, 2003; Zhao et al., 2005) which believe the students are more likely to find entrepreneurial opportunities and have strong motivation to achieve their vision because they have high level of self-efficacy. In addition, Boyd and Vozikis (1994) described entrepreneurial self-efficacy as an important explanatory variable in determining both the strength of entrepreneurship intention and the likelihood that this intention will result in entrepreneurial actions. In addition, Boyd and Vozikis emphasized that self-efficacy is found to be a critical aspect of entrepreneurial intention because the higher the entrepreneurial self-efficacy, the greater the entrepreneurial intention. Chen et al. (1998) stated in their study, based on two surveys, that entrepreneurial self-efficacy is positively related to the intention to set-up one's own business. Further, they found support for a positive relationship between entrepreneurial self-efficacy and entrepreneurial intention with a sample of business and psychology students. The study also provides preliminary evidence that entrepreneurial self-efficacy has the potential to be an individual construct. Accordingly, clear patterns emerge:

individuals with higher entrepreneurial self-efficacy have higher entrepreneurial intentions (Chen et al., 1998; N. Krueger et al., 2000; Noble et al., 1999; Wang et al., 2002; Wilson et al., 2007).

Entrepreneurial self-efficacy has been shown to be a useful construct to predict the entrepreneurial intention and competencies of students. Nwankwo et al. (2012) supported this finding by affirming that the students who have a high level of self-efficacy always believe that they will succeed in any business activity they participate in. Boyd and Vozikis (1994) stated that the students who exhibit higher entrepreneurial self-efficacy beliefs after the educational intervention have greater inclination for entrepreneurship, which in turn, results in higher intention for new venture creation. Perceived self-efficacy is the strongest single predictor of career choice and self-reported competencies that can predict entrepreneurial intention (Bandura, 1986; Chandler & Jansen, 1992; Urban, 2004). Zhao et al. (2005) also showed that entrepreneurial self-efficacy has a positive relationship with entrepreneurial intention. They will frequently strive to add value to themselves in an entrepreneurial environment. Those students who are exposed to such environment will develop better self-reliance in decision-making and they sustain their interest to become entrepreneurs. Hence, entrepreneurial self-efficacy has a vital role in students' intention to become entrepreneurs. The present finding thus gives due importance to entrepreneurial self-efficacy among students in their intention to become entrepreneurs in the future.

The variable of entrepreneurial self-efficacy is one of the pivotal factors that can explain perceived behavioral control in the TPB. The perceived behavioral control refers to a person's perception of the ease or difficulty of performing the behavior of interest. In the entrepreneurship area, this behaviour is pivotal to elevate the self-efficacy of the individual to achieve the best performance in entrepreneurship activities.



Hence, in addition to entrepreneurial orientation and social support system, a student is in need of high initiation, high effort and persistence in his or her attitude to become an entrepreneur. This element is further discussed as efficacy. During their learning and development stage from academics and incubation exposures, it is expected that the students should develop their confidence and sustain their interest to become entrepreneurs. This persistence only comes with new product or market opportunities, building an innovative environment, initiating investor relationship, defining core purpose, coping with unexpected challenges and developing critical human resources to start-up a business. The higher the exposure the students get from academics, industry exposures and incubation programs, the higher will be their entrepreneurial self-efficacy. The result of the study thus indicates a strong correlation between students' entrepreneurial self-efficacy and their intention to become entrepreneurs.

#### **5.2.4 Entrepreneurial Internship Program and Entrepreneurial Intention**

The current study hypothesized that entrepreneurial internship program is positively associated with entrepreneurial intention among business students in Indonesia. The empirical evidence from this study found the relationship between entrepreneurial internship program and entrepreneurial intention to be positive and significant. Previous studies in an entrepreneurship setting have shown support for this finding (Cooper et al., 2004; Frazier & Niehm, 2006; Hildebeitel et al., 2000; Keat et al., 2011; Kolvereid & Moen, 1997). This hypothesis is also reinforced by other previous researchers (Chou et al., 2014; Kumara, 2012; Mokhtar et al., 2010; Tau, 2012; Wilson et al., 2007; Yemini & Haddad, 2010). This finding indicates that the more favorable the students' attitude is to participate in the entrepreneurial internship program, the better they will feel about their intention to start a business.

Kolvereid and Moen (1997) supported this finding by affirming that university students who choose entrepreneurship courses have greater inclination to become entrepreneurs compared to those who do not. By obtaining experience in the entrepreneurial world, the students will be more inclined and ready to deal with entrepreneurship since they are already familiar with the business atmosphere (Cooper, Bottomley, & Gordon, 2004). In addition to that, Frazier & Niehm (2006) supported this finding when they stated that students' major in university, family occurrence of entrepreneurship and internship experience influence entrepreneurial intention. Internship plays a pivotal role to bridge the gap between career expectation developed in the classroom and the employment reality in the real world (Gault et al., 2000).

Supporting the above discussion and in line with the present finding of this research, high internship experience of students indicates high self-perceived entrepreneurial behavior and learning effect (Kumara, 2012; Wilson et al., 2007; Yemini & Haddad, 2010). Entrepreneurial intention of university students with working experience is higher than the ones without experience. By obtaining experience in the entrepreneurial world, the students will be more inclined and ready to deal with entrepreneurship since they are already familiar with the business atmosphere (Cooper et al., 2004). Chou et al. (2014), in their research, also indicated that entrepreneurial internship program has a crucial role in entrepreneurial intention. Some studies have proven empirical evidence to support this finding that internship program is really useful to assist individuals in entering the world of work (Groves et al., 1977; Hite & Bellizzi, 1986), and subsequently, they would enjoy greater job satisfaction (Bales, 1979).

Based on the discussion above, it can be concluded that the entrepreneurial internship program is crucial for making students entrepreneurially inclined. Students who have

completed an internship are likely to look favorably to entrepreneurship as a career choice than those who have not completed an internship.

This variable could explain the experiential learning theory developed by Kolb (1984). The main idea of this theory is that an individual learner moves through observations and reflections on the experience. These reflections are then absorbed and linked with previous knowledge and translated into abstract concepts or theories, which result in new ways and actions to adjust to the experience that can be tested and explored. In the entrepreneurship area, students will have concrete experiences through their academic coursework and their internship assignment. Both on the job and when they return to the classroom, they will be given the opportunity to observe and reflect upon that experience. Both the experience itself and the reflection in any post-placement assignment will give students the opportunity to form abstract concepts and generalizations that they will then test in subsequent experiences.

The role played by the entrepreneurial internship program to encourage students to become entrepreneurs cannot be overlooked, especially in the Indonesian context. Therefore, the existence of entrepreneurial internship program should be socialized widely to all students in order for them to better understand the benefits and functions of this program. This is because the students who enter the university and enroll into entrepreneurial internship program do not have sufficient information about how to become entrepreneurs. If a student does not have a family involved in business, it will be hard for them to acquire business acumen. This internship program is the only way with which they can improve their entrepreneurial self-efficacy, entrepreneurial orientation and intention to become an entrepreneur. Therefore, the university should encourage their students to take the entrepreneurial intership program prior to being offered a qualification in entrepreneurship.

### **5.2.5 Business Incubation Program and Entrepreneurial Intention**

In this study, it is predicted that business incubation program is positively related to entrepreneurial intention of the students. It is found to have a positive significant relationship. Thus, the hypothesis is supported and also supported by several authors (Amitaba, 2012; Indarti & Rostiani, 2008; Nurhayati, 2014; Reith, 2000). Numerous other studies have understood clearly that the business incubation program has a significant influence on entrepreneurial intention which indicates that the more favorable the students' attitude to participate in the business incubation program, the more they feel confident in their intention to start a business (Hamdani, 2006; Huffman & Quigley, 2002; Krabel, 2013; Otuya et al., 2013).

Several researchers have explained the importance of business incubation program during entrepreneurial learning and development process (Hamdani, 2006; Mubarak et al., 2013; Zasiadly, 2012). Indarti and Rostiani (2008) supported this finding by stating that the readiness instrument, including self-employment programs, such as business incubation programs, are key determinants of entrepreneurship for students. Krabel (2013) further said that many universities are becoming more entrepreneurial by supporting spin-off activities of students and staff, installing entrepreneurship programs (such as business incubation programs) and creating networks of local entrepreneurs. The study conducted by Otuya, Kibas, Gichira and Martin (2013) indicated that the students who have exposure to business incubation centers have higher intentions toward entrepreneurship than their counterparts who have no intention to attend entrepreneurship courses.

This finding indicates that in the Indonesian context, some universities have made provision for incubation programs which support EI among students. This indicates that business incubation program is a key factor in developing EI among students. The higher the

business incubation support extended by the academic institution, the higher the students' entrepreneurial intention will be.

This variable acts as one of the major components to explain the experiential learning theory developed by Kolb (1984). This theory emphasizes that mentorship can assist the students to obtain better experience in the field of entrepreneurship.

Under these circumstances, an incubator staff needs to be well prepared and ready to train students to become real entrepreneurs once they graduate from the universities by conducting frequent workshops and training on entrepreneurship. These workshops should be conducted for the students prior to their participation in entrepreneurship activities. After having the guidance, they can then implement their skills in the real entrepreneurship world.

### **5.3 Implication of Study**

Several implications of this study, such as theoretical implication, managerial implication to the university, managerial implication to the general public and the managerial implication of the government are discussed in the following sections.

#### **5.3.1 Theoretical implication**

This study empirically tests the direct effects of entrepreneurial orientation, social support, entrepreneurial self-efficacy, entrepreneurial internship program and business incubation program on entrepreneurial intention. Firstly, the entrepreneurial intention predictor model may enrich the conceptualization of EI and its relationships in the context of business schools in Indonesia. Overall, the results are consistent with the hypotheses from the literature. Secondly, this finding substitutes the TPB and experiential learning theory in which entrepreneurial orientation, social support and entrepreneurial self-efficacy factors

could explain the dimensions of attitude toward behavior, subjective norm and perceived behavioral control. The entrepreneurial intention may represent the tipping point for those students with an already high entrepreneurial intention to turn ideas into reality and become self-employed. This could explain why some students with high entrepreneurial intentions do become entrepreneurs while others do not. As a final point, the analysis supports the argument that attitudes are open to change. Therefore, the findings support the further development of the TPB applied to the entrepreneurship program. The results further provide evidence of the link between entrepreneurial intention and becoming self-employed. In addition, the entrepreneurial internship program and business incubation program are also proven to contribute to the experiential learning theory in which these factors could explain how one can obtain the experience when participating in the entrepreneurship program and increase one's motivation to start a business. Therefore, these two factors may represent the experiential learning theory.

The results can help to improve entrepreneurial intention of the business students in Indonesia. The determinants of entrepreneurial intention are considered as major factors to improve students' entrepreneurial intention in business schools due to stiff competition, the increase of jobless graduates as well as economic situational instability, locally and globally.

This study intended to develop a model to improve the entrepreneurial intention of the business students by looking into the determinants (EO, SS, ESE, EIP and BIP). Further, the findings of both direct and indirect impact of the determinants of entrepreneurial intention support significant and positive relationship links to eight hypotheses suggested and two associations are not supported. These results increase empirical literature on entrepreneurship and related disciplines. The direction of the relationship in this study has verified and extended the theoretical consistency that exists in the previous literature.

The methodological contribution is the direction and new validation of the existing instruments utilized to assess each construct in this study. SEM was used in this study, resulting a few advantages were derived, such as a strict examination and testing of the measurements through CFA, GOF models is achievable for generalization, complex research model with multiple independents and moderators could easily be tested, and causal relationship could be established.

An entrepreneurial intention model provides the conceptual framework which is developed based on previous research finding and suggestions. The research model of this study's first attempt is based on the TPB (Ajzen, 1991); and experiential learning theory (Kolb, 1984). Further, the result of this study is more concrete and robust by employing SEM. The data are collected from the education sector (Universities) in Indonesia from three zones (Northern, Central, and Southern) for manageability. The three sectors were selected to cover the three zones in Indonesia. This study has added to the number of Indonesian empirical research in the area of entrepreneurship setting or its related disciplines. It has also increased the evidence of new knowledge on the entrepreneurial intention paradigm.

### **5.3.2 Practical Implication to both Government and University**

Given ASEAN Free Trade Area (AFTA) or AEC will commence by this year, the government needs to anticipate and pay more attention to enhance the entrepreneurial orientation and self-efficacy among students since the proportion of entrepreneurs in Indonesia is still far behind compared to the number of entrepreneurs in neighboring countries, such as Malaysia, Thailand, Singapore and even Vietnam. This phenomenon will make Indonesian community a big market for other ASEAN countries. Whatever policy and regulation Indonesia is following now, has been unable to increase the number of entrepreneurs in this country. So this kind of research may become an eye opener for the

government and help them get a better insight relating to entrepreneurship in an effort to improve the innovation, proactivity and risk-taking ability and how these factors can build up the lack of entrepreneurial awareness among business students. This can ensure more entrepreneurs come from universities. Innovation is very closely related to business; once the number of entrepreneurs increases, it will increase the level of innovation. Innovation can improve the level of productivity and will definitely reduce the unemployment rate.

This study may become an eye opener for the government and help the government to get a better insight relating to entrepreneurship in an effort to improve the innovation, proactivity, risk-taking ability and how these factors can build up the lack of entrepreneurial awareness among business students, and thus, more entrepreneurs will be coming from universities. Innovation is very closely related to business; once the number of entrepreneurship increases, it will increase the level of innovation. Innovation will then improve the level of productivity and will definitely reduce the number of unemployed.

Therefore, the government should keep the innovation capacity high and facilitate young entrepreneurs to be more proactive since these factors have been proven to have a strong correlation with entrepreneurial intention. Further, trainers of internship and business incubation programs must make sure that all three elements (innovativeness, proactiveness and risk-taking) of EO are conducted together for students, paying particular attention to the risk-taking dimension.

This finding may also provide better insight for the government to change the mindset of people from being a job seeker to a job creator. Since most of the higher education institutions today do not embed creativity and do not provide space for students to be more creative. The government should have the courage to revise their education policy systematically by providing university students the chance to be more creative and



innovative. This can be addressed by establishing internship and business incubation programs in the university. This policy may encourage the business community to be more productive and innovative because this program truly can connect the student with the industrial world. In addition, by participating in entrepreneurship programs, the students will be more productive to exploit natural resources and could create their own business and in turn they can contribute significantly to the economy. The government should move faster to address this problem by revising their policies and regulations to be more flexible for those students who want to engage in entrepreneurship activity as well as allow the entrepreneurship education centers in every university to enhance entrepreneurial awareness among business students.

This finding may also improve government-university cooperation in the field of innovation and entrepreneurship. The insights obtained from this finding offer a significant starting point to policy makers for the development of an action plan regarding the roles of Indonesian universities and the government in promoting innovation and entrepreneurship aimed to strengthen Indonesia's economy. Indonesia's higher education institutions should be involved in developing a set of diverse yet coherent and exciting programs as part of the education of their students, faculty and alumni to nurture an innovation and entrepreneurship spirit. These programs may serve as an effective complementary tool to leverage their educational assets to create economic value in Indonesian society.

This study emphasizes that key activities need to be governed by the higher education institutions to promote entrepreneurship programs. The finding of this study implicates and suggests ways by which the Indonesian government could make its role more effective in the entrepreneurial activities of its youth. These activities have implications for greater innovation, commercialization and broad-based entrepreneurship, stemming from

Indonesian universities and higher education institutions. Several implications are explained in the next paragraph:

Enhancing the human capital of students - improving human capital is very important for students who want to shape their talent in entrepreneurship. This can be done by equipping students with the qualifications, skills, competencies and experience in the SME sector in an effort to develop their entrepreneurial awareness. This action may also improve students' confidence in starting a business since they have better qualifications, skills and competencies.

Developing a creative economy industry - the existence of a creative economy is very important to improve student's innovativeness and proactiveness. This can be done by intensifying information and creativity of academic community, particularly students, emphasizing more on their ideas and knowledge as main resources or production bases. This concept can run effectively with the assistance of the creative industry as a place to accommodate and exploit students' ideas and creations. To realize this practice, both the government and universities should conduct annual entrepreneurial events, like creative product fairs or expos.

At the very least, the students can express themselves through this media to improve their innovation, proactivity and risk-taking ability, since it is clear that student entrepreneurs need a media to express their ideas. Students will be able to create their own industry based on their ideas and creativity that in turn can create employment opportunities.

Providing business and innovation commercialization courses in every university - the government should allocate at least 20% of the total budget for improving the facility and infrastructure in the universities. They should prioritize this plan. In addition, the

government should revise the recruitment process for those who want to apply to be trainers or lecturers in this course. Those who are qualified can be in charge and responsible for the success of this course. This course can help to educate and motivate both students and faculty researchers in innovation, commercialization and entrepreneurship development.

Improving the quality of entrepreneurship programs in every university, like business incubation programs and internship programs - entrepreneurship programs today do not run effectively in Indonesia due to lack of facilities and lack of qualified trainers. To address this problem, the government should pay attention to the development of these programs by revising the education policy and regulations in terms of funding, recruitment of both internship and incubation staff as well as the provision of infrastructure that can enable students to easily access and make use of the facilities. By allocating at least 20% of budget derived from government income to innovation, proactivity and risk-taking ability of students, these programs will be more productive and perform much better than currently.

These programs may enhance the entrepreneurial awareness and creativity of business students and may connect students with the industrial world to obtain entrepreneurial experience. As a result, the students will be more productive to exploit natural resources and may develop their own business as well as contribute to economic growth.

Promoting student innovation and entrepreneurship - most colleges and universities are tilted towards making heavy investments in the development of their students' entrepreneurial orientation and skills. Today, many students dream of starting the next wave of innovative business ventures, like Facebook or Twitter (which were started by students). Universities and higher education institutions (HEIs) are focusing on the pedagogical value of entrepreneurship courses to provide required business skills that students can apply in a professional environment. These complimentary programs and activities also tend to support

the students' classroom experience and improve its effectiveness. Universities need to invest both in formal programs and courses along with the extra-curricular activities to channel the students' energy and brains towards solving problems through entrepreneurship activities. This may include formal programs, such as degrees and certificates in entrepreneurship and extra-curricular activities, such as multi-disciplinary teams and coursework approach, business plan competitions integrated with seminars, short courses and mentorship by faculty members and business people to assist and push the students' ideas to the next level of commercialization. The university may also encourage and promote students' interaction with distinguished researchers and faculty and business professionals/entrepreneurs. University should also develop strong team skills, engage in entrepreneurial work, practice proposal writing and conduct workshops regarding how to learn business and intellectual property law.

These activities at the very least may provide critical organizational skills to the students. It may also improve their innovative capability, proactive ability as well as strengthen their entrepreneurial self-efficacy to engage in entrepreneurship as a career.

Encouraging faculty innovation and entrepreneurship - in most of the universities in Indonesia, faculty members and graduate students seldom consider the relevance of their study programs and research with surrounding market and society. In order to address this issue, the universities and higher education institutions in Indonesia need to bring in a series of policy changes aimed to encourage more faculty entrepreneurship. This will, in turn, complement and strengthen the students' entrepreneurial orientation and entrepreneurship choice as a career. The policy should give greater recognition to faculty entrepreneurs by integrating entrepreneurial activities and experience into the faculty members' tenure and selection process. This may also include strengthening industry-linkage programs and

enhancing faculty members' connections to outside partners through programs, such as externships, targeted resources for business incubation and engagement with business people. Universities should educate and motivate students and faculty researchers to be involved in innovation development, commercialization and entrepreneurship activities. Finally, universities should be engaged actively with the federal agencies in Indonesia in order to address regulatory challenges for faculty and students' entrepreneurship, especially those related to conflict of interest, reward system and national security issues. In order to encourage the best practices for encouraging faculty innovation and entrepreneurship, several actions need to be executed. First, offering a specialized course of Business and Innovation Commercialization geared to educate and motivate both students and faculty researchers to engage in entrepreneurship. Second, promoting faculty innovation and entrepreneurship through support, reward and funding for these activities of faculty members. Last, working with licensing authorities/staff and faculty researchers at universities in order to identify, evaluate, develop and support the creation of new ventures based on commercialization of innovative ideas.

Facilitating University-Industry Collaboration - this can be done by sharing resources and knowledge between the universities and industries. The students and other faculty members will be more motivated to do research that can lead the students to become more innovative and proactive to do applied research. Since the students have a strong connection with the industry, the students will obtain more experience in industry.

Empowering and strengthening the function of the Entrepreneurship Center in every higher HEI - the establishment of a center to take responsibility for planning and implementing the entrepreneurship agenda in every HEI is deemed necessary to support the HEIs' entrepreneurial agenda and facilitate the students to engage in an entrepreneurial career.

The establishment of these centers can serve as a catalyst to move the entrepreneurship agenda forward. This can be done by upgrading the entrepreneurship center, especially business incubation centers as centers of responsibility. Second, a board needs to be appointed that will act as an advisory or governance body, consisting of high caliber individuals from industry, government agencies and the private sector. The appointed board should be able to improve the performance of the entrepreneurship centers. Each entrepreneurship center must generate its own income. The HEI should achieve the minimum 10 income, increasing annually to 30% to be generated during the 2015 period.

Improving the planning and delivery system of the Entrepreneurship Centers - this can be done by trying to develop an entrepreneurship database to improve the planning and delivery system which will be centralized and monitored by the government through the Ministry of Higher Education. The database should include entrepreneurial activities undertaken and planned by the HEIs. The creation of this database will allow the Ministry to develop a more systematic inventory of entrepreneurial activities conducted in HEIs.

Provide a planned and holistic entrepreneurship education program - entrepreneurship education in HEIs is still at an infancy stage. Hence, it must planned and implemented holistically and comprehensively. This can be done through three strategies: the first strategy is to inculcate entrepreneurial values and characteristics in teaching methods across the curriculum and faculties, by extending efforts to inculcate entrepreneurial values and characteristics among the students beyond merely teaching the subject in class. These values can also be included in other subjects offered by the HEIs. The academics must identify entrepreneurship elements to be included in the curriculum, and use a suitable method of teaching to achieve the objective of inculcating the identified characteristics or values of entrepreneurship. Besides the inculcation efforts, the HEIs can also offer more

elective courses on entrepreneurship to the students, if they have sufficient resources to do so; the second strategy is to increase the involvement of industry players in the process of teaching and learning, as a step to overcome the gap between academic input and current applications in the industry. The HEIs must be advised to establish a set of comprehensive guides to encourage and attract industry players and cooperate with them for the successful implementation of entrepreneurship studies at HEIs; and the third strategy is to increase the active participation of students in entrepreneurship programs by carrying out seminars on entrepreneurship acculturation and incorporating entrepreneurship activities, as one of the items in the orientation schedule; improving implementation of the student entrepreneurship acculturation programs; acknowledging students who perform extra-curricular entrepreneurship activities; providing recognition to students who excel in entrepreneurship; considering the entrepreneurship internship program as an alternative to the industrial training requirements of the mainstream programs, as well as the credits allocated; and providing credit facilities to the students' participating in business activities at HEIs as part of extra-curricular activities.

Strengthening the entrepreneurship programs - for the successful implementation of entrepreneurship programs which support the objectives of the higher education entrepreneurship agenda, a conducive ecosystem is crucial. This can be done through several strategies. The first strategy is to strengthen and widen the support system for the students' business by providing a guideline on micro-credit schemes offered to students intending to run a business while studying; giving opportunities to the companies owned by student's associations to act as suppliers of goods and services to government agencies and to their respective HEIs; and increasing and expanding business opportunities and business space for students while they pursue their studies. The second strategy is to offer an intervention program for the creation of high-impact entrepreneurs among the students who

are highly interested in an entrepreneurial career by implementing and enhancing an intervention program for the creation of entrepreneurs in collaboration with the implementing agencies and industry players. The third strategy is to encourage the development of entrepreneurial programs based on businesses that can benefit students, SMEs and society by implementing more innovative social entrepreneurship programs; encouraging students' participation in the social entrepreneurship program competitions; and implementing entrepreneurship programs based on the knowledge transfer program (KTP), to assist in the development of SMEs and young entrepreneurs.

Strengthen the competency of entrepreneurship educators and mentors - entrepreneurship studies at HEIs require competent educators and mentors. In addition to increasing the number of educators and mentors, which currently is still small compared to the number of students requiring guidance and exposure to entrepreneurship, their competency must also be improved to ensure the effectiveness of the delivery and implementation of the entrepreneurship programs at HEIs. This can be done through several strategies. The first strategy is to increase the number of entrepreneurship educators and mentors at HEIs by training the existing lecturers to address the gap between competent educators and mentors. In order to increase the number and competency of entrepreneurship educators and mentors, universities need to offer entrepreneurship training programs to lecturers from various faculties; introduce lecturer mobility programs amongst the HEI entrepreneurship centers; and consider lecturers' participation in student entrepreneurial activities in staff promotion assessments. The second strategy is to overcome the knowledge gap between theoretical and practical aspects of entrepreneurship among HEI educators by introducing, encouraging and recognizing instructors' mobility programs in industry and vice versa. This program requires cooperation between the HEIs and industry. To overcome the problem of insufficient practical experience in the field of business, the HEIs must be advised to



encourage lecturers to gain experience in the industry. The industrial training must be given appropriate recognition by the HEIs. In addition, the HEIs must also be encouraged to provide opportunities to industrial practitioners to be involved in entrepreneurship education at HEIs.

Provide a conducive environment and ecosystem for entrepreneurship development - the entrepreneurship education agenda of HEIs in Indonesia is relatively in its infancy stage. Hence, the environment and ecosystem for most HEIs are not sufficiently conducive for holistic development of this agenda. This can be done through strategies. The first strategy is to improve the commitment of HEIs' top management by making the development and teaching of entrepreneurship as one of the university's main agenda and considering entrepreneurship education and development as part of the Vice Chancellors' key performance measurement. The second strategy is to increase the commitment and involvement of the HEI community. The HEI community consists of three main groups of citizenry; the academia, the administrators or support staff and students. All HEI citizens must be responsible for the existence of a good environment for the development of entrepreneurship agenda in their respective institutions. Besides creating the entrepreneurship appreciation program for academic leaders, for example, for the Deans, the Heads of Department or the Centre/Institute Directors, the HEIs should provide incentives to improve the level of commitment and involvement of all the HEI citizens, so as to achieve the objectives of the entrepreneurship agenda.

#### **5.4 Limitations**

Even though this study provides good insights and many contributions, the contributions of this study, interpretation of the results obtained and the conclusions drawn accordingly should be considered in the light of the study's limitations. As it is always the case in doing

research work, this study has many limitations. The main limitations of this study can be addressed through three main categorizations, namely: causality; generalizability; and methodology. In terms of causality, the research design employed in this study is a survey questionnaire research design that used cross-sectional data collected at a particular point in time to test the hypotheses. As it is always the case in survey research design, the information obtained only shows the degree of association between variables. Therefore, whilst the causal relationships can be inferred based on the results obtained, they cannot be strictly ascertained. Additionally, a comprehensive review of the EO, SS, ESE, EIP and BIP revealed that they are long-term strategies in nature. Given this fact, examining the association between the above factors and the entrepreneurial intention among business students at one point in time will lack accuracy since the results will be dependent on the time of their implementation. This implies that in order to be able to examine the effect of these factors on entrepreneurial intention, it is strongly advised that longitudinal studies should be conducted to examine this effect.

In terms of generalizability, due to some factors over which the researcher had no control, there exist some limitations pertaining to generalizability. Firstly, slightly more than 32 % of the respondents were first and second-semester students. These respondents, although under business faculty, have not taken entrepreneurship courses and do not have the same level of entrepreneurial awareness. Consequently, the results could have been different if all the respondents were in the fourth or fifth semester. Secondly, the results of this study and consequently the conclusions drawn, are based on the data collected from business students based on their perception of the EO, SS, ESE, EIP and BIP practices at one point of time. This study did not consider the continuous changes in the psychological human aspects that could have taken place on entrepreneurial intention among business students due to the continuous exposure and growing experience. This is so since the data is based on the cross-

sectional approach and no follow-up data were collected. Based on that, the conclusions of the study could have been different if the research design was longitudinal rather than cross-sectional. Finally, although business faculty is one of the faculties that embeds entrepreneurship education in the universities, it is difficult to generalize the results to the other faculties. This difficulty could be because the results obtained regarding the entrepreneurial orientation, social support and entrepreneurial self-efficacy on the entrepreneurial intention of the students might be different in other faculties.

In terms of methodology, this study used two scales, namely: five-point Likert scale and 10-point Likert scale, in which the respondents indicated their degree of agreement to statements related to entrepreneurial orientation (EO), social support (SS), entrepreneurial self-efficacy (ESE), entrepreneurial internship program (EIP) and business incubation centers (BIC). Using such measures may cause a patterned response because respondents tend to answer the questions automatically without paying careful attention to the statements. This happens since different individuals have different interpretations of the numbers used to measure their perceptions. It is also difficult to assume that all the questions have been understood completely. In addition, this study used convenience sampling which is part of non probability sampling. Since, this type of sampling is non probability sampling, it is unable to represent the whole population. In other words, all the respondents do not have the same right to be chosen, consequently, this finding cannot be generalized.

Moreover, as it is the case in quantitative research design, another limitation of this study is that respondents were requested to translate their perception about the statements in the survey questionnaire into numbers through different Liker-type scale. However, the answers of the respondents may be influenced by the biased perception of the situation (Macinati,

2008). Since the biasedness might be present in the data collected, this study recommends that future research design studying the effect of strategies on the entrepreneurial intention should consider mixed research design, where both quantitative as well as qualitative research designs can be employed to complement each other.

From another methodological perspective, this study employed perceptual measures to measure entrepreneurial intention construct. Although this measure has gone through rigorous validity and reliability examination, either while it was being developed and pretested, during pilot study, or prior to testing the hypotheses based on the actual data collected, the results of such measures are still questionable compared to the outcomes of objective measures. Therefore, future research work could benefit from using both perceptual and objective measures to be able to draw reliable conclusions about the entrepreneurial intention construct.

Additionally, the results of this study are based on the data collected from students under business faculty. These respondents are the best representatives who can describe the factors of EO, SS, ESE, EIP and BIC as well as the level of entrepreneurial intention of the business students. These constructs could also be evaluated in some future studies by other stakeholders, such as non-business students and faculty members.

Finally, another limitation of this study is the lack of accurate data in developing countries, like Indonesia. The lack of public databases limited the researcher's ability to compare these findings with other sources. Moreover, in the context of Indonesia, there are no other studies that have previously examined the effect of all or some of the constructs of this study, and the researcher had to proceed without the advantage of having other findings to be benchmarked or to be used in further explanations.

## 5.5 Recommendation for Future Research

This study provides a few recommendations for future research as mentioned below:

First, more similar studies should be conducted to cover a larger population or the country as a whole so that the results can be generalized to the entire population. Likewise, university limitation can be remedied by including other universities with different disciplines and schools, like agriculture, health psychology, tourism schools, etc.

Second, more empirical studies should be conducted utilizing other conceptual bases in future research, such as the image theory propounded by Beach (Beach, 1990); TPB (Chiou & Shen, 2006; Eisingerich & Bell, 2007); and the corporate image model (Shee & Abratt, 1989).

Third, since this study employed non probability sampling, future research should be conducted among business students through probability sampling like cluster sampling or stratified sampling in order to support the generalization of the outcome.

Fourth, given the increasingly important role that women play in entrepreneurship, a research on gender differences in entrepreneurship is necessary. Of particular interest are the ways in which men and women are similar to, or different from, each other with respect to the interest in starting small firms.

Fifth, stakeholders of entrepreneurship, such as entrepreneurship lecturers, employers and community members should be employed in future research in spite of some unwillingness from the informants to cooperate in data collection. Real situation behavioral perceptions are very much needed in today's research venture. Their invaluable input will give a much more realistic and authentic scenario of the current happenings in entrepreneurship research.

### **5.5.1 Recommendation for Universities**

This study provides the recommendations for universities as mentioned below:

First, universities need to offer internship programs on entrepreneurship as it has the potential to strongly affect students' entrepreneurial intention to become entrepreneurs. The entrepreneurial internship programs expose students directly to the real entrepreneurial world and enable students to learn directly.

Second, faculty members need to play an active role in shaping the entrepreneurial culture among students. This will enhance their intention to pursue as an entrepreneur. Faculty members' role as a mentor or supervisor is important for the students aspiring to be an entrepreneur and they can also be a shared partner if the students have some business to start.

Third, successful alumni entrepreneurs can be taken as role models. The universities need to engage with the entrepreneurs' alumni to enable students' interaction with them. The alumni entrepreneurs can be quite effective role models as they also have experienced the same educational process at the institution.

Fourth, the university needs to provide counseling to those students who are aspiring to be entrepreneurs and want to choose self-employment as a career. The universities should facilitate interaction of such students with successful entrepreneurs who can guide them until they can start-up their own business.

### **5.6 Conclusion**

The present study has achieved its research objectives in identifying entrepreneurial intentions among business graduates in Indonesian universities. The influence of business

role models on students' intention towards entrepreneurship has been established by the findings of this study. Family and other social groups play significant role to motivate and enable students to choose self-employment as their career. Access to financial resources has been found as one of the barriers for students' inclination to get engaged in entrepreneurship activities as a career. A number of factors can facilitate access to financial resources, such as family, government, friends, etc. Findings show that entrepreneurial intention of young graduates is significantly influenced by financial support.

The overall results indicate that there is a number of factors that may influence young graduates to be entrepreneurs as well as the process that leads to entrepreneurial intention. The results of the study can be used by researchers, the government and university authorities, including faculty members interested to further the theory and practice of entrepreneurship among university students. Finally, in addition to the above, the government should have more effective entrepreneurship programs and policies to increase awareness of entrepreneurial career possibilities and increase the number of entrepreneurs among university graduates.

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## **APPENDICES**

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**APPENDIX A:**  
**Questionnaire (English)**

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In the following pages, there are number of questions that may or may not reflect your thoughts in association with your life condition. By using a scale ranging from strongly disagree to strongly agree, please choose the degree of agreement with your current circumstances by ticking (√) on the square provided in every question. There is no right or wrong answer in answering these questions. You are only required to answer that most accurately reflects your perceptions. If you have trouble in understanding a question, then answer to the best of your ability. Your answers are very confidential and important to the accuracy of this study.

Jurusan :  Management  Economic  Accountancy

Semester :

Gender :  Male  Female

<b>ENTREPRENEURIAL ORIENTATION (BOLTON AND LANE, 2012)</b>						
<b>Strongly Disagree</b>	I like to take bold action by venturing into the unknown				<b>Strongly Agree</b>	
	1	2	3	4		5
	I am willing to invest a lot of time and/or money on something that might yield a high return					
	1	2	3	4		5
	I tend to act "boldly" in situations where risk is involved					
	1	2	3	4		5
	I often like to try new and unusual activities that are not typical but not necessarily risky.					
	1	2	3	4		5
	In general, I prefer a strong emphasis in projects on unique, one-of-a-kind approaches rather than revisiting tried and true approaches used before.					
	1	2	3	4		5
	I prefer to try my own unique way when learning new things rather than doing it like everyone else does.					
	1	2	3	4		5
	I favour experimentation and original approaches to problem solving rather than using methods others generally use for solving their problems.					
	1	2	3	4		5
	I usually act in anticipation of future problems, needs or changes.					
	1	2	3	4		5
	I tend to plan ahead on projects					
	1	2	3	4		5
I prefer to "step-up" and get things going on projects rather than sit and wait for someone else to do it.						
1	2	3	4	5		

<b>SOCIAL SUPPORT (Sahban et a., 2014)</b>									
Family provides useful information relating to business opportunities.									
1	2	3	4	5	6	7	8	9	10
My family usually update information related to changing business scenario.									
1	2	3	4	5	6	7	8	9	10
I have clear advice from my family members on how to start up and operate a new business.									
1	2	3	4	5	6	7	8	9	10
Members of my family always support me with right suggestion on how to do business.									
1	2	3	4	5	6	7	8	9	10
My family always motivate me to become an entrepreneur.									
1	2	3	4	5	6	7	8	9	10
In making business plan, my family always willing to share responsibilities.									
1	2	3	4	5	6	7	8	9	10
I can rely on my family for emotional support in start up business.									
1	2	3	4	5	6	7	8	9	10
My family always pour moral support in starting up a new business.									
1	2	3	4	5	6	7	8	9	10
My family members usually induce courage and confidence in me to start up a new business.									
1	2	3	4	5	6	7	8	9	10
My family members are willing to provide financial support in case I start a new business.									
1	2	3	4	5	6	7	8	9	10
I will consult with my family In case I meet with any business difficulties in future.									
1	2	3	4	5	6	7	8	9	10
I can trust my family members in providing solution when I will share my business problems.									
1	2	3	4	5	6	7	8	9	10
My family has good network with business people whom can support in starting my business.									
1	2	3	4	5	6	7	8	9	10



My friends will provide good recommendations in terms of determining space/location if I start up my own business.									
1	2	3	4	5	6	7	8	9	10
Me and My friends have made an arrangement regarding the business I will be engaged with.									
1	2	3	4	5	6	7	8	9	10
My friends always support and induce motivation to start my business.									
1	2	3	4	5	6	7	8	9	10
My friends give me useful information relating to the business I will run.									
1	2	3	4	5	6	7	8	9	10
My friends will help me to make decision related to the business I will engage with.									
1	2	3	4	5	6	7	8	9	10
My friends are willing to share responsibilities relating to the business I will run.									
1	2	3	4	5	6	7	8	9	10
I trust my friends in getting right advices to become an entrepreneur.									
1	2	3	4	5	6	7	8	9	10
My friends induce self confidence in me to start a new business.									
1	2	3	4	5	6	7	8	9	10
My friends give me useful advices when I usually share my business plan.									
1	2	3	4	5	6	7	8	9	10
My friends help me to have a better networking with several stakeholders in business.									
1	2	3	4	5	6	7	8	9	10
My friends always give me recommendations in term of determining right location to start a business.									
1	2	3	4	5	6	7	8	9	10
My friends are always willing to support me in coordinating my business's activities.									
1	2	3	4	5	6	7	8	9	10
<b>ENTREPRENEURIAL SELF-EFFICACY (Noble et al., 1999)</b>									
I can see new market opportunities for new products and services.									
1	2	3	4	5	6	7	8	9	10
I can discover new ways to improve existing products.									
1	2	3	4	5	6	7	8	9	10
I can identify new areas for potential growth.									

1	2	3	4	5	6	7	8	9	10
I can design products that solve current problems.									
1	2	3	4	5	6	7	8	9	10
I can create products that fulfill customers' unmet needs.									
1	2	3	4	5	6	7	8	9	10
I can bring product concepts to market in a timely manner.									
1	2	3	4	5	6	7	8	9	10
I can determine what the business will look like.									
1	2	3	4	5	6	7	8	9	10
I can create a working environment that lets people be more their own boss.									
1	2	3	4	5	6	7	8	9	10
I can develop a working environment that encourages people to try out something new.									
1	2	3	4	5	6	7	8	9	10
I can encourage people to take initiatives and responsibilities for their ideas and decisions, regardless of outcome.									
1	2	3	4	5	6	7	8	9	10
I can form partner or alliance relationship with others.									
1	2	3	4	5	6	7	8	9	10
I can develop and maintain favorable relationships with potential investors.									
1	2	3	4	5	6	7	8	9	10
I can develop relationships with key people who are connected to capital sources.									
1	2	3	4	5	6	7	8	9	10
I can identify potential sources of funding for investment.									
1	2	3	4	5	6	7	8	9	10
I can articulate vision and values of the organization.									
1	2	3	4	5	6	7	8	9	10
I can inspire others to embrace vision and values of the company.									
1	2	3	4	5	6	7	8	9	10
I can formulate a set of actions in pursuit of opportunities.									
1	2	3	4	5	6	7	8	9	10
I can work productively under continuous stress, pressure and conflict.									
1	2	3	4	5	6	7	8	9	10
I can tolerate unexpected changes in business conditions.									
1	2	3	4	5	6	7	8	9	10
I can persist in the face of adversity.									
1	2	3	4	5	6	7	8	9	10

I can recruit and train key employees.									
1	2	3	4	5	6	7	8	9	10
I can develop contingency plans to backfill key technical staff.									
1	2	3	1	5	6	7	8	9	10
I can identify and build management teams.									
1	2	3	4	5	6	7	8	9	10
<b>BUSINESS INCUBATION CENTERS (Sahban et al., 2014)</b>									
I believe that the space that offered by the incubation centre is safe and free from any hazard.									
1	2	3	4	5	6	7	8	9	10
The space that offered by incubation centre provides basic equipments for the new start-ups in running a business.									
1	2	3	4	5	6	7	8	9	10
This incubation centre provides options for maximum use of resourses.									
1	2	3	4	5	6	7	8	9	10
This incubation centre has a huge laboratory to support business activities of the students.									
1	2	3	4	5	6	7	8	9	10
I believe that the working space is quiet comfortable and huge.									
1	2	3	4	5	6	7	8	9	10
I believe that the space offered by the incubation centre has a variety of sizes based on students' business requirements.									
1	2	3	4	5	6	7	8	9	10
I believe that the place offered by the business incubation centre is quite close to the target market.									
1	2	3	4	5	6	7	8	9	10
I believe that the space offered by the incubation centre is environmental friendly.									
1	2	3	4	5	6	7	8	9	10
I believe that this program has a central receptionist service that can be used for all students.									
1	2	3	4	5	6	7	8	9	10
I believe that this incubation centre has a conference room that can be used for multi purpose.									
1	2	3	4	5	6	7	8	9	10
The telephone and faxing in this incubation centre can be used together.									
1	2	3	4	5	6	7	8	9	10

I believe that this incubation centre provides security services for students to start up new business.									
1	2	3	4	5	6	7	8	9	10
I believe that the incubation centre provides equipments and utilities for all students.									
1	2	3	4	5	6	7	8	9	10
I believe that the incubation centre provides laboratories that can be utilized together.									
1	2	3	4	5	6	7	8	9	10
I believe that the internet connection in this incubation centre can be used together.									
1	2	3	4	5	6	7	8	9	10
I believe that renting transportation is available for all students.									
1	2	3	4	5	6	7	8	9	10
I believe that rooms, building and equipments in this incubation centre are well maintained.									
1	2	3	4	5	6	7	8	9	10
This centres provides financial assistance for the selected students who have made a good business plan.									
1	2	3	4	5	6	7	8	9	10
This Incubation centre provides education and training as well as research and development to enhance my potency in business.									
1	2	3	4	5	6	7	8	9	10
Incubation centre in this campus provide assistance to process various company legal services.									
1	2	3	4	5	6	7	8	9	10
This incubation centre provides assistance to do market opportunity analysis.									
1	2	3	4	5	6	7	8	9	10
This incubation centre provides administrative service such as secretarial, word processing, desktop publishing, telephone answering, photocopy, fax system, etc.									
1	2	3	4	5	6	7	8	9	10
This incubation centre is very much informative regarding current business issues that need to be avoided.									
1	2	3	4	5	6	7	8	9	10
Incubation centre provides technical guidance during the start up									
1	2	3	4	5	6	7	8	9	10
Incubation centre provide guidance on how to seek the potential investor or capitalist.									
1	2	3	4	5	6	7	8	9	10
This incubation centre will provides effective mentorship for early stage businesses.									
1	2	3	4	5	6	7	8	9	10

This incubation centre assist students in identifying business advisers and professionals who suit my business expertise.									
1	2	3	4	5	6	7	8	9	10
This incubation centre will provides access to the updated technology to orient my work to become an entrepreneur.									
1	2	3	4	5	6	7	8	9	10
This incubation centre provides education and training for the students regularly.									
1	2	3	4	5	6	7	8	9	10
I believe that this incubation centre has created social contact with banking institutions and government institutions to obtain capital and technology.									
1	2	3	4	5	6	7	8	9	10
I believe that the government regulation really support business incubator activities.									
1	2	3	4	5	6	7	8	9	10
I believe that the incubation management always give emotional support I need.									
1	2	3	4	5	6	7	8	9	10
This incubation program provides useful information regarding the business I will run.									
1	2	3	4	5	6	7	8	9	10
I believe that this incubation centre has many connection to business industries that can support business activities.									
1	2	3	4	5	6	7	8	9	10
I believe many students have made a number of products from research finding in this incubation centre.									
1	2	3	4	5	6	7	8	9	10
Incubation centre helps students with strategic planning, business plan development, financial planning, management team development etc.									
1	2	3	4	5	6	7	8	9	10
Education and training provided by the incubation centre can build my character/personality.									
1	2	3	4	5	6	7	8	9	10
This incubation centre provides a number of techniques for students to address difficult situation.									
1	2	3	4	5	6	7	8	9	10
I believe this incubation centre provides training to make the students to be more creative.									
1	2	3	4	5	6	7	8	9	10

This incubation centre held workshops / training with the theme "how to develop communication and presentation skills for the students.									
1	2	3	4	5	6	7	8	9	10
This incubation centre regularly holds a training on "how to maintain a relationship with stake holders.									
1	2	3	4	5	6	7	8	9	10
The incubation centre provides training to the students which improve their negotiation ability.									
1	2	3	4	5	6	7	8	9	10
Before meeting the venture capitalist, the incubation staff assist the students in effective preparation.									
1	2	3	4	5	6	7	8	9	10
This incubation centre helps students in raising bank finance, grants, venture capital, etc.									
1	2	3	4	5	6	7	8	9	10
I believe this incubation centre itself provides initial funding for the start ups.									
1	2	3	4	5	6	7	8	9	10
This incubation centre has capital access to banks or other financial institutions.									
1	2	3	4	5	6	7	8	9	10
This incubation centre provides a long term soft credit for the students.									
1	2	3	4	5	6	7	8	9	10
This incubation centre implements profit sharing system between incubation management and the students.									
1	2	3	4	5	6	7	8	9	10
I believe that this incubation centre maintains good relationship with all financial institutions to support students.									
1	2	3	4	5	6	7	8	9	10
The incubation staff assist <i>students</i> to allocate the funds according to the business needs.									
1	2	3	4	5	6	7	8	9	10
I believe there is a coordination among students and incubation centre to build a networking with higher educations, research institutions, entrepreneurs, professionals and international community.									
1	2	3	4	5	6	7	8	9	10
I believe the students here are also sharing their business experience with other entrepreneurs or freelancers.									
1	2	3	4	5	6	7	8	9	10
I believe this incubation centre has many business contact from the stakeholders to support business activities.									
1	2	3	4	5	6	7	8	9	10

In this incubation centre, there is a group of students who has commitment to establish new business together.									
1	2	3	4	5	6	7	8	9	10
I believe this incubation centre works with local government and industries, shoulder by shoulder to accelerate economic activities.									
1	2	3	4	5	6	7	8	9	10
<b>ENTREPRENEURIAL INTERNSHIP PROGRAM (Keat et al., 2011)</b>									
Feel confident about tackling unfamiliar work-based problems.									
1	2	3	4	5					
Good opportunity for self-development									
1	2	3	4	5					
Able to develop my technical skills.									
1	2	3	4	5					
Encouraging innovative ideas									
1	2	3	4	5					
Interesting and challenging work									
1	2	3	4	5					
Help to develop my problem-solving skills.									
1	2	3	4	5					
Had lots of real business experiences that are not found in the classroom.									
1	2	3	4	5					
Was used as expensive labor.									
1	2	3	4	5					
Develop my communication skills.									
1	2	3	4	5					
This activity broads my practical business experience									
1	2	3	4	5					
<b>ENTREPRENEURIAL INTENTION (Linan &amp; Chen, 2009)</b>									
I am ready to do anything to be an entrepreneur.									
1	2	3	4	5					
My professional goal is to be an entrepreneur.									
1	2	3	4	5					
I will make every effort to start and run my own business.									

	1	2	3	4	5	
	I am determined to create a business venture in the future.					
	1	2	3	4	5	
	I do not have doubts about ever starting my own business in the future.					
	1	2	3	4	5	
	I have very seriously thought of starting a business in the future.					
	1	2	3	4	5	
	I have a strong intention to start a business in the future.					
	1	2	3	4	5	
	My qualification has contributed positively towards my interest in starting a business.					
	1	2	3	4	5	
	I had a strong intention to start my own business before I started with my qualification.					
	1	2	3	4	5	



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**APPENDIX B:**

**Certified Translation (English to Indonesia)**



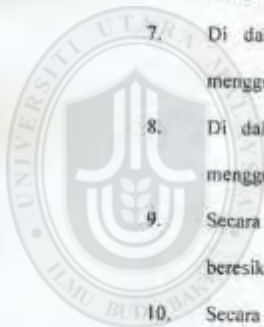
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### Orientasi Kewirausahaan ((Taatila, 2012)

1. Secara umum, ia lebih memilih barang dan jasa yang pernah dicoba sebelumnya dan tradisional dibandingkan barang dan jasa inovatif dan baru .
2. Selama tiga tahun terakhir, ia secara pribadi lebih berkomitmen untuk mengubah kehidupannya sendiri dibandingkan temannya .
3. Selama tiga tahun terakhir, ia secara pribadi kurang berkomitmen untuk mengubah kehidupannya sendiri dibandingkan temannya.
4. Perubahan yang ia lakukan untuk kehidupannya secara umum agak dramatis .
5. Perubahan yang ia lakukan untuk kehidupannya secara umum ditujukan untuk hal sederhana.
6. Di dalam berkomunikasi dengan orang lain, ia biasanya memulai tindakan sehingga orang lain kemudian menanggapi .
7. Di dalam kelompok sebayanya, ia biasanya salah satu yang pertama kali menggunakan produk, jasa dan lain-lain yang baru.
8. Di dalam kelompok sebayanya, ia sangat jarang menjadi yang pertama kali menggunakan produk, jasa baru dan lain-lain yang baru.
9. Secara umum, ia memiliki kesukaan yang mendalam untuk mengerjakan proyek beresiko tinggi.
10. Secara umum, ia memiliki kesukaan untuk mengerjakan proyek beresiko tinggi.
11. Ia mempercayai bahwa berdasarkan ciri khas lingkungan, cara terbaik untuk memahami lingkungan tersebut adalah dengan bersikap hati-hati dan bertahap.
12. Ia mempercayai bahwa berdasarkan ciri khas lingkungan, tindakan yang berani diperlukan .



13. Ketika dihadapkan dengan situasi pembuatan keputusan yang melibatkan ketidakpastian, ia biasanya menggunakan sikap hati-hati, "tunggu dan pahami" untuk mengurangi kemungkinan pembuatan keputusan yang salah.
14. Ketika dihadapkan dengan situasi pembuatan keputusan yang melibatkan ketidakpastian, ia biasanya menggunakan sikap berani, agresif demi meningkatkan kemungkinan untuk memanfaatkan peluang potensial.
15. Ia sangat senang bergaul, menggunakan waktunya untuk berkomunikasi dengan orang lain.
16. Ia secara aktif menggunakan jejaring sosial untuk mengembangkan pekerjaan/studinya.

#### **Orientasi Kewirausahaan (Bolton, 2012):**

##### *Pengambilan Resiko*

1. Saya ingin mengambil tindakan yang berani dengan menjalankan usaha yang belum saya ketahui sebelumnya
2. Saya bersedia untuk menggunakan waktu dan/atau uang saya untuk sesuatu yang dapat memberikan keuntungan modal yang tinggi.
3. Saya cenderung bertindak berani di dalam situasi yang melibatkan resiko.

##### *Sikap Inovatif*

4. Saya sering mencoba hal baru dan khusus yang tidak biasa namun tidak beresiko.



5. Secara umum, saya lebih memberikan penekanan yang lebih kuat di dalam penyelesaian pekerjaan dengan pendekatan khusus atau sejenis dibandingkan dengan menggunakan pendekatan yang pernah dicoba dan digunakan sebelumnya.
6. Saya lebih memilih untuk menggunakan cara saya yang khusus pada saat mempelajari hal baru dibandingkan dengan menggunakan cara yang digunakan sebagian besar orang.
7. Saya menyukai eksperimen dan pendekatan asli untuk penyelesaian masalah dibandingkan dengan menggunakan metode yang secara umum digunakan orang lain untuk menyelesaikan masalahnya sendiri.

*Sikap Proaktif*

8. Saya biasanya bertindak dengan memperhitungkan masalah, kebutuhan atau perubahan yang timbul di kemudian hari.
9. Saya cenderung berencana ke depan di dalam suatu pekerjaan.
10. Saya lebih menyukai "cepat melangkah" dan menjalankan berbagai hal pada suatu pekerjaan dari pada duduk dan menunggu orang lain melakukannya.

*Jaringan*

11. Ia sangat senang bergaul dengan menggunakan waktunya untuk berkomunikasi dengan orang lain.
12. Ia secara aktif menggunakan jaringan sosial untuk mengembangkan pekerjaan/studinya.

**Keyakinan Diri tentang Kemampuan Kewirausahaan (Noble et al., 1999)**

*Mengembangkan produk baru dan peluang pasar:*



1. Saya dapat melihat peluang pasar yang baru untuk barang dan jasa yang baru.
2. Saya dapat menemukan cara baru untuk meningkatkan produk yang ada.
3. Saya dapat mengidentifikasi bidang baru untuk pertumbuhan potensial.
4. Saya dapat merancang produk baru yang dapat menyelesaikan masalah yang sedang terjadi.
5. Saya dapat membuat produk yang memenuhi kebutuhan pelanggan yang belum terpenuhi.
6. Saya dapat membawa konsep produk ke suatu pasar secara cepat
7. Saya dapat menentukan bagaimana suatu usaha akan berjalan

*Membangun lingkungan inovatif*

8. Saya dapat membuat lingkungan kerja yang memudahkan setiap orang untuk mampu memimpin dirinya sendiri.
9. Saya dapat mengembangkan lingkungan kerja yang mendukung setiap orang untuk mencoba hal baru.
10. Saya dapat mendorong orang lain untuk berani mengambil inisiatif dan tanggung jawab atas gagasan dan keputusan yang dibuat terlepas dari hasil yang akan dicapai.
11. Saya dapat membentuk hubungan kemitraan atau kerjasama dengan orang lain.

*Memulai hubungan investor*

12. Saya dapat mengembangkan dan memelihara hubungan yang baik dengan calon investor.
13. Saya dapat mengembangkan hubungan dengan tokoh kunci yang terkait dengan sumber modal.



14. Saya dapat mencari sumber dana untuk investasi.

*Mendefinisikan tujuan utama:*

15. Saya dapat menjelaskan visi dan nilai suatu organisasi
16. Saya dapat menginspirasi orang lain untuk menjalankan visi dan nilai perusahaan.
17. Saya dapat merumuskan beberapa tindakan untuk mewujudkan peluang.

*Menyelesaikan tantangan yang tidak dapat diperkirakan sebelumnya*

18. Saya dapat bekerja secara produktif walau di bawah tekanan dan konflik.
19. Saya dapat mentolerir perubahan yang tidak terduga di dalam kondisi usaha
20. Saya dapat bertahan di tengah kesulitan.

*Pengembangan Sumberdaya Manusia Kritis*

21. Saya dapat merekrut dan melatih karyawan inti.
22. Saya dapat mengembangkan rencana darurat untuk mendukung staf teknis utama
23. Saya dapat mengidentifikasi dan membangun tim manajemen.

Universiti Utara Malaysia  
Program Magang Kewirausahaan (Keat, 2011)

1. Merasa percaya diri untuk menyelesaikan masalah usah yang tidak biasa.
2. Membantu mengembangkan kemampuan untuk merencanakan dan mengatur pekerjaan sehari-hari.
3. Membantu mengembangkan kemampuan yang berhubungan dengan pekerjaan.



4. Memberikan saya berbagai ide usaha.
5. Tidak banyak belajar dari pengalaman .(R)
6. Membantu mengembangkan kemampuan penyelesaian masalah saya.
7. Menemukan berbagai pengalaman usaha nyata yang tidak dipelajari di kelas.
8. Digunakan sebagai tenaga kerja murah. (R)
9. Mengembangkan kemampuan komunikasi saya.
10. Tidak mengembangkan pengetahuan usaha praktis .(R)

**Angket Niat Kewirausahaan (Liñán & Chen, 2009 cited in Malebana, 2011)**

Skala Likert 7-Nilai

1. Saya siap melakukan apapun untuk menjadi pengusaha.
2. Tujuan profesional saya adalah menjadi pengusaha.
3. Saya akan berupaya untuk memulai dan menjalankan usaha saya sendiri.
4. Saya bertekad untuk membuat kerjasama usaha di masa mendatang.
5. Saya tidak merasa ragu untuk memulai usaha saya sendiri di masa mendatang.
6. Saya telah memikirkan secara serius untuk memulai suatu usaha di masa mendatang
7. Saya memiliki niat yang kuat untuk memulai usaha di masa mendatang. \_\_\_\_\_
8. Kualifikasi yang saya miliki telah memberikan kontribusi positif terhadap minat saya untuk memulai suatu usaha.
9. Saya memiliki niat yang kuat untuk memulai usaha saya sendiri sebelum saya memulai dengan kualifikasi yang saya miliki.

Dokumen ini telah diterjemahkan dari bahasa Inggris ke dalam bahasa Indonesia oleh Penerjemah Resmi dan Tersumpah, Eko Tjahyadi, berdasarkan SK. Gubernur 1765/2006. Jakarta, 16 Februari 2015





**APPENDIX C:**  
**Questionnaire (Indonesian)**

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Dibagian berikut, ada sejumlah pertanyaan yang mungkin saja sesuai maupun tidak dengan kondisi kehidupan anda. Dengan menggunakan skala dari sangat tidak setuju sampai sangat setuju, tentukan tingkat kesesuaian dengan kondisi kehidupan dan pandangan anda dengan cara memberikan tanda centang (√) pada kotak yang telah disediakan pada tiap pertanyaan. **Tidak ada Pertanyaan yang benar atau salah dalam pengisian kuesioner ini.** Anda hanya diminta untuk memberikan jawaban yang sangat menggambarkan diri anda. Jika mengalami kesulitan dalam pemahaman, mohon jawab pertanyaan yang lebih mudah terlebih dahulu. Jawaban anda sangat rahasia dan penting untuk keakuratan studi ini.

Jurusan :  Manajemen  Ekonomi  Akuntansi

Semester :

Jenis Kelamin :  Male  Female

		<b>ORIENTASI BERWIRAUSAHA</b>						
<b>Sangat Tidak Setuju</b>	Saya suka mengambil tindakan yang berani dengan menjalankan usaha yang belum saya ketahui sebelumnya.							<b>Sangat Setuju</b>
	1	2	3	4	5			
	Saya bersedia untuk menggunakan waktu dan/atau uang saya untuk sesuatu yang dapat memberikan keuntungan modal yang tinggi.							
	1	2	3	4	5			
	Saya cenderung bertindak berani di dalam situasi yang beresiko tinggi.							
	1	2	3	4	5			
	Saya sering mencoba hal-hal baru dalam aktivitas saya.							
	1	2	3	4	5			
	Secara umum, saya cenderung melakukan pendekatan khusus atau sejenis dalam penyelesaian suatu pekerjaan dibandingkan dengan menggunakan pendekatan yang pernah dicoba dan digunakan sebelumnya.							
	1	2	3	4	5			
	Saya lebih memilih untuk menggunakan cara saya pribadi pada saat mempelajari hal baru dibandingkan dengan menggunakan cara yang digunakan sebagian besar orang.							
	1	2	3	4	5			
Saya menyukai eksperimen dan pendekatan pribadi untuk								

penyelesaian suatu masalah dibandingkan dengan menggunakan metode yang secara umum digunakan orang lain untuk menyelesaikan masalahnya sendiri									
1	2	3	4	5					
Saya biasanya bertindak dengan memperhitungkan masalah, kebutuhan atau perubahan yang timbul di kemudian hari.									
1	2	3	4	5					
Saya cenderung berencana jauh kedepan dalam melaksanakan suatu pekerjaan									
1	2	3	4	5					
Saya lebih menyukai melangkah dengan cepat dalam menjalankan berbagai hal pada suatu pekerjaan dari pada duduk dan menunggu orang lain melakukannya.									
1	2	3	4	5					
<b>DUKUNGAN SOSIAL</b>									
Keluarga saya selalu memberikan informasi yang berguna terkait dengan peluang bisnis yang baik untuk saya.									
1	2	3	4	5	6	7	8	9	10
Keluarga saya selalu memberikan informasi terbaru mengenai situasi didunia usaha yang selalu berubah-ubah.									
1	2	3	4	5	6	7	8	9	10
Keluarga saya memberikan saran yang jelas tentang bagaimana memulai suatu usaha yang baik dan benar.									
1	2	3	4	5	6	7	8	9	10
Keluarga saya memberikan gagasan yang bagus terkait bagaimana menjalani suatu bisnis dengan baik.									
1	2	3	4	5	6	7	8	9	10
Orangtua saya selalu mendukung keputusan saya untuk menjadi seorang pengusaha.									
1	2	3	4	5	6	7	8	9	10
Dalam membuat rancangan bisnis, saya yakin keluarga saya akan selalu bersedia untuk berbagi tanggung jawab.									
1	2	3	4	5	6	7	8	9	10
Saya merasa dapat bergantung pada keluarga saya untuk setiap dukungan emosional dalam pembuatan usaha baru.									

1	2	3	4	5	6	7	8	9	10
Keluarga saya akan selalu memberikan dukungan moral untuk memulai usaha baru.									
1	2	3	4	5	6	7	8	9	10
Keluarga saya selalu mendorong saya agar dapat memulai suatu bisnis/usaha baru dengan rasa percaya diri.									
1	2	3	4	5	6	7	8	9	10
Saya percaya keluarga saya akan bersedia untuk memberikan dukungan finansial jika saya memulai suatu usaha baru.									
1	2	3	4	5	6	7	8	9	10
Saya akan berkonsultasi dengan keluarga saya jika saya menemukan kesulitan bisnis nantinya.									
1	2	3	4	5	6	7	8	9	10
Saya dapat mempercayai anggota keluarga saya dalam memberikan solusi ketika saya mempunyai masalah dalam berbisnis nanti.									
1	2	3	4	5	6	7	8	9	10
Keluarga saya mempunyai banyak teman dari dunia usaha yang dapat membantu untuk memulai bisnis saya nanti.									
1	2	3	4	5	6	7	8	9	10
Keluarga saya akan memberikan rekomendasi yang bagus dalam hal menentukan tempat/lokasi jika saya memulai suatu usaha nanti.									
1	2	3	4	5	6	7	8	9	10
Saya dan keluarga akan mengatur bersama pembuatan suatu usaha baru.									
1	2	3	4	5	6	7	8	9	10
Teman saya akan selalu mendukung dan memberikan saya motivasi untuk membuat suatu usaha baru.									
1	2	3	4	5	6	7	8	9	10
Teman saya memberikan informasi yang berguna terkait bidang bisnis yang akan saya jalani.									
1	2	3	4	5	6	7	8	9	10
Teman saya akan membantu saya untuk membuat keputusan terkait bisnis yang akan saya jalani.									
1	2	3	4	5	6	7	8	9	10
Teman saya bersedia untuk berbagi tanggung jawab terkait usaha yang akan saya jalani.									

1	2	3	4	5	6	7	8	9	10
Saya percaya kepada teman-teman saya dalam memberikan saran yang benar untuk menjadi seorang wirausahawan.									
1	2	3	4	5	6	7	8	9	10
Teman saya memotivasi agar saya lebih percaya diri untuk memulai suatu bisnis.									
1	2	3	4	5	6	7	8	9	10
Saya yakin teman saya memberikan saran yang berguna ketika saya berbicara tentang rancangan bisnis yang saya buat.									
1	2	3	4	5	6	7	8	9	10
Saya yakin teman saya akan membantu untuk membuat jaringan bisnis dengan para pelaku bisnis.									
1	2	3	4	5	6	7	8	9	10
Saya yakin teman saya akan membantu melakukan observasi untuk menemukan tempat yang tepat untuk memulai suatu usaha baru.									
1	2	3	4	5	6	7	8	9	10
Saya yakin teman saya bersedia mendukung saya dalam mengatur berbagai aktivitas bisnis saya.									
1	2	3	4	5	6	7	8	9	10
<b>EFIKASI DIRI</b>									
Saya dapat melihat peluang pasar yang baru untuk barang dan jasa yang baru.									
1	2	3	4	5	6	7	8	9	10
Saya dapat menemukan cara baru untuk meningkatkan produk yang sudah ada.									
1	2	3	4	5	6	7	8	9	10
Saya dapat mengidentifikasi bidang baru untuk suatu pertumbuhan yang potensial.									
1	2	3	4	5	6	7	8	9	10
Saya dapat merancang produk baru yang dapat menyelesaikan masalah yang sedang terjadi.									
1	2	3	4	5	6	7	8	9	10
Saya dapat membuat produk yang mampu memenuhi kebutuhan pelanggan yang belum terpenuhi.									
1	2	3	4	5	6	7	8	9	10

Saya dapat membawa konsep produk ke suatu pasar secara cepat									
1	2	3	4	5	6	7	8	9	10
Saya dapat menentukan bagaimana suatu usaha akan berjalan.									
1	2	3	4	5	6	7	8	9	10
Saya dapat membuat lingkungan kerja yang memudahkan setiap orang untuk mampu memimpin dirinya sendiri.									
1	2	3	4	5	6	7	8	9	10
Saya dapat mengembangkan lingkungan kerja yang mendukung setiap orang untuk mencoba hal baru.									
1	2	3	4	5	6	7	8	9	10
Saya dapat mendorong orang lain untuk berani mengambil inisiatif dan tanggung jawab atas gagasan dan keputusan yang dibuat terlepas dari hasil yang akan dicapai.									
1	2	3	4	5	6	7	8	9	10
Saya dapat membentuk hubungan kemitraan atau kerjasama dengan orang lain									
1	2	3	4	5	6	7	8	9	10
Saya dapat mengembangkan dan memelihara hubungan yang baik dengan calon investor.									
1	2	3	4	5	6	7	8	9	10
Saya dapat mengembangkan hubungan dengan tokoh kunci yang terkait dengan sumber modal.									
1	2	3	4	5	6	7	8	9	10
Saya dapat mencari sumber dana untuk investasi.									
1	2	3	4	5	6	7	8	9	10
Saya dapat menjelaskan visi dan nilai suatu organisasi.									
1	2	3	4	5	6	7	8	9	10
Saya dapat menginspirasi orang lain untuk menjalankan visi dan nilai perusahaan.									
1	2	3	4	5	6	7	8	9	10
Saya dapat merumuskan beberapa tindakan untuk mewujudkan suatu peluang.									
1	2	3	4	5	6	7	8	9	10
Saya dapat bekerja secara produktif walau di bawah tekanan dan konflik.									
1	2	3	4	5	6	7	8	9	10
Saya dapat mentolerir perubahan yang tidak terduga di dalam									

kondisi usaha.									
1	2	3	4	5	6	7	8	9	10
Saya dapat bertahan di tengah kesulitan.									
1	2	3	4	5	6	7	8	9	10
Saya dapat merekrut dan melatih karyawan inti.									
1	2	3	4	5	6	7	8	9	10
Saya dapat mengembangkan rencana darurat untuk mendukung staf teknis utama.									
1	2	3	4	5	6	7	8	9	10
Saya dapat mengidentifikasi dan membangun tim manajemen.									
1	2	3	4	5	6	7	8	9	10
<b>INKUBATOR BISNIS</b>									
Saya yakin tempat yang ditawarkan oleh program inkubator cukup aman dan bebas dari berbagai gangguan berbahaya.									
1	2	3	4	5	6	7	8	9	10
Tempat ini menyediakan perlengkapan dasar untuk para pemula dalam menjalankan bisnisnya.									
1	2	3	4	5	6	7	8	9	10
Program inkubator ini menyediakan pilihan tempat kerja bagi mahasiswa/tenant agar dapat menggunakan sumberdaya secara maksimal.									
1	2	3	4	5	6	7	8	9	10
Program inkubator ini mempunyai laboratorium yang cukup besar untuk mendukung kegiatan bisnis mahasiswa/tenant.									
1	2	3	4	5	6	7	8	9	10
Saya percaya bahwa tempat bekerja didalam inkubator ini cukup luas dan nyaman.									
1	2	3	4	5	6	7	8	9	10
Saya percaya bahwa tempat yang ditawarkan oleh program inkubator mempunyai ukuran yang bermacam-macam, sehingga mahasiswa dapat memilih kegiatan berdasarkan kebutuhan bisnis mereka.									
1	2	3	4	5	6	7	8	9	10
Saya percaya bahwa tempat yang ditawarkan oleh program inkubator cukup dekat dengan target pasar.									
1	2	3	4	5	6	7	8	9	10

Saya percaya bahwa tempat yang ditawarkan oleh pusat inkubator ini ramah lingkungan.									
1	2	3	4	5	6	7	8	9	10
Saya percaya bahwa program ini mempunyai pusat pelayanan resepsionis yang bisa digunakan bersama.									
1	2	3	4	5	6	7	8	9	10
Saya percaya bahwa program inkubator ini mempunyai ruang pertemuan yang dapat digunakan untuk berbagai kepentingan bisnis.									
1	2	3	4	5	6	7	8	9	10
Telepon dan faksimili di program inkubator bisa digunakan bersama-sama.									
1	2	3	4	5	6	7	8	9	10
Saya percaya bahwa program inkubator ini menyediakan jasa keamanan untuk mahasiswa guna memulai bisnis yang baru.									
1	2	3	4	5	6	7	8	9	10
Saya percaya bahwa program inkubator menyediakan perlengkapan dan keperluan semua mahasiswa.									
1	2	3	4	5	6	7	8	9	10
Saya percaya bahwa program inkubator menyediakan laboratorium yang dapat digunakan bersama.									
1	2	3	4	5	6	7	8	9	10
Saya percaya bahwa koneksi internet di program inkubator ini bisa digunakan bersama.									
1	2	3	4	5	6	7	8	9	10
Saya percaya bahwa penyewaan transportasi tersedia untuk semua mahasiswa.									
1	2	3	4	5	6	7	8	9	10
Saya percaya bahwa ruangan, bangunan, dan peralatan di program inkubator ini dirawat dengan baik.									
1	2	3	4	5	6	7	8	9	10
Pusat inkubator ini menyediakan bantuan keuangan untuk mahasiswa terpilih yang mempunyai rancangan bisnis yang bagus.									
1	2	3	4	5	6	7	8	9	10
Program inkubator ini menyediakan pendidikan dan pelatihan untuk meningkatkan potensi bisnis para mahasiswanya.									
1	2	3	4	5	6	7	8	9	10
Program inkubator dikampus ini dapat membantu									

mahasiswa/tenant dalam hal izin atau legalitas suatu bisnis/usaha.									
1	2	3	4	5	6	7	8	9	10
Program inkubator ini selalu membantu mahasiswa dalam melakukan analisa peluang pasar.									
1	2	3	4	5	6	7	8	9	10
Program inkubator ini menyediakan jasa administratif seperti sekretariat, penjawaban telpon, fotokopi, fax, dll.									
1	2	3	4	5	6	7	8	9	10
Program inkubator ini sangat informatif berkaitan dengan isu terbaru yang perlu untuk dihindari.									
1	2	3	4	5	6	7	8	9	10
Program inkubator ini menyediakan bimbingan teknis selama awal bisnis.									
1	2	3	4	5	6	7	8	9	10
Program inkubator memberikan bimbingan bagaimana untuk mencari investor atau pemilik modal yang potensial.									
1	2	3	4	5	6	7	8	9	10
Program inkubator ini menyediakan mentoring efektif untuk para pemula bisnis.									
1	2	3	4	5	6	7	8	9	10
Program inkubator ini membantu mahasiswa mencari penasihat bisnis atau para profesional yang sesuai dengan keahlian bisnisnya.									
1	2	3	4	5	6	7	8	9	10
Program inkubator ini akan menyediakan akses teknologi terbaru untuk mendukung saya menjadi seorang pengusaha.									
1	2	3	4	5	6	7	8	9	10
Program inkubator ini menyediakan pendidikan dan pelatihan untuk mahasiswa secara rutin.									
1	2	3	4	5	6	7	8	9	10
Saya percaya bahwa program inkubator telah membuat hubungan sosial dengan bank dan lembaga pemerintah untuk mendapatkan bantuan modal dan teknologi.									
1	2	3	4	5	6	7	8	9	10
Saya percaya bahwa peraturan pemerintah sangat mendukung kegiatan-kegiatan dalam program inkubator ini.									
1	2	3	4	5	6	7	8	9	10
Saya percaya bahwa manajemen inkubator dan trainer selalu memberikan dukungan emosional yang dibutuhkan para pemula									



bisnis.									
1	2	3	4	5	6	7	8	9	10
Program pelatihan ini menyediakan informasi penting yang berkaitan dengan bisnis yang akan jalani oleh para mahasiswa/pemula.									
1	2	3	4	5	6	7	8	9	10
Saya percaya bahwa program inkubator ini mempunyai banyak jaringan industri bisnis yang dapat mendukung kegiatan bisnis para pemula.									
1	2	3	4	5	6	7	8	9	10
Saya yakin banyak mahasiswa telah membuat beberapa produk dari hasil penelitian di program inkubator ini.									
1	2	3	4	5	6	7	8	9	10
Program inkubator ini membantu mahasiswanya dalam menyusun rencana strategis, pengembangan bisnis plan, pengembangan tim manajemen, dll.									
1	2	3	4	5	6	7	8	9	10
Saya percaya pendidikan dan pelatihan yang disediakan oleh program inkubator dapat membangun karakter/kepribadian para mahasiswa/pemula.									
1	2	3	4	5	6	7	8	9	10
Program inkubator ini menyediakan beberapa teknik bagi mahasiswa/pemula untuk menghadapi situasi sulit.									
1	2	3	4	5	6	7	8	9	10
Saya percaya program inkubator ini menyediakan pelatihan bagi mahasiswa untuk lebih kreatif dalam melakukan bisnis.									
1	2	3	4	5	6	7	8	9	10
Program inkubator ini selalu mengadakan workshop/pelatihan yang bertujuan untuk mengembangkan kemampuan komunikasi pada mahasiswanya.									
1	2	3	4	5	6	7	8	9	10
Program inkubator ini kerap melatih mahasiswa agar dapat membina hubungan yang baik dengan para pelaku bisnis									
1	2	3	4	5	6	7	8	9	10
Program inkubator ini menyediakan pelatihan kepada para mahasiswa untuk meningkatkan kemampuan mereka dalam bernegosiasi.									
1	2	3	4	5	6	7	8	9	10
Sebelum melakukan presentasi dengan para pemilik modal, mahasiswa dibantu untuk melakukan persiapan yang efektif dan									

efisien.									
1	2	3	4	5	6	7	8	9	10
Saya yakin program inkubator ini membantu para mahasiswa untuk memperoleh dana dari bank, lembaga keuangan lainnya atau dari para pemilik modal.									
1	2	3	4	5	6	7	8	9	10
Saya percaya program inkubator ini memberikan dana awal untuk para mahasiswanya untuk membuat bisnis baru.									
1	2	3	4	5	6	7	8	9	10
Saya yakin program inkubator ini mempunyai akses modal dari sektor bank atau lembaga keuangan lainnya.									
1	2	3	4	5	6	7	8	9	10
Program inkubator ini menyediakan kredit lunak jangka panjang bagi para mahasiswa.									
1	2	3	4	5	6	7	8	9	10
Program inkubator ini menerapkan sistem bagi hasil antara manajemen inkubator dan para mahasiswanya.									
1	2	3	4	5	6	7	8	9	10
Saya yakin program inkubator ini menjaga hubungan baik dengan semua lembaga keuangan untuk mendukung para mahasiswa/pemula dalam menjalankan bisnis.									
1	2	3	4	5	6	7	8	9	10
Staf inkubator membantu mahasiswa mengalokasikan dana berdasarkan kebutuhan bisnis mereka.									
1	2	3	4	5	6	7	8	9	10
Saya percaya adanya koordinasi antara mahasiswa dengan pihak inkubator untuk membangun jaringan dengan pendidikan tinggi, lembaga penelitian, pengusaha, para profesional atau komunitas internasional.									
1	2	3	4	5	6	7	8	9	10
Saya percaya mahasiswa disini juga berbagi pengalaman bisnis mereka dengan para pebisnis lainnya.									
1	2	3	4	5	6	7	8	9	10
Saya percaya program inkubator ini mempunyai banyak kontak bisnis dari para pelaku usaha untuk mendukung kegiatan bisnis.									
1	2	3	4	5	6	7	8	9	10
Diprogram inkubator ini, ada sekelompok mahasiswa yang mempunyai komitmen untuk mendirikan bisnis secara bersama-sama.									

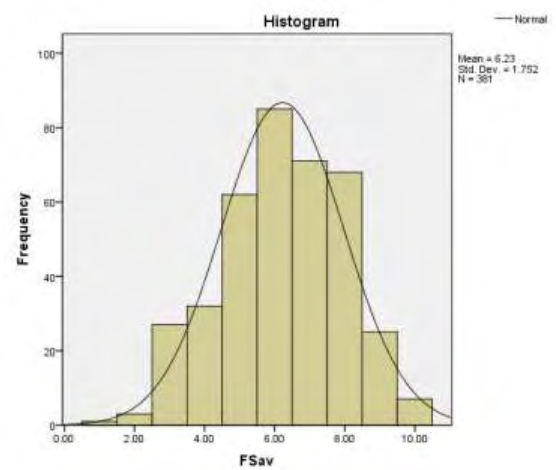
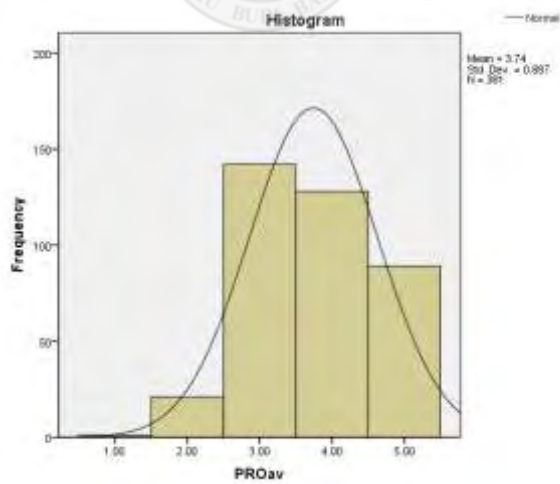
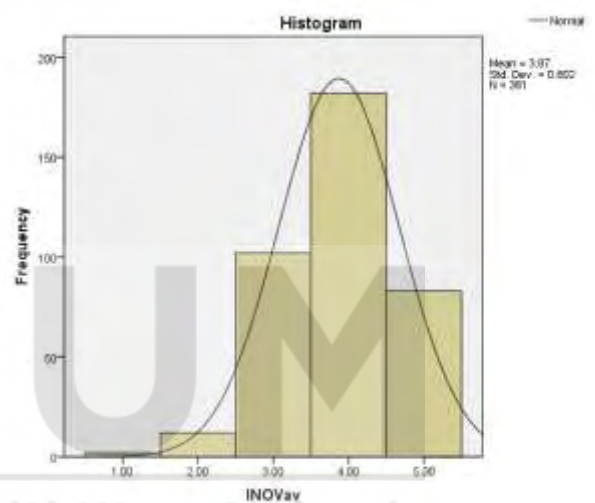
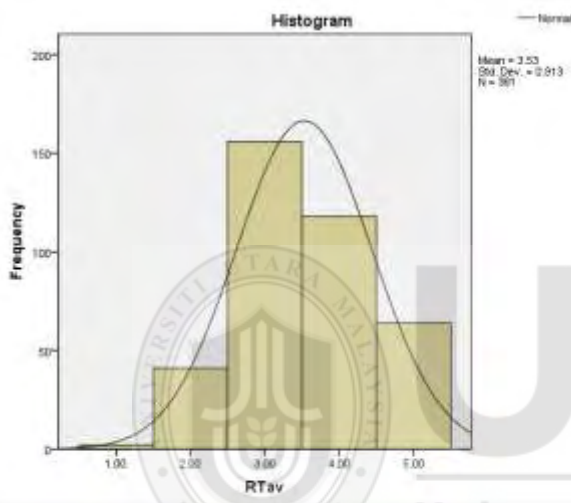
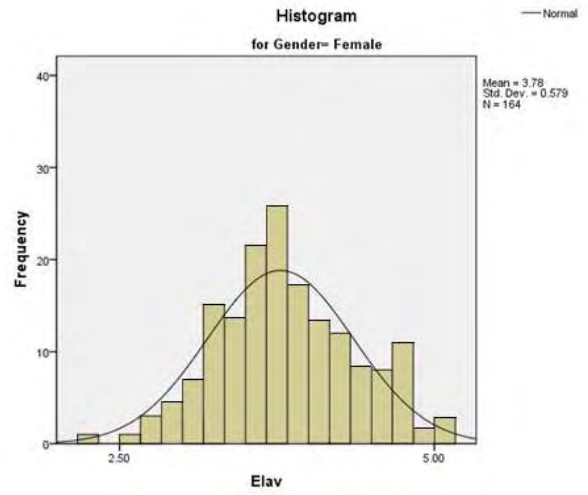
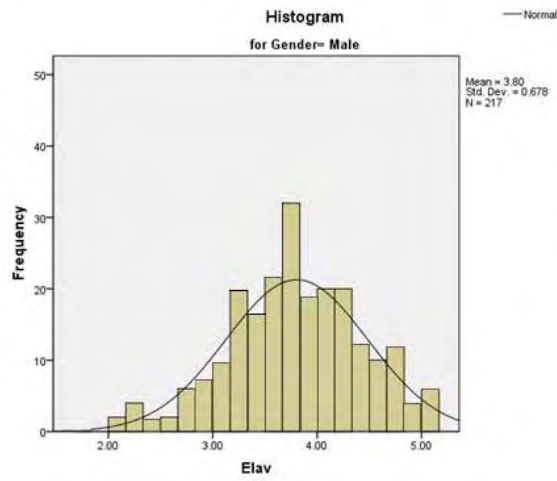
1	2	3	4	5	6	7	8	9	10
Saya percaya program inkubator ini bekerja dengan pemerintah lokal, industri besar maupun UKM, bahu-membahu untuk mempercepat kegiatan ekonomi.									
1	2	3	4	5	6	7	8	9	10
<b>PROGRAM MAGANG KEWIRAUSAHAAN</b>									
Merasa percaya diri untuk menyelesaikan masalah usaha yang tidak biasa.									
1	2	3	4	5					
Kesempatan baik untuk pengembangan diri.									
1	2	3	4	5					
Mampu mengembangkan keahlian teknis saya.									
1	2	3	4	5					
Memberikan saya berbagai ide yang inovatif									
1	2	3	4	5					
Pekerjaan menarik dan menantang									
1	2	3	4	5					
Membantu mengembangkan kemampuan penyelesaian masalah saya									
1	2	3	4	5					
Menemukan berbagai pengalaman usaha nyata yang tidak dipelajari di kelas.									
1	2	3	4	5					
Digunakan sebagai tenaga kerja dengan gaji yang tinggi.									
1	2	3	4	5					
Mengembangkan kemampuan komunikasi saya.									
1	2	3	4	5					
Aktivitas ini memperluas pengalaman bisnis saya.									
1	2	3	4	5					
<b>MINAT KEWIRAUSAHAAN</b>									
Saya siap melakukan apapun untuk menjadi pengusaha									
1	2	3	4	5					

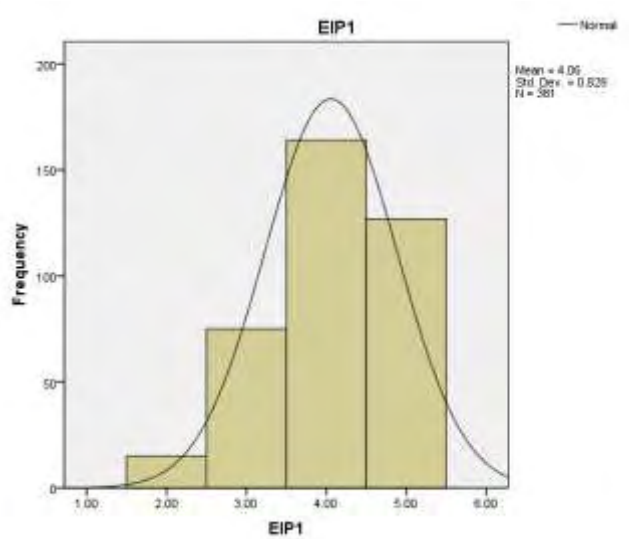
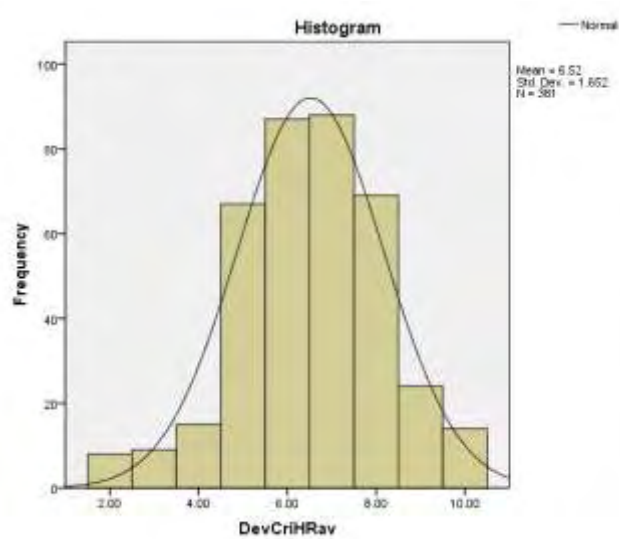
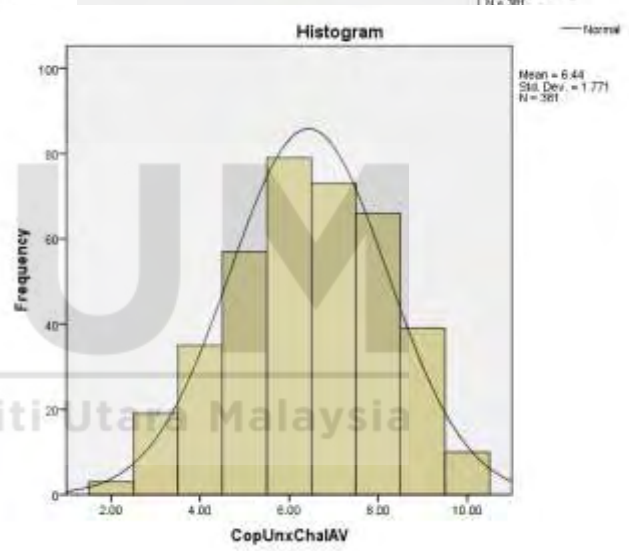
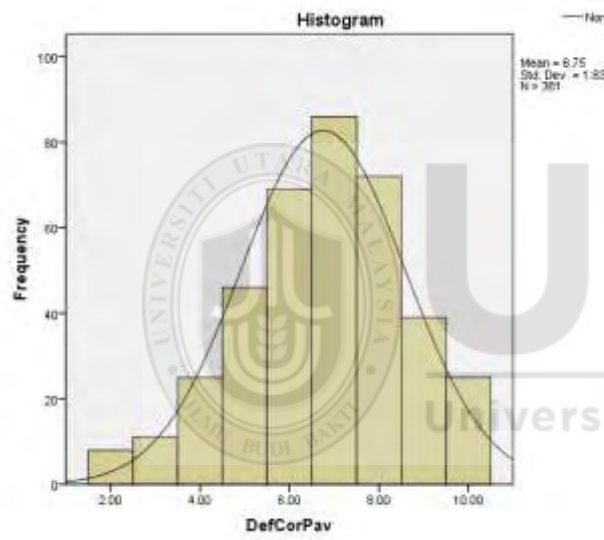
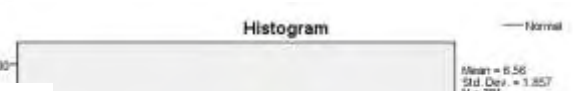
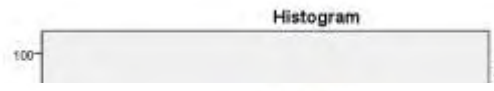
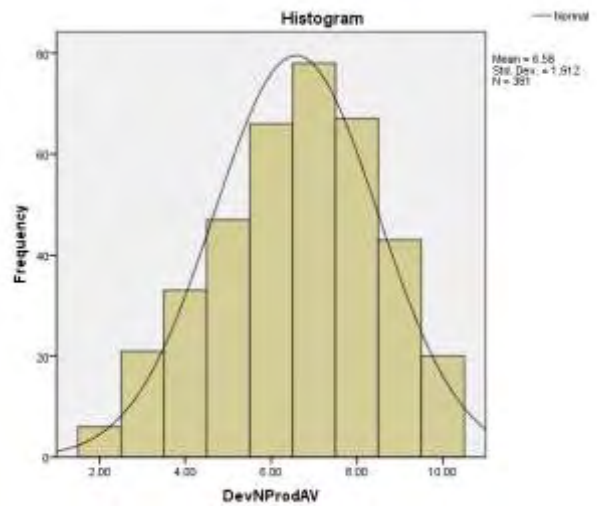
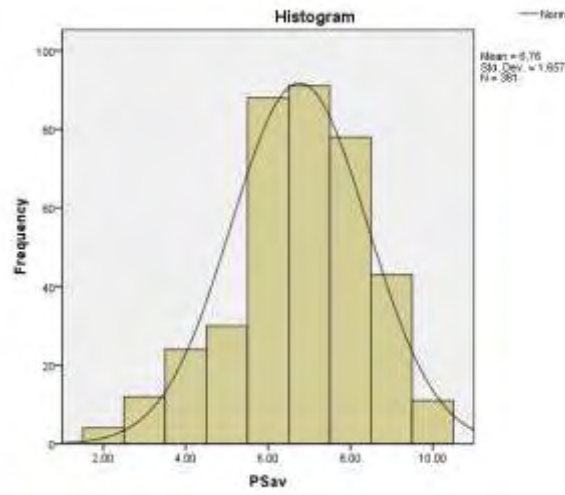
Tujuan profesional saya adalah menjadi pengusaha.				
1	2	3	4	5
Saya akan berupaya untuk memulai dan menjalankan usaha saya sendiri				
1	2	3	4	5
Saya bertekad untuk membuat kerjasama usaha di masa mendatang				
1	2	3	4	5
Saya tidak merasa ragu untuk memulai usaha saya sendiri di masa mendatang				
1	2	3	4	5
Saya telah memikirkan secara serius untuk memulai suatu usaha di masa mendatang				
1	2	3	4	5
Saya memiliki niat yang kuat untuk memulai usaha di masa mendatang				
1	2	3	4	5
Kualifikasi yang saya miliki telah memberikan kontribusi positif terhadap minat saya untuk memulai suatu usaha				
1	2	3	4	5
Saya memiliki niat yang kuat untuk memulai usaha saya sendiri sebelum saya memulai dengan kualifikasi yang saya miliki.				
1	2	3	4	5

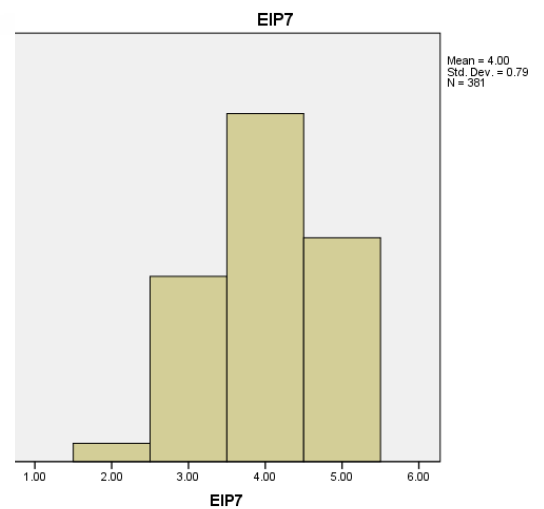
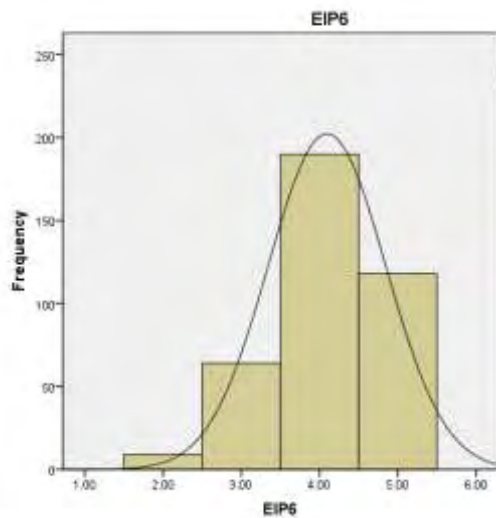
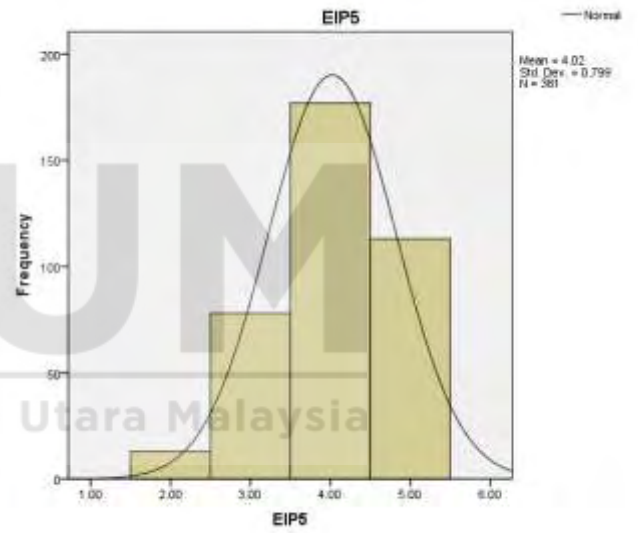
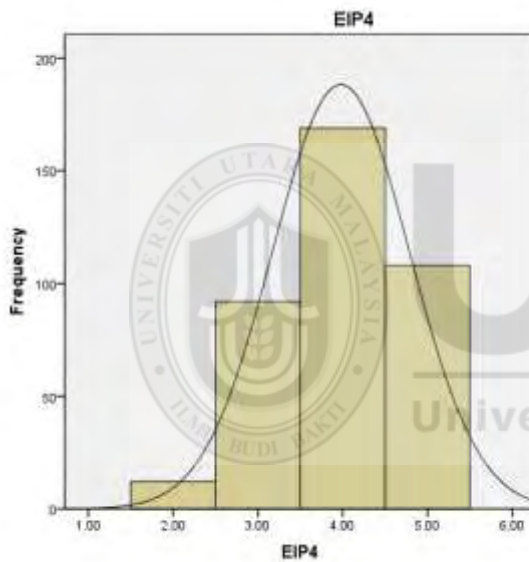
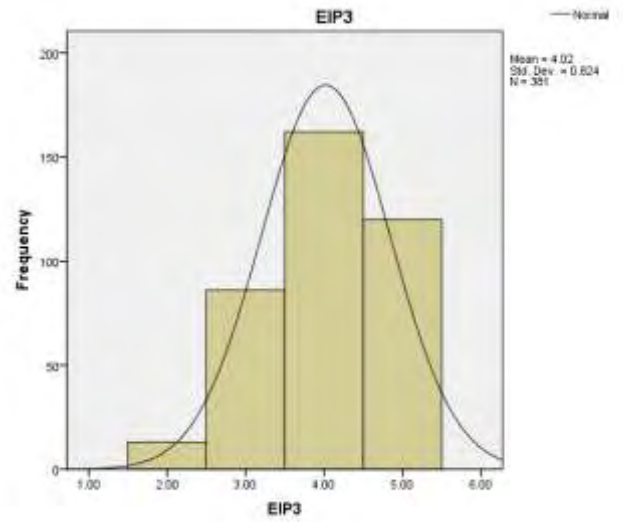
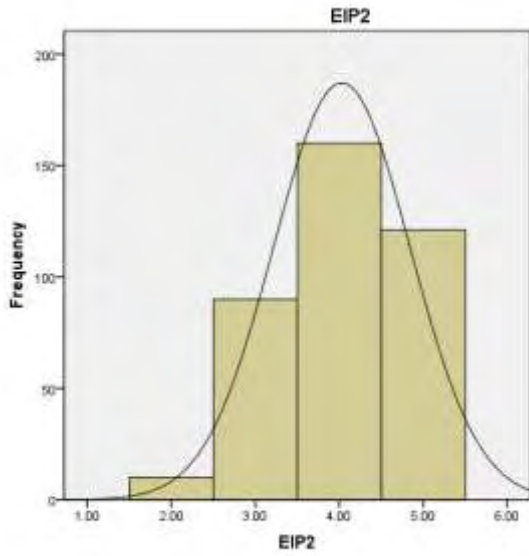


**APPENDIX D:**  
**Histograms and Q-Q Plot**

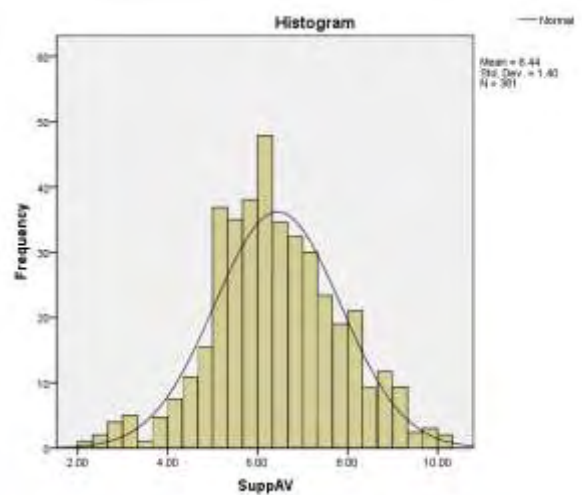
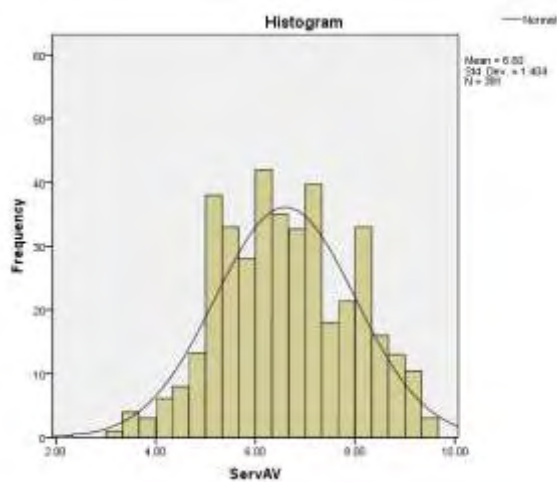
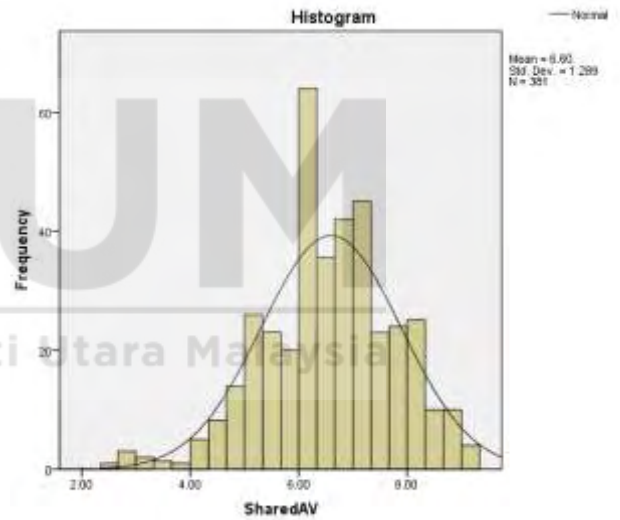
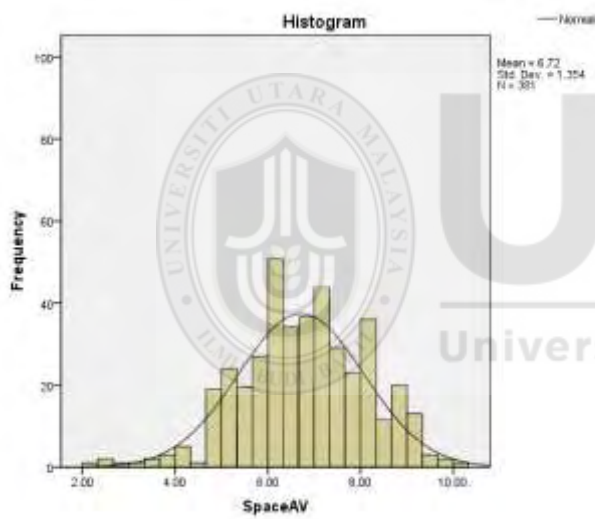
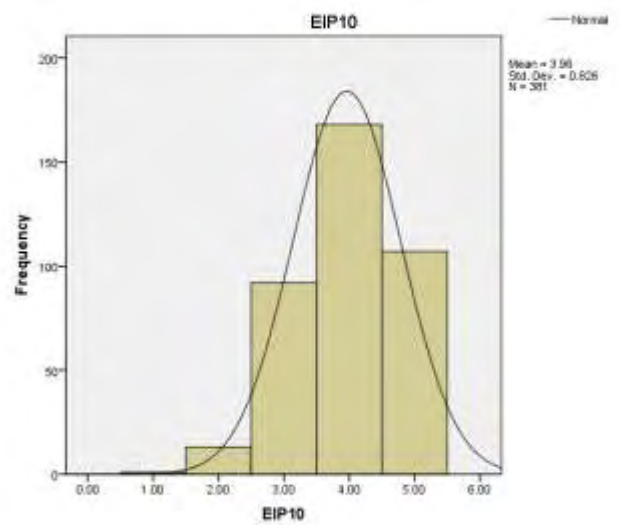
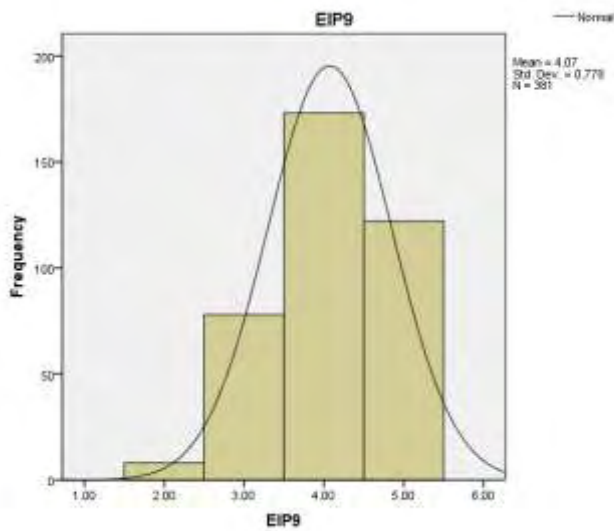
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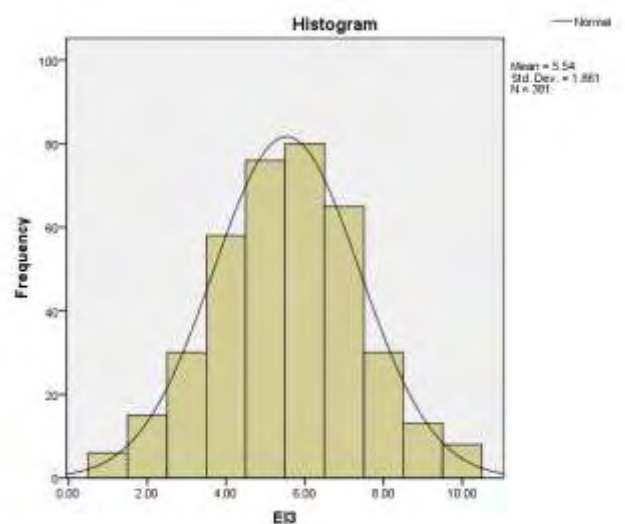
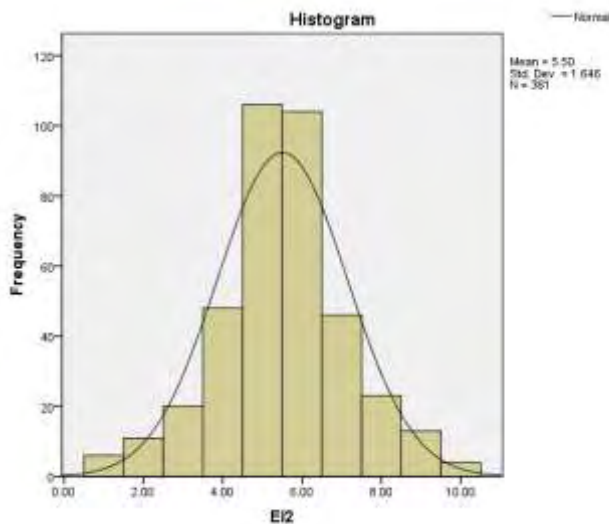
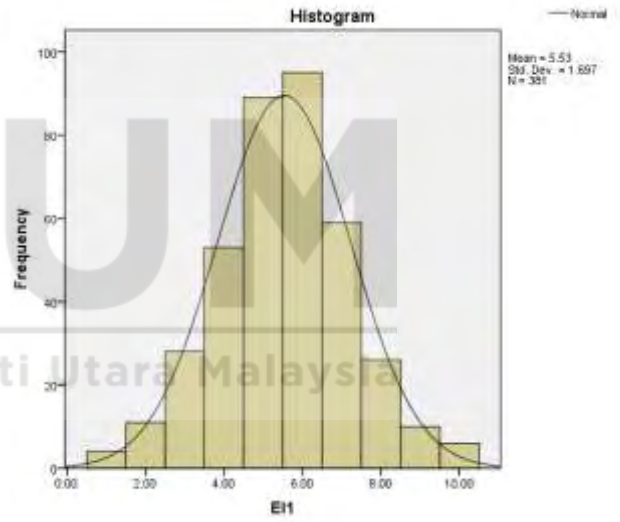
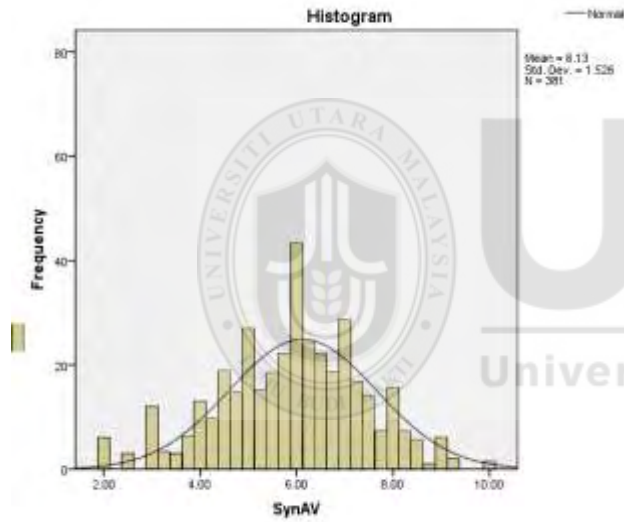
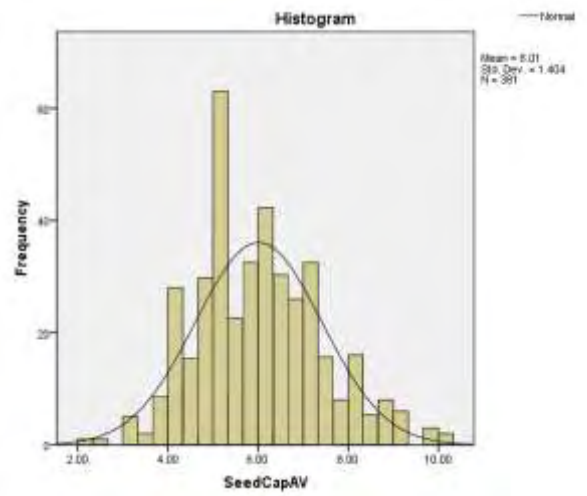
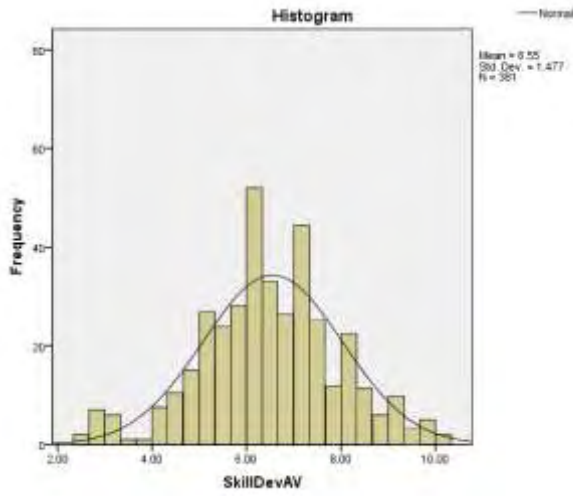


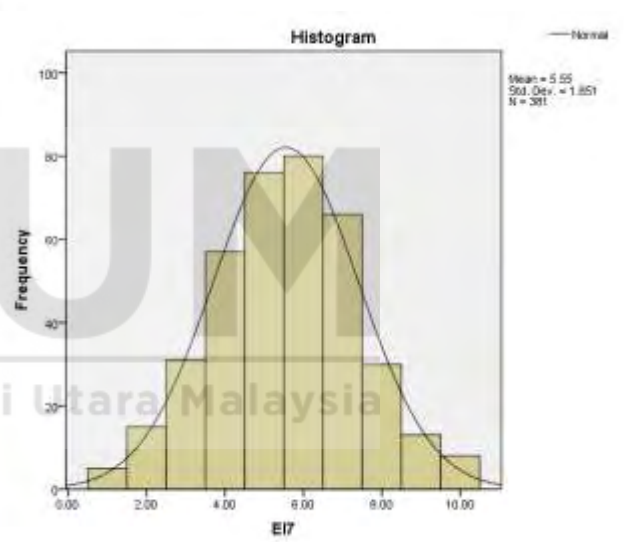
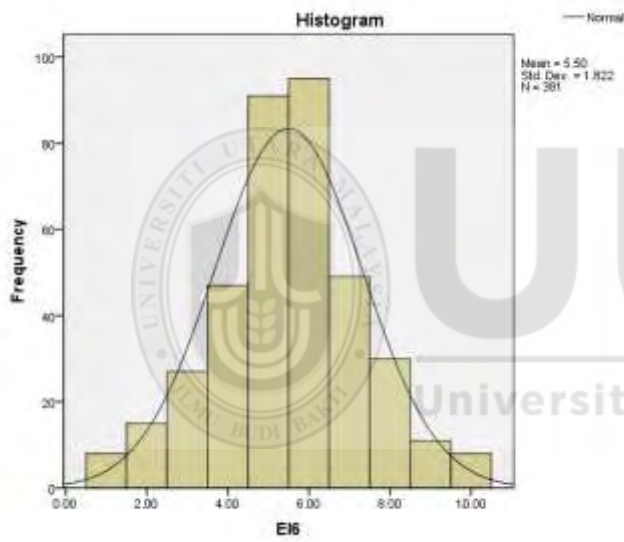
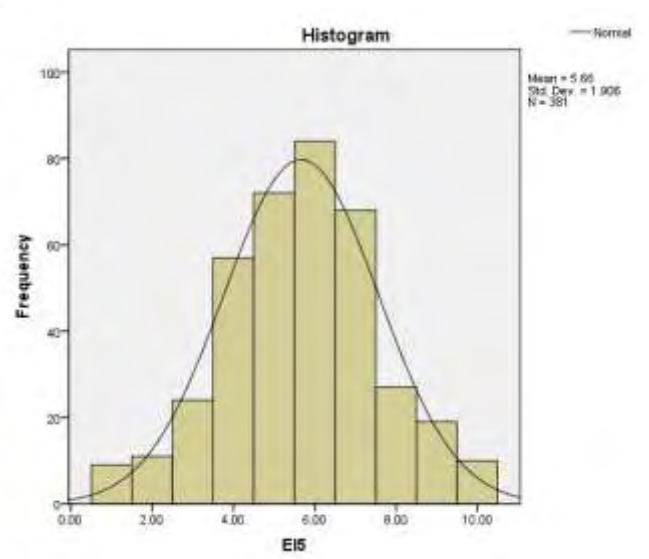
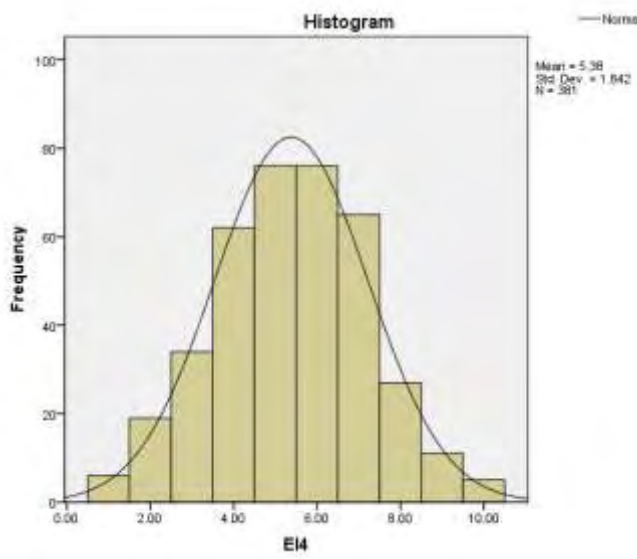


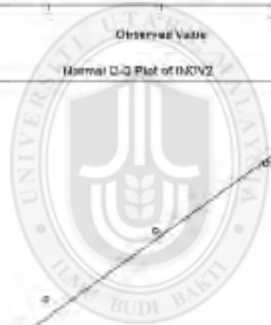
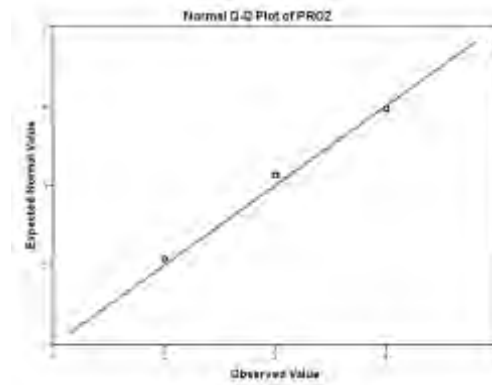
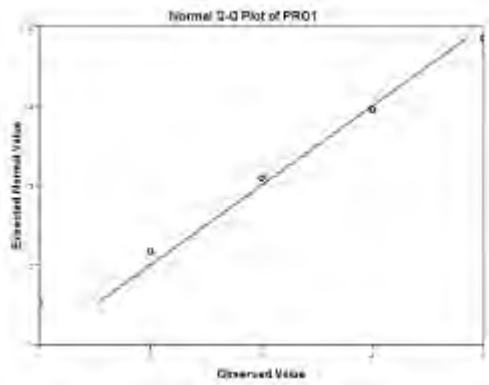
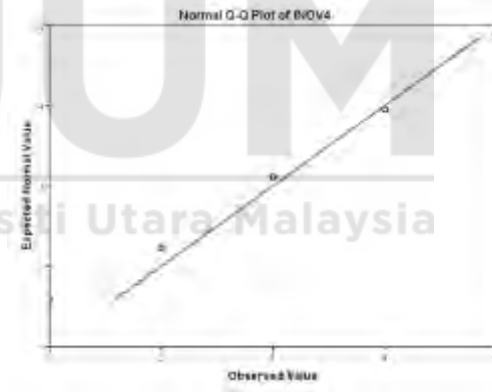
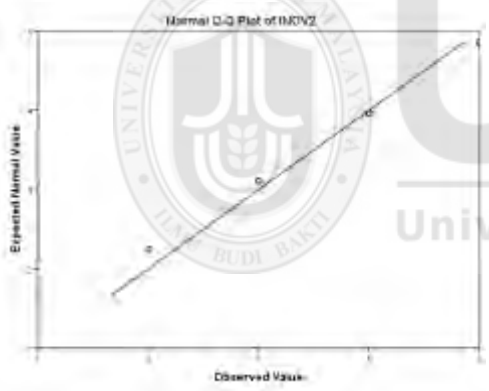
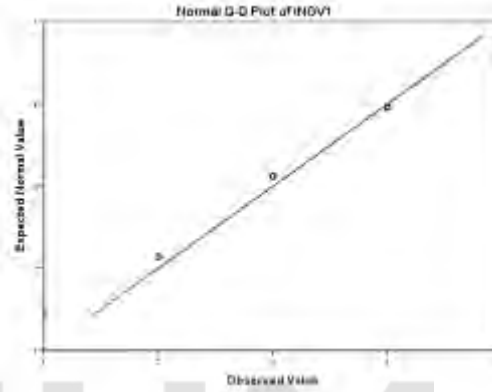
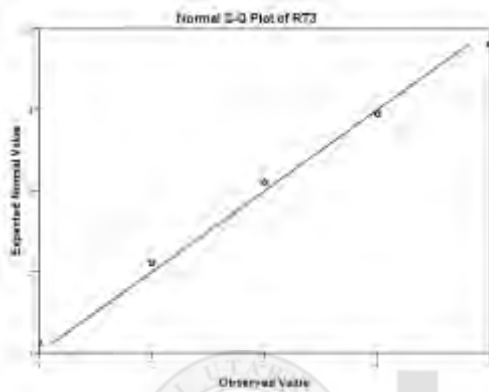
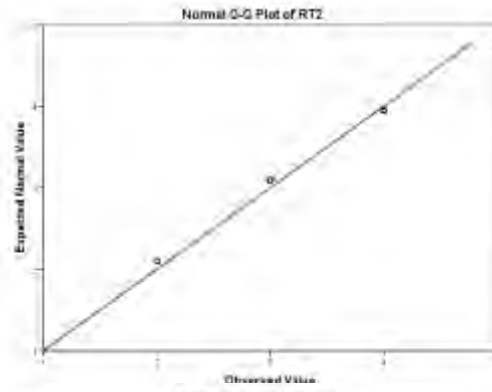
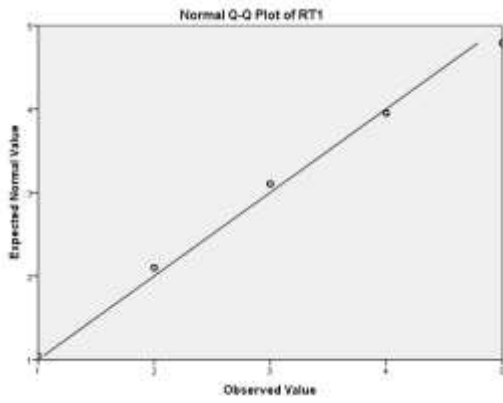




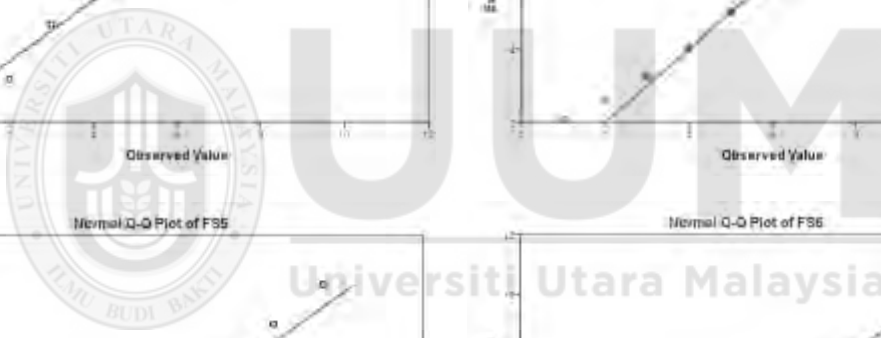
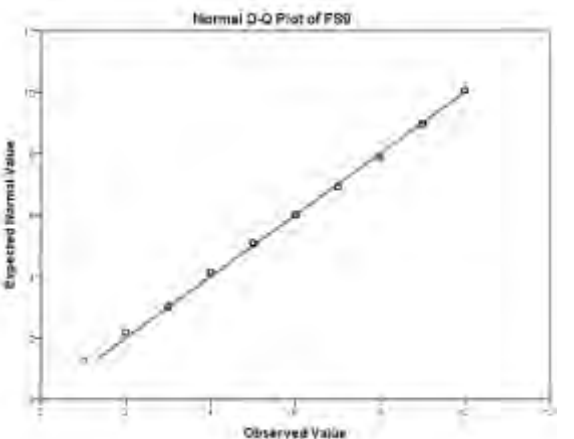
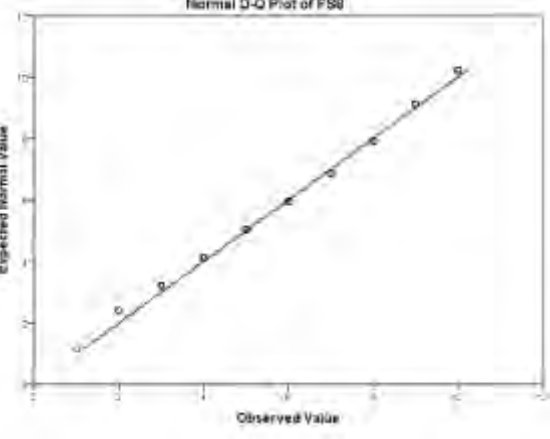
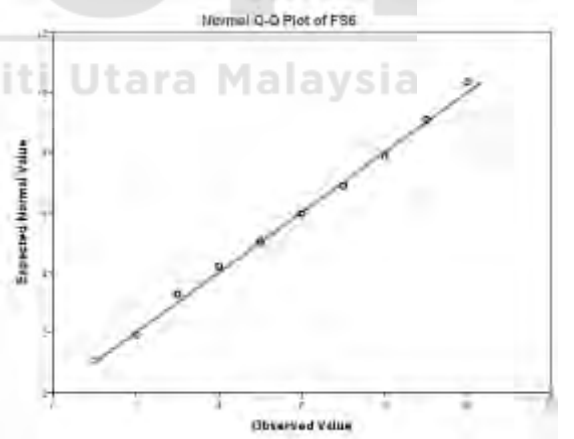
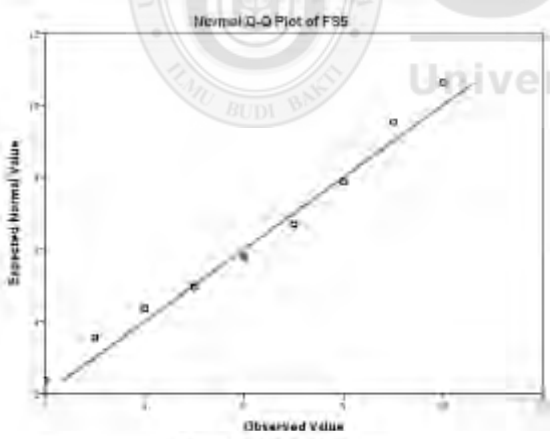
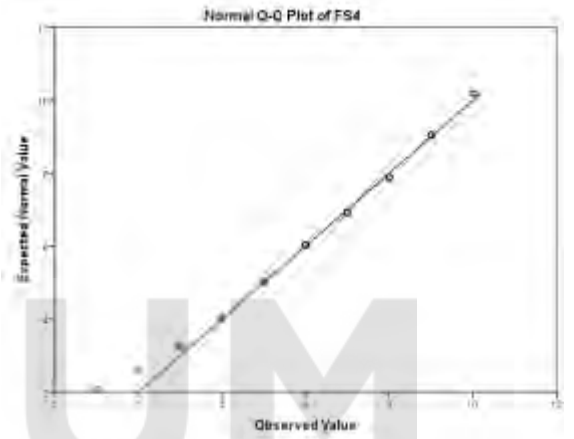
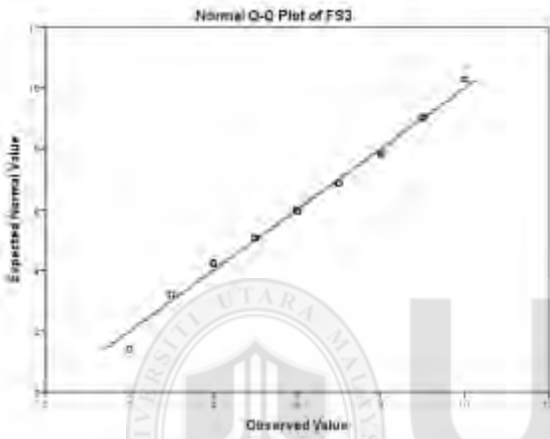
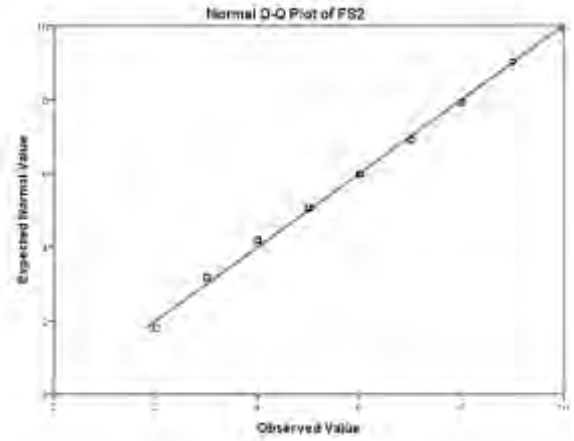
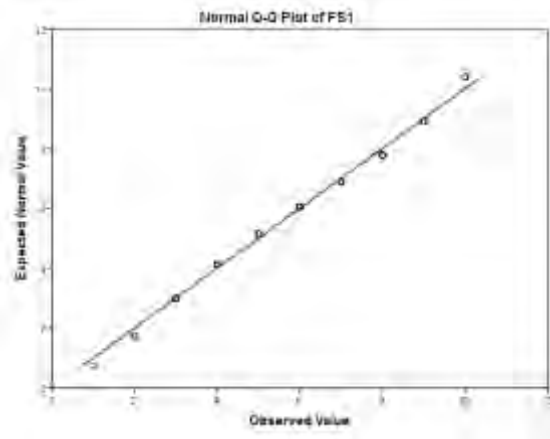


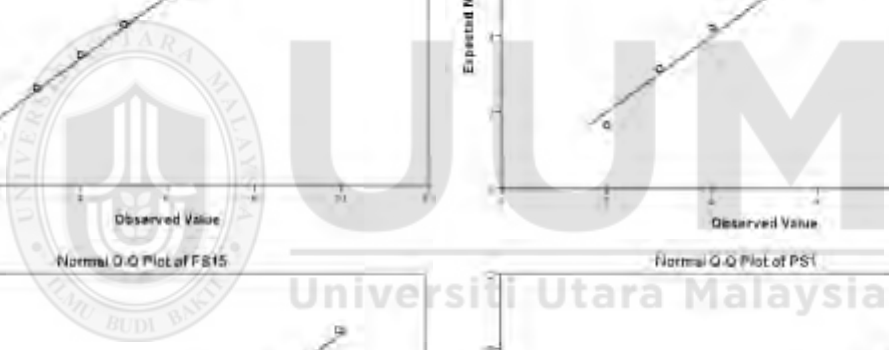
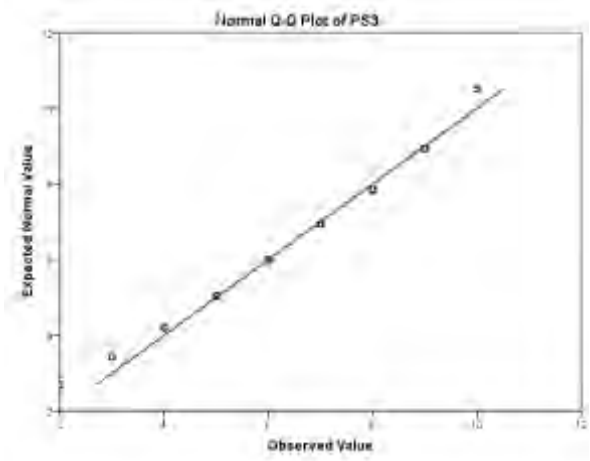
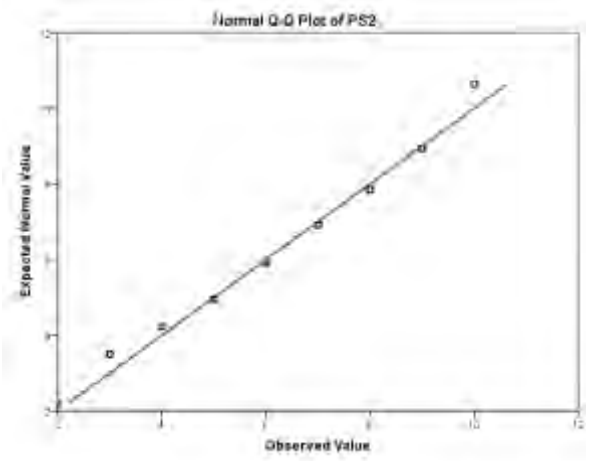
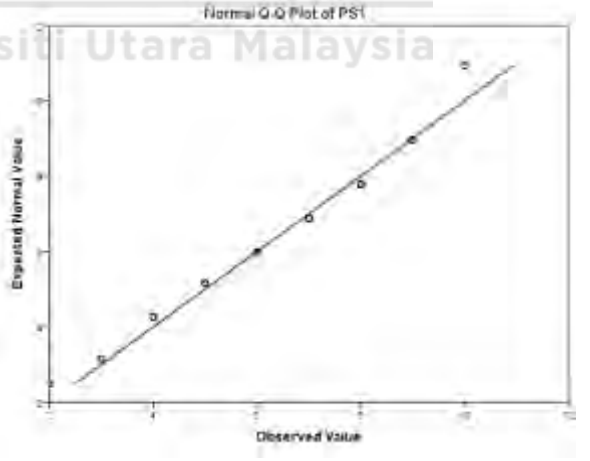
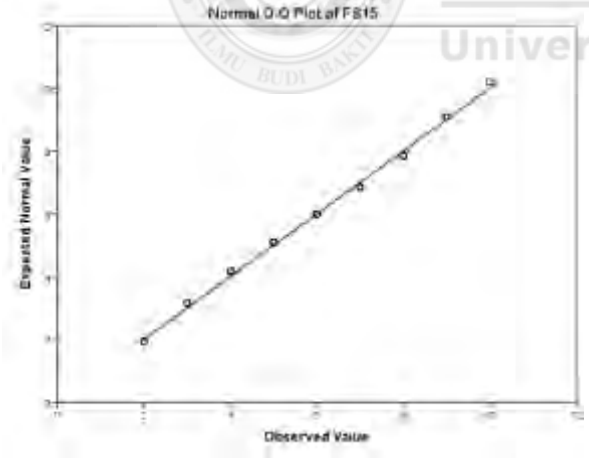
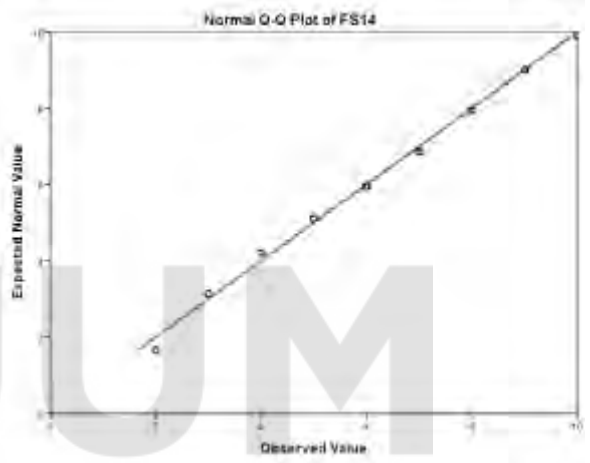
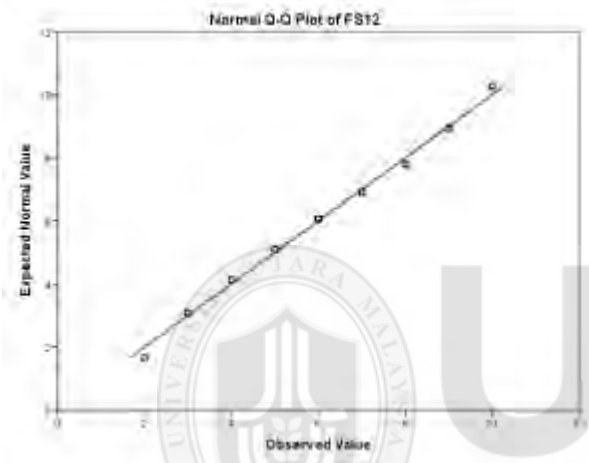
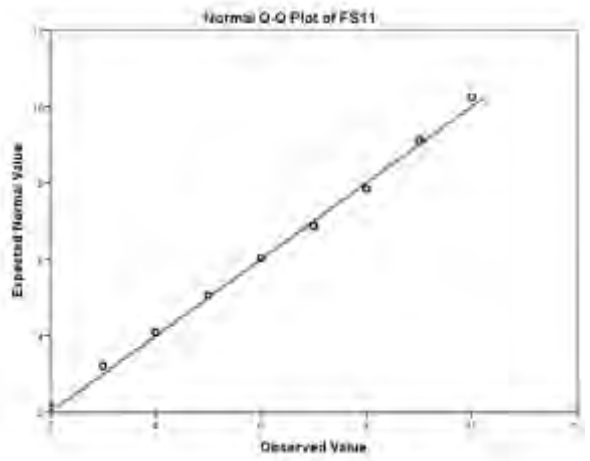
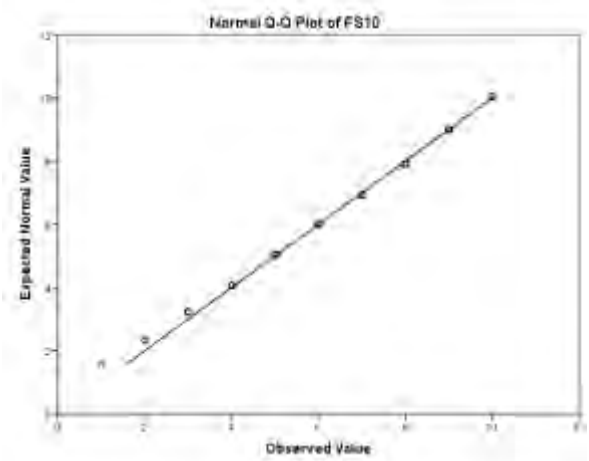


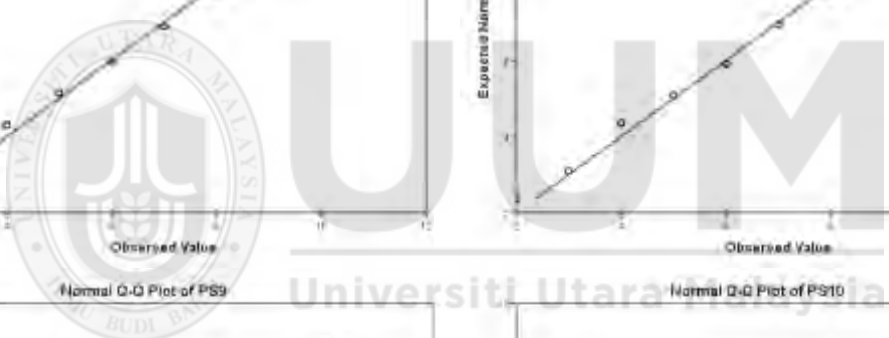
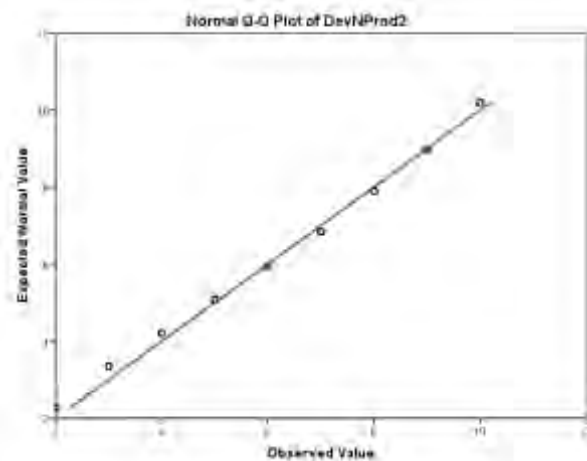
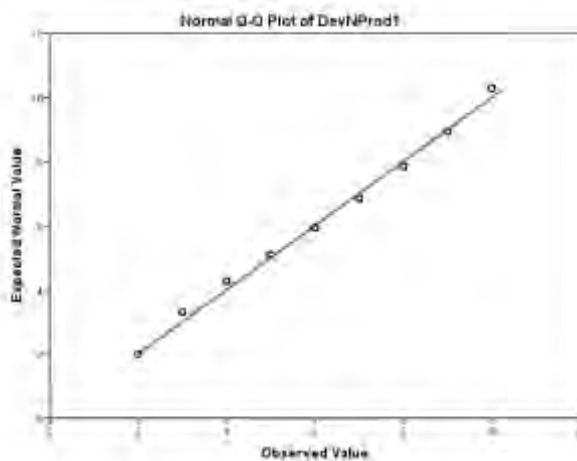
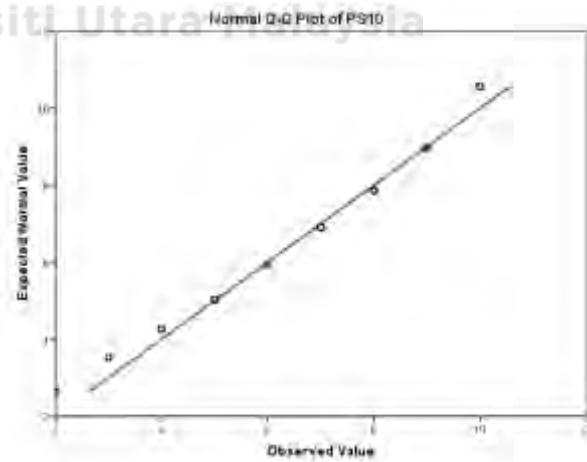
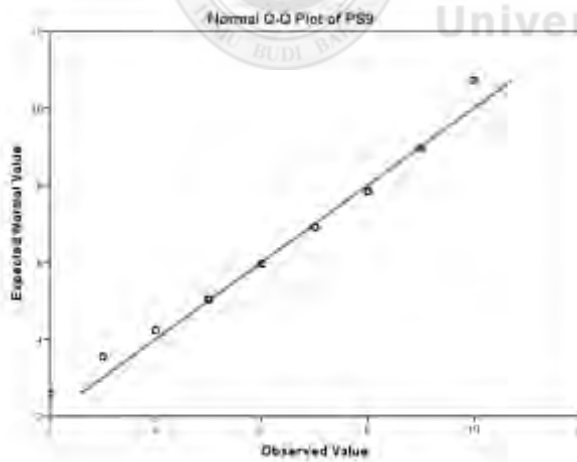
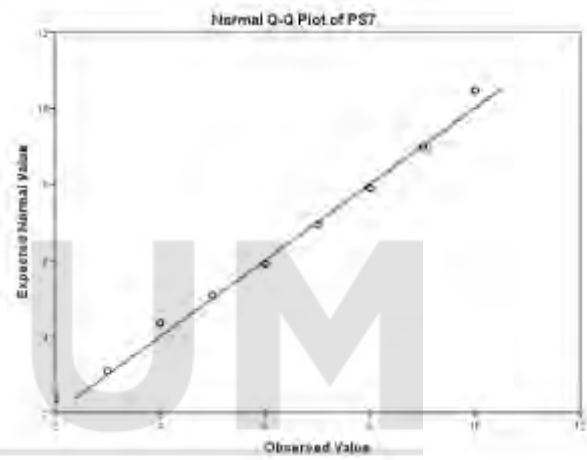
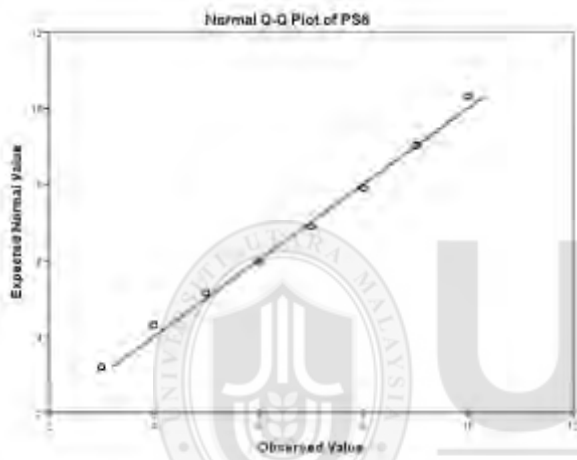
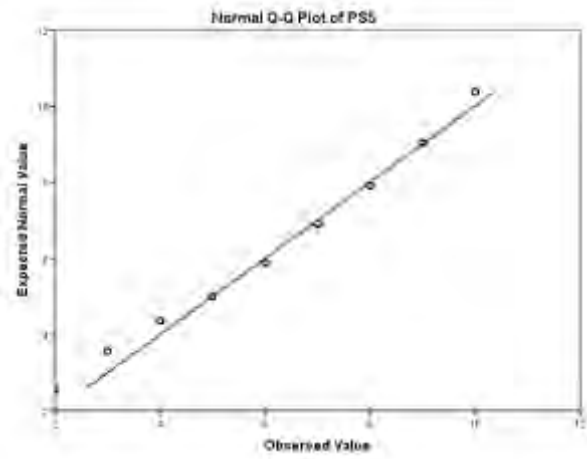
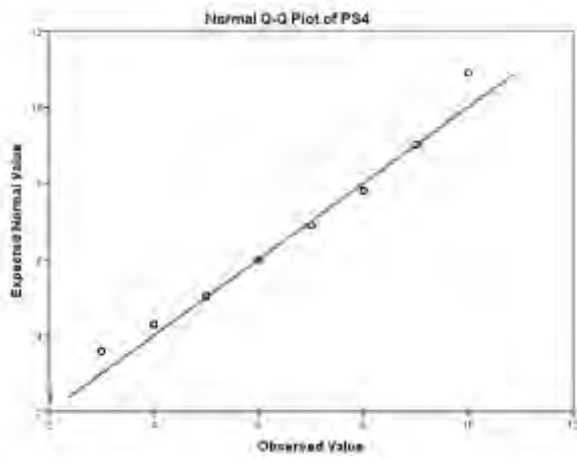


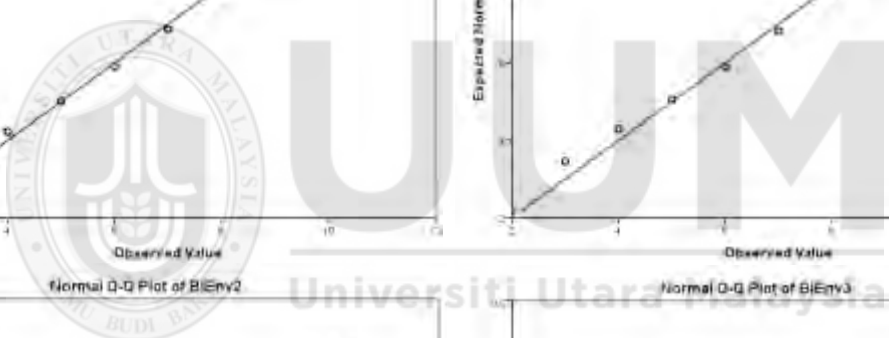
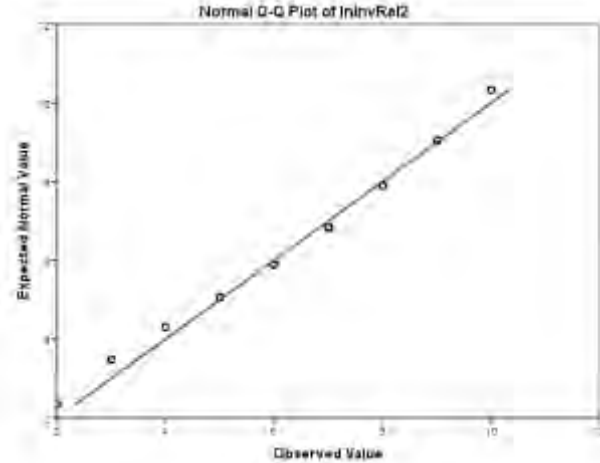
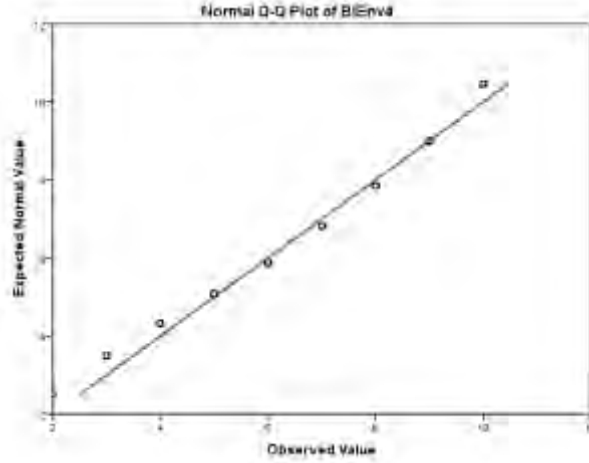
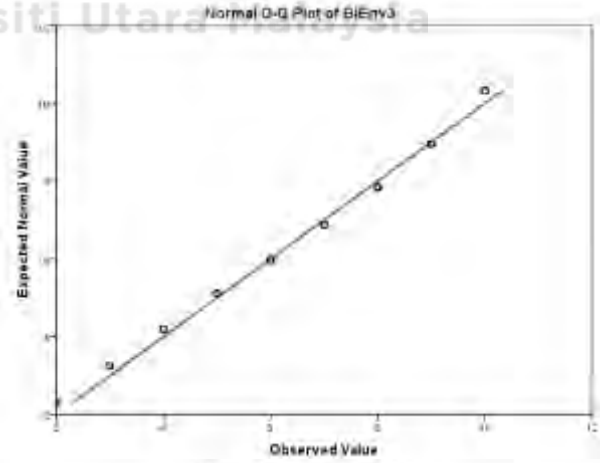
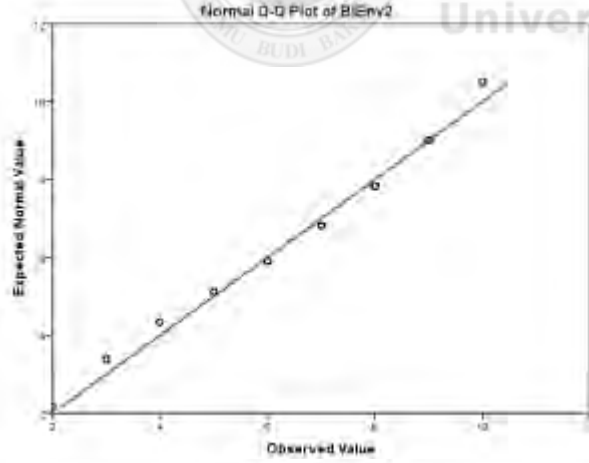
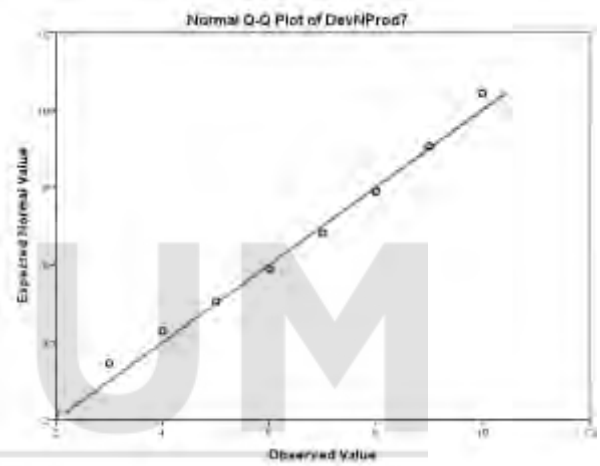
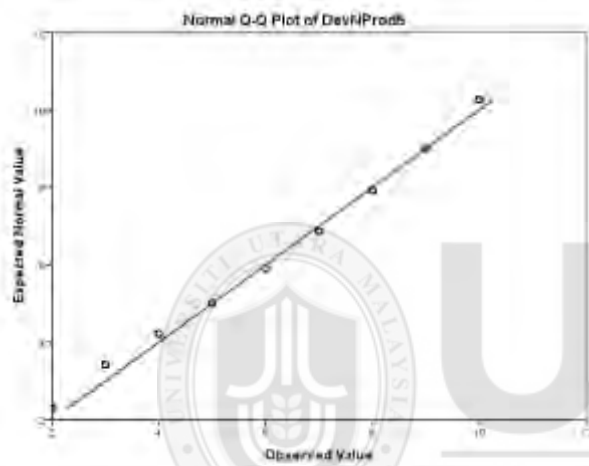
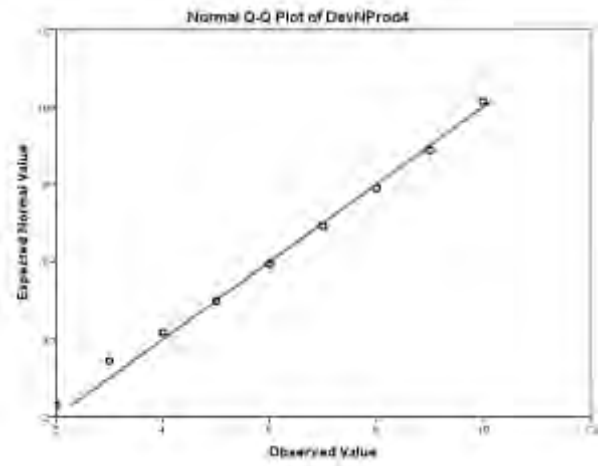
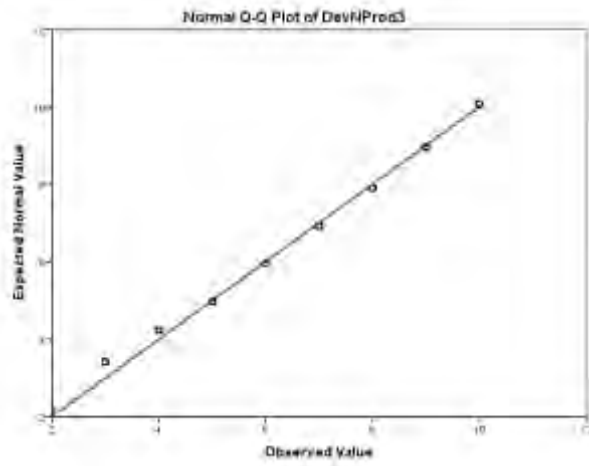


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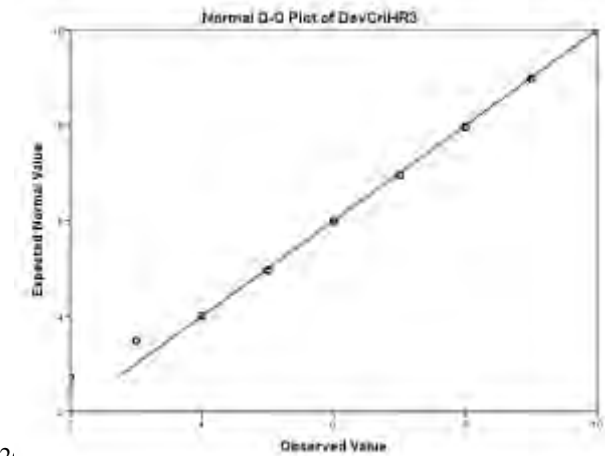
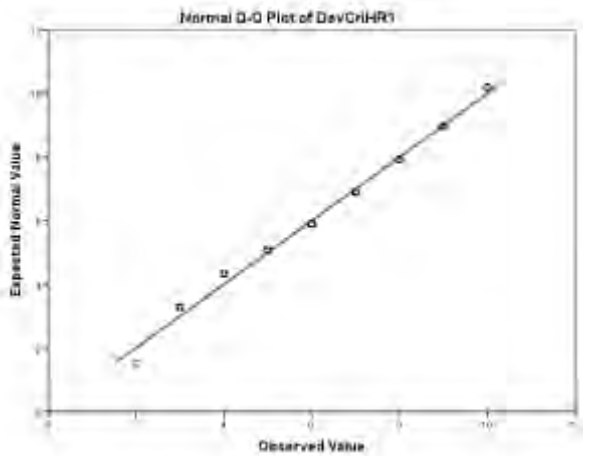
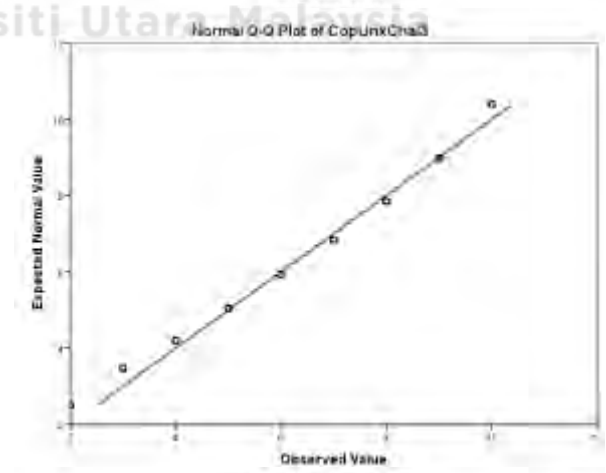
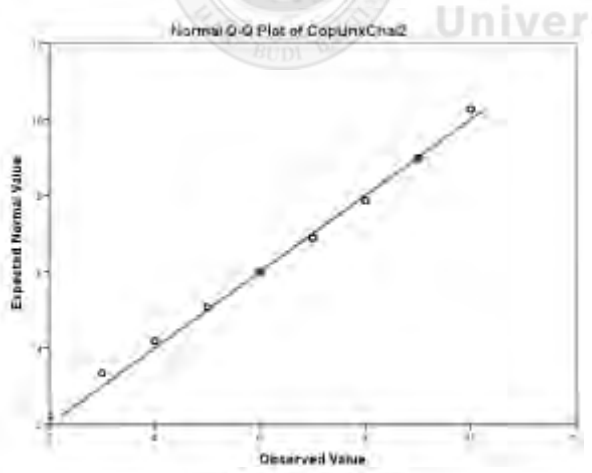
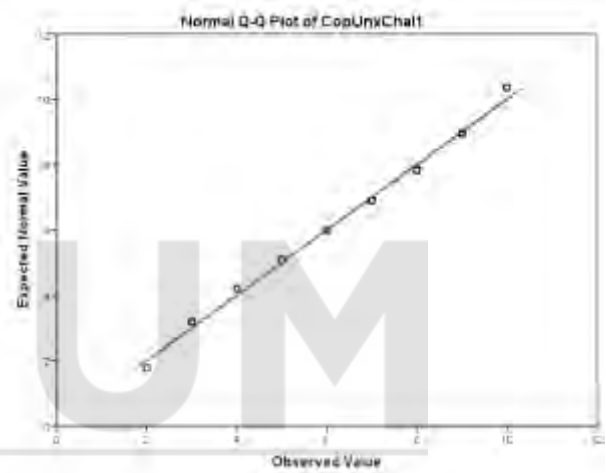
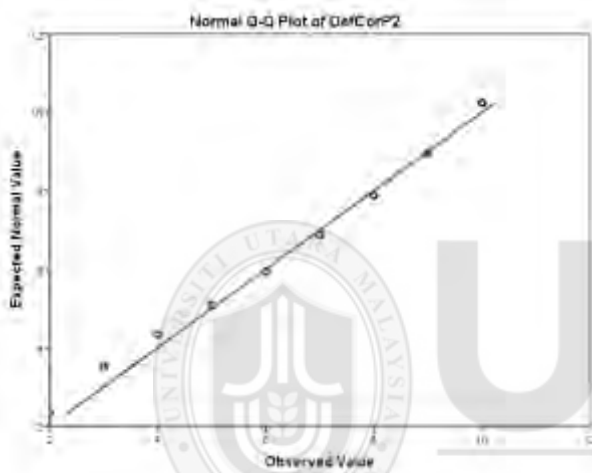
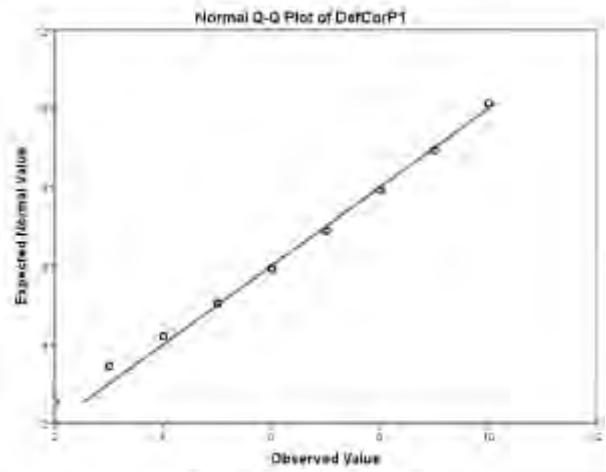
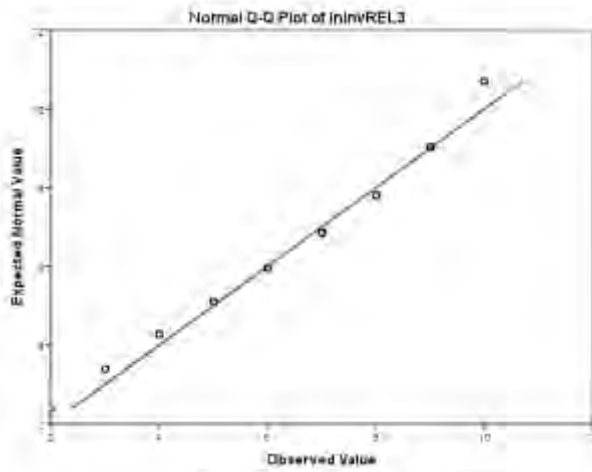




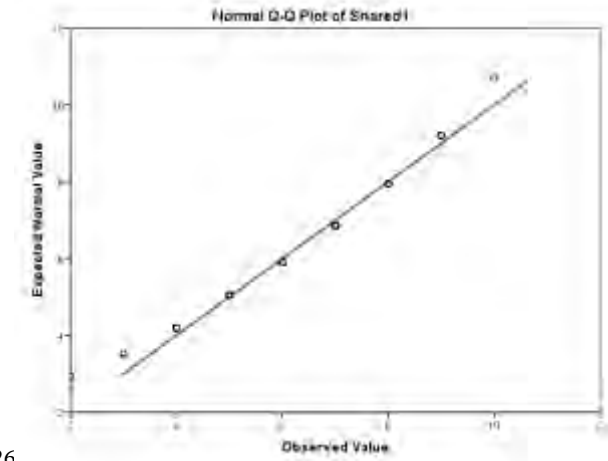
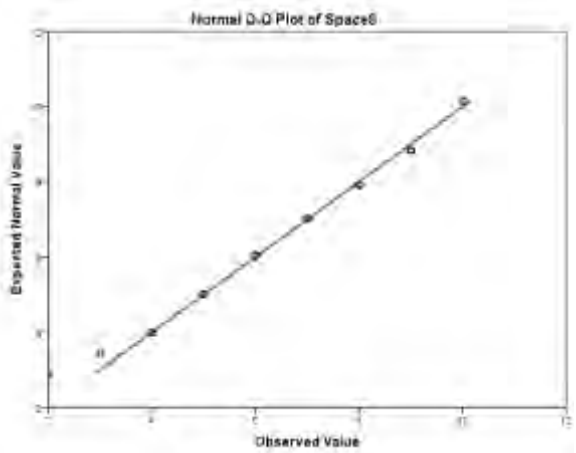
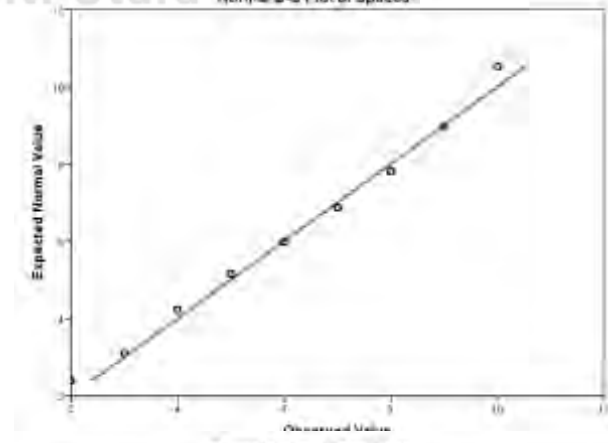
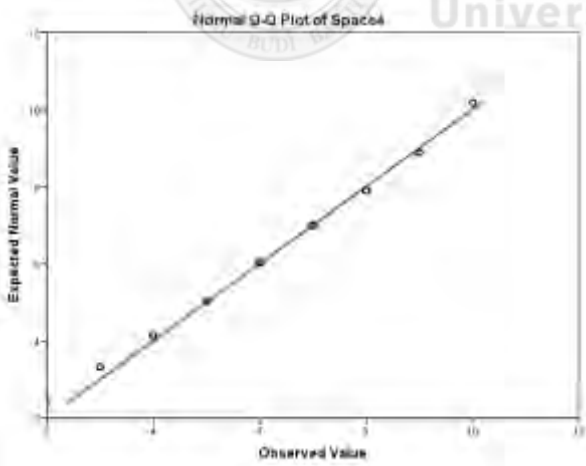
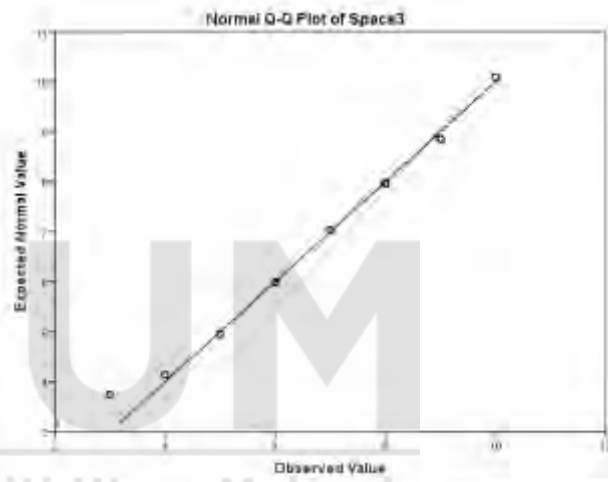
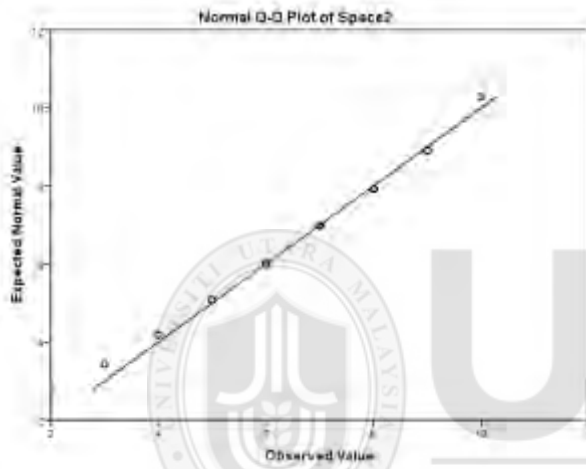
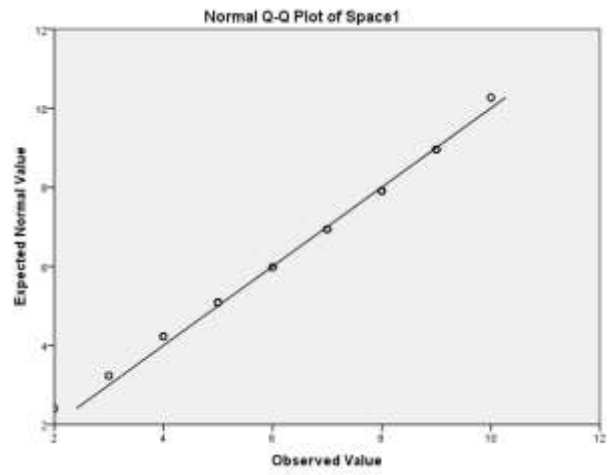
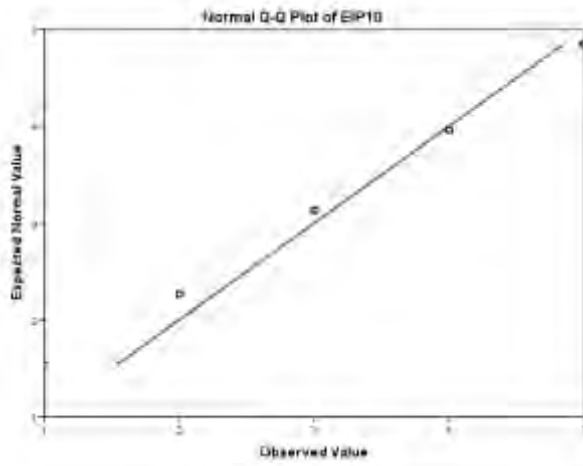


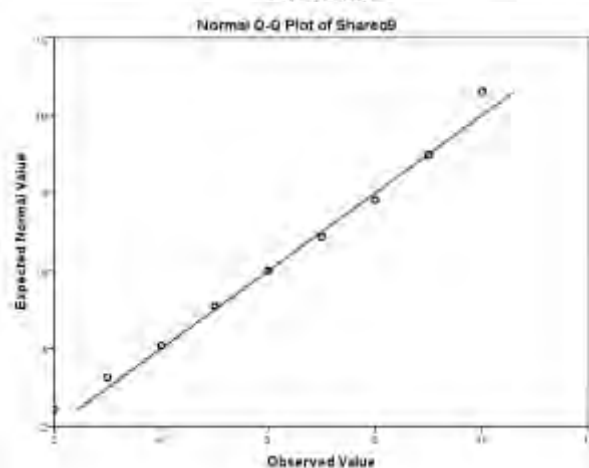
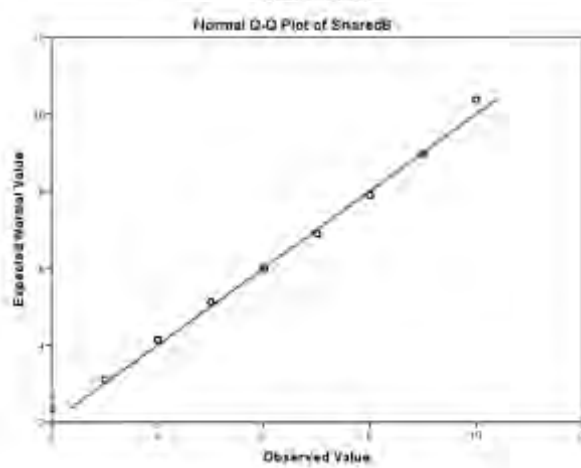
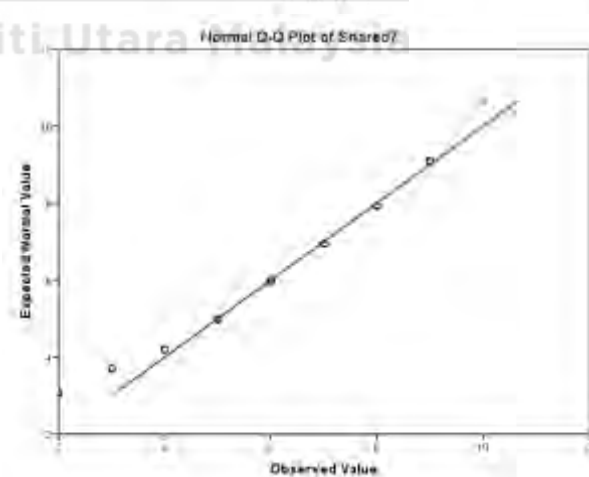
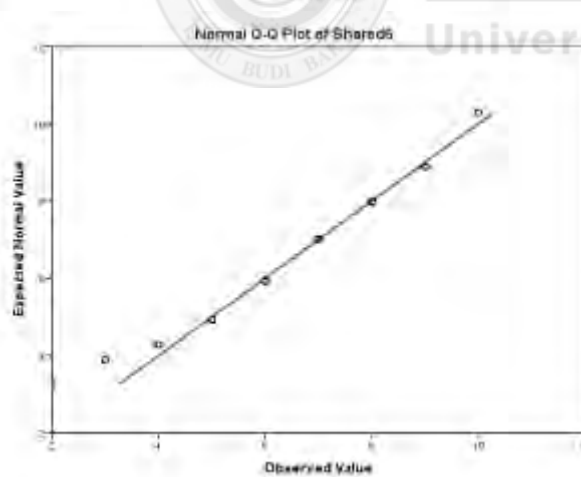
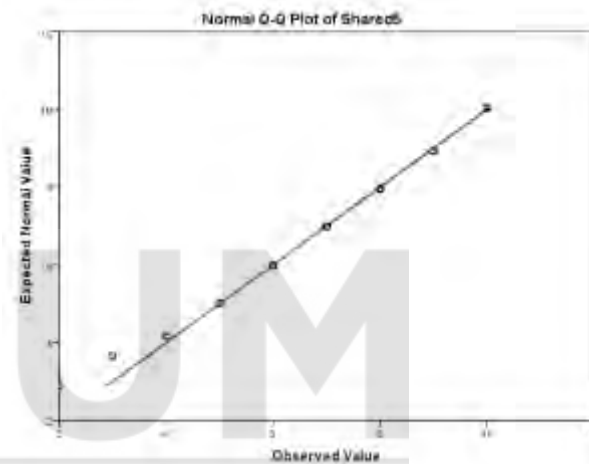
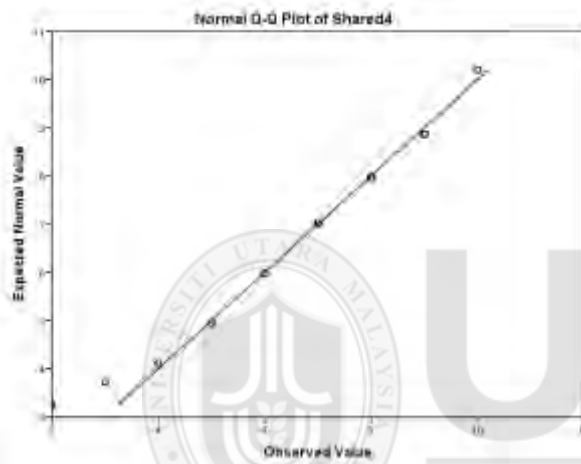
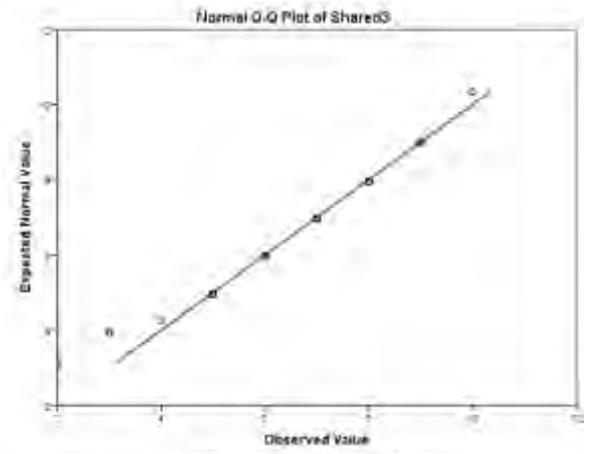
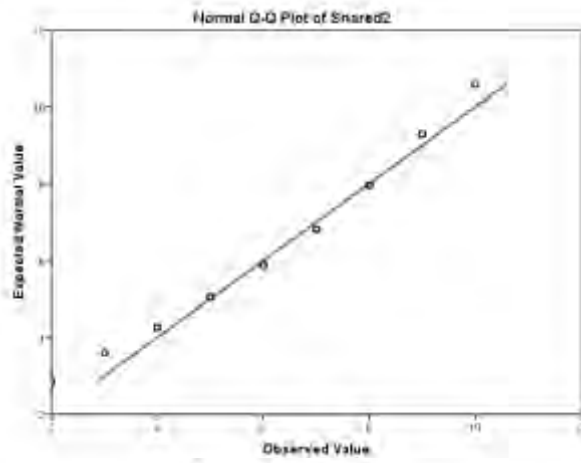


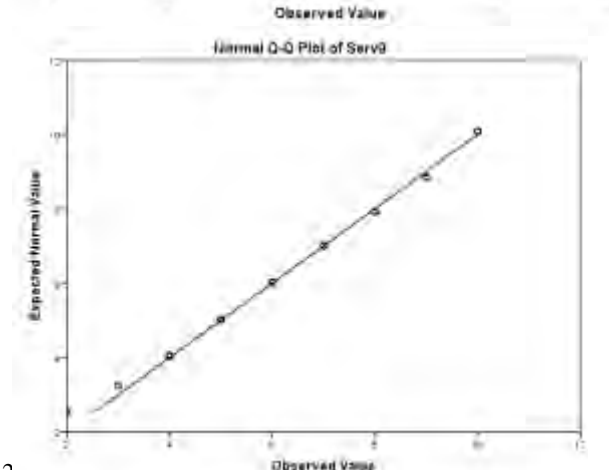
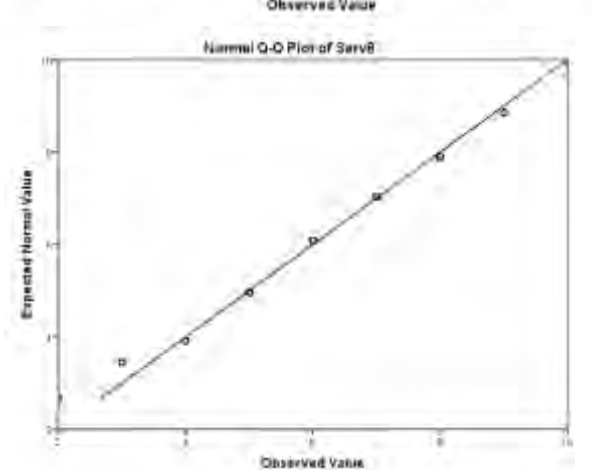
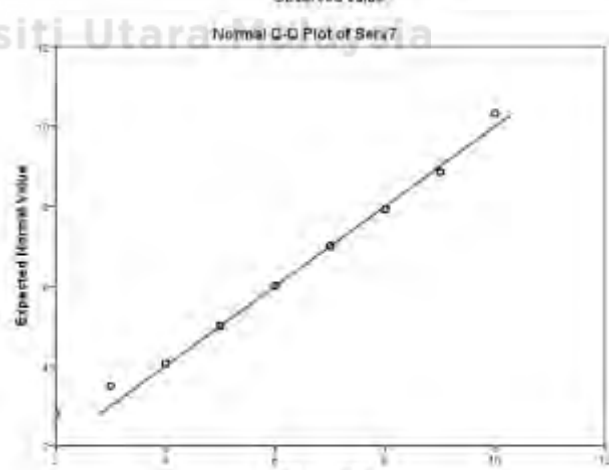
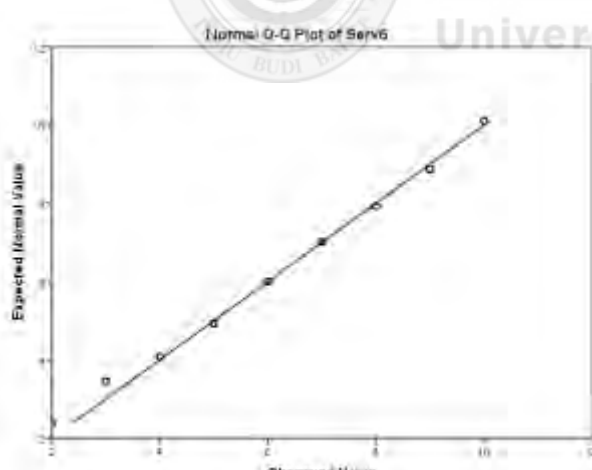
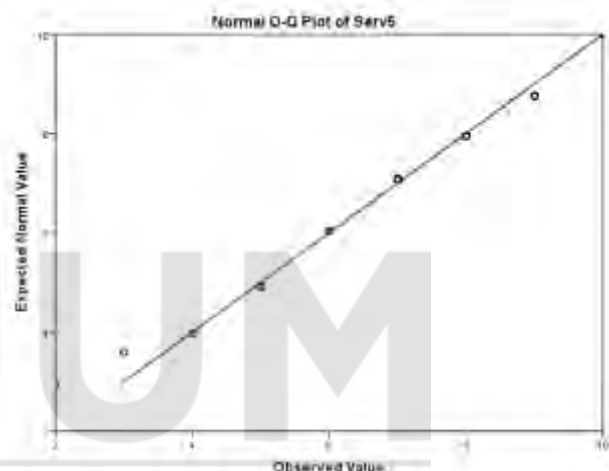
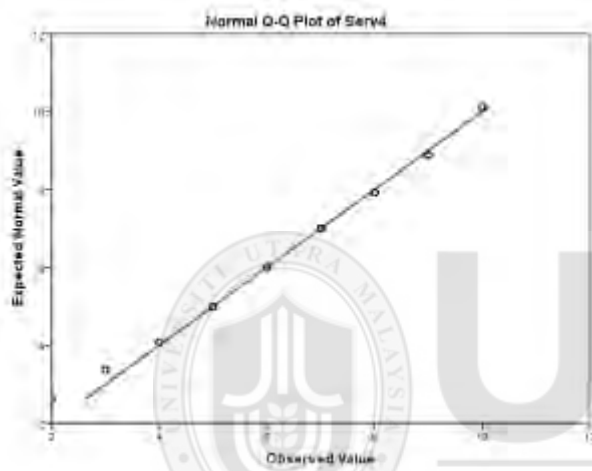
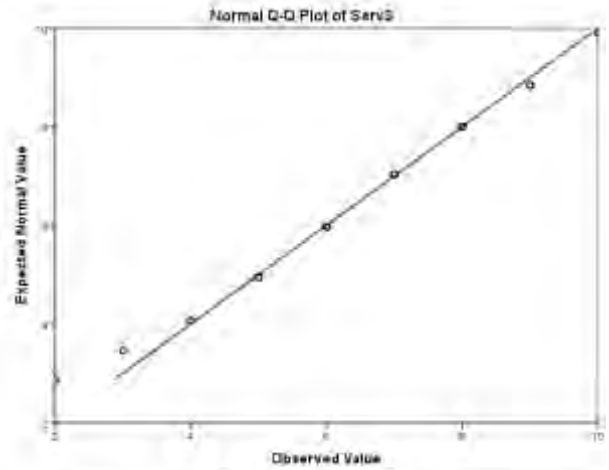
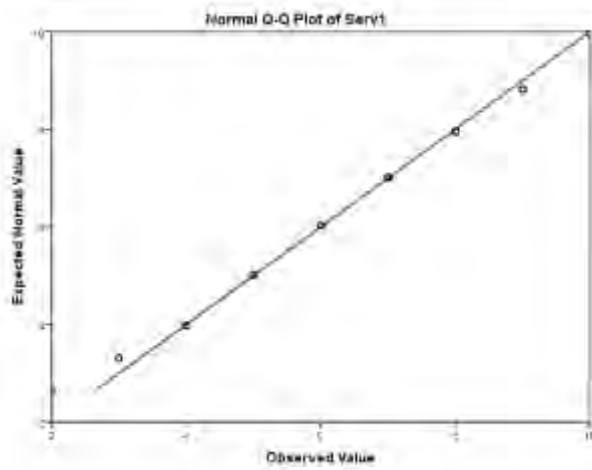


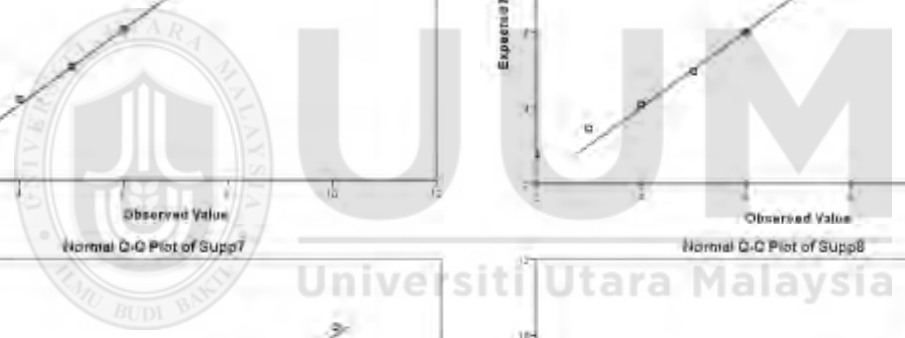
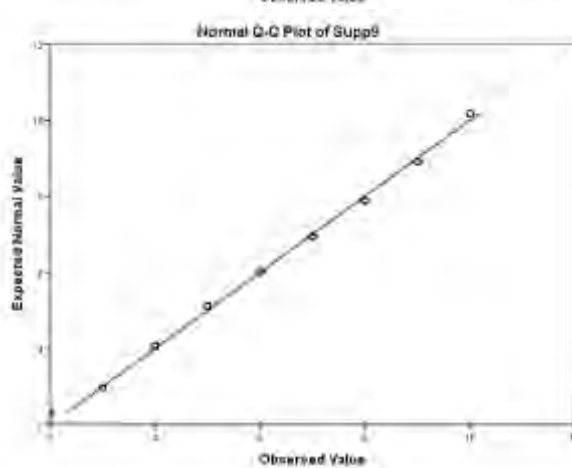
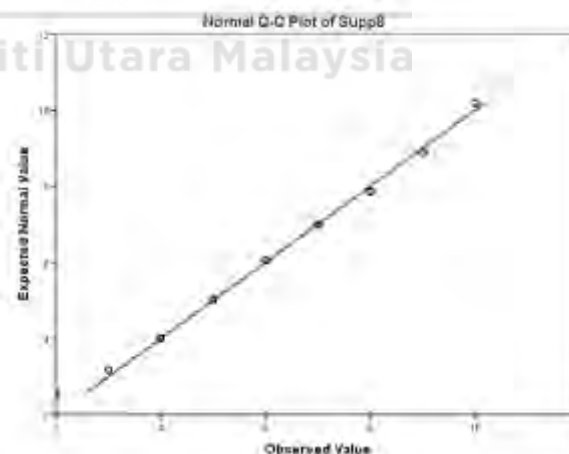
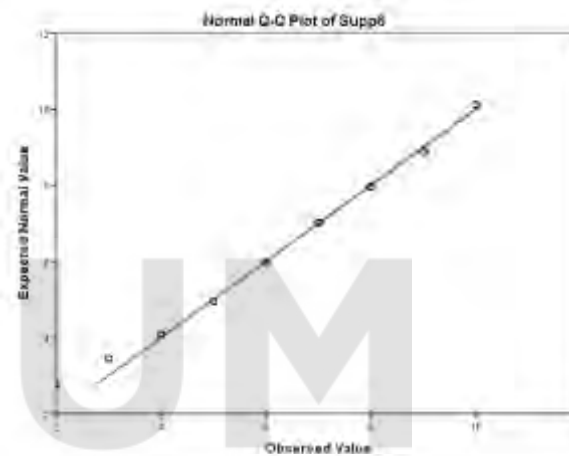
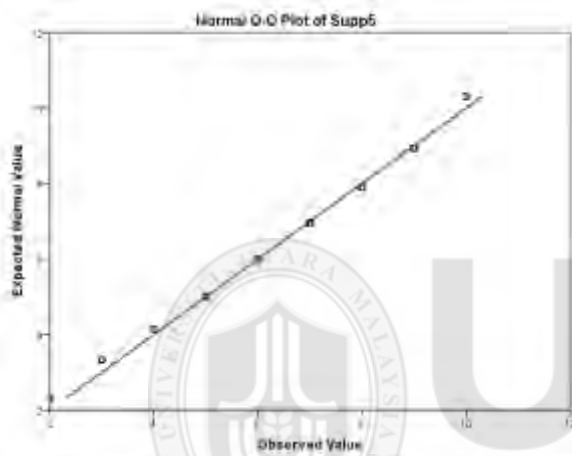
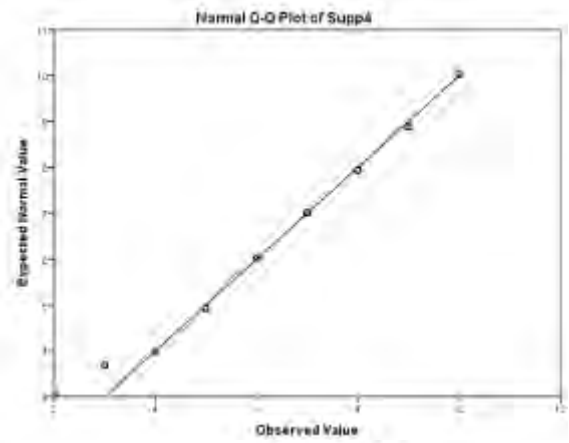
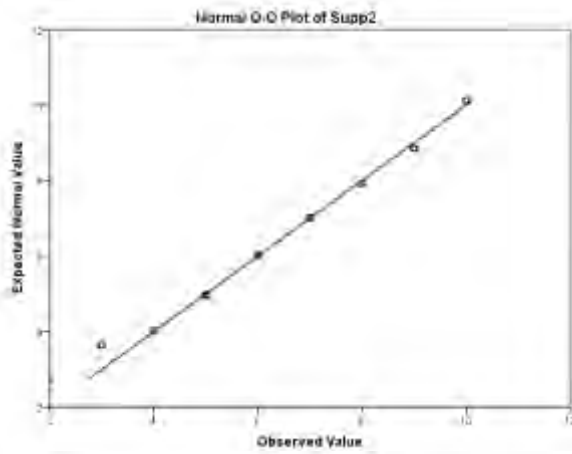


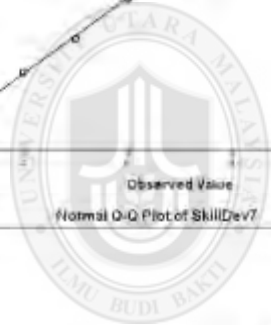
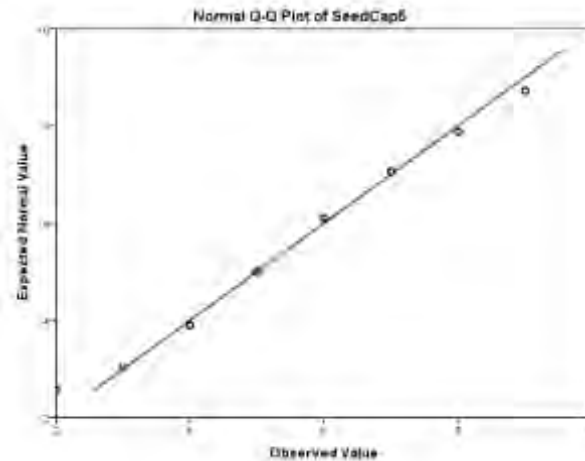
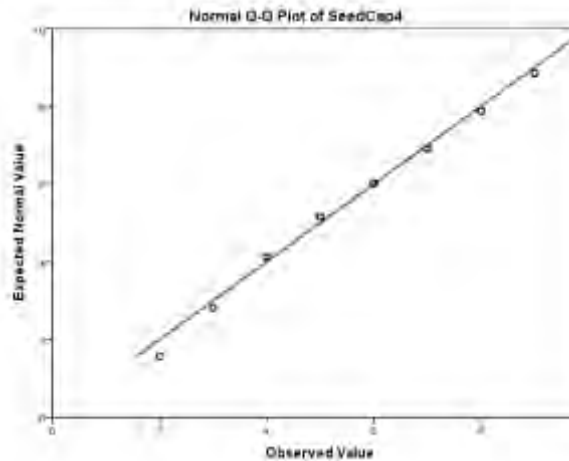
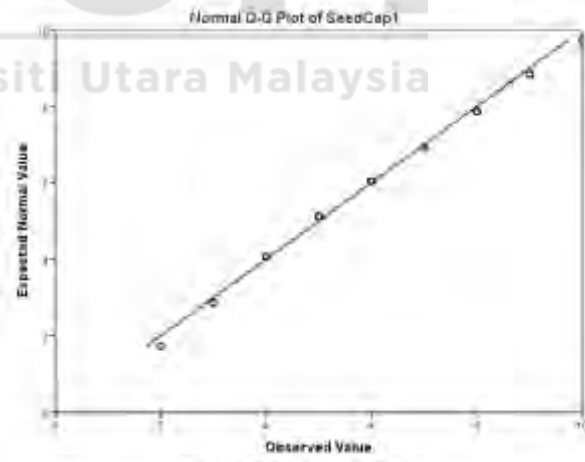
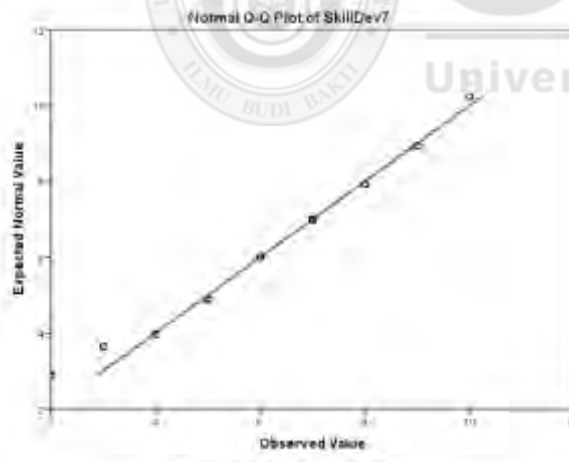
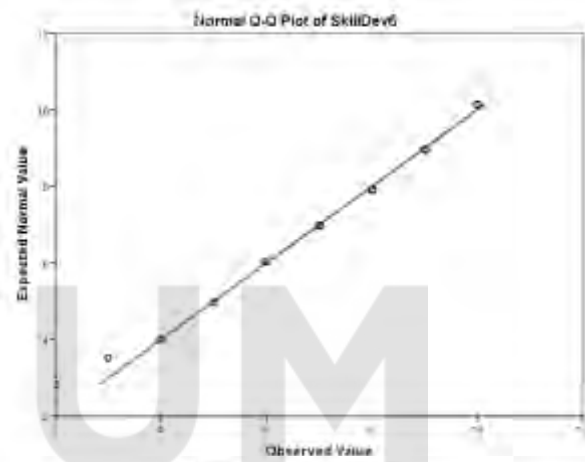
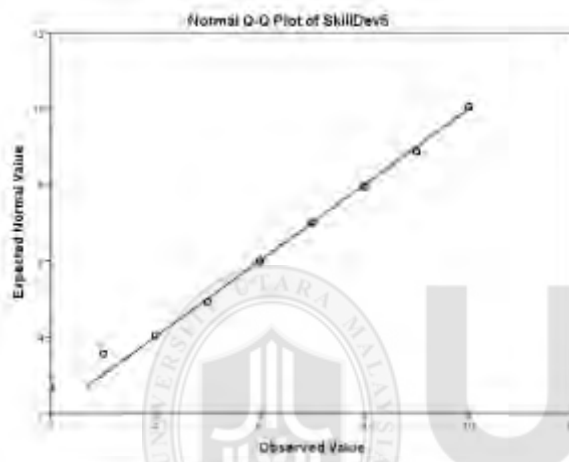
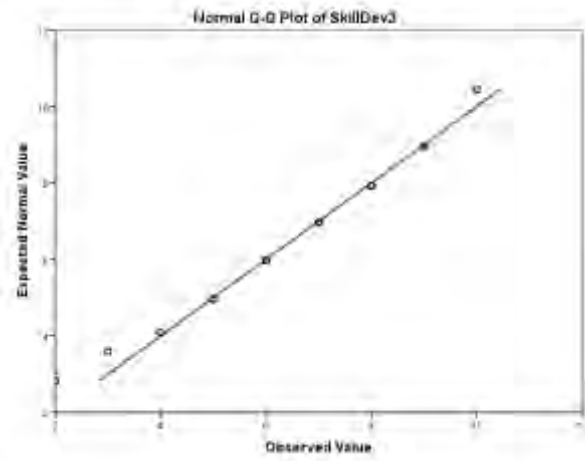
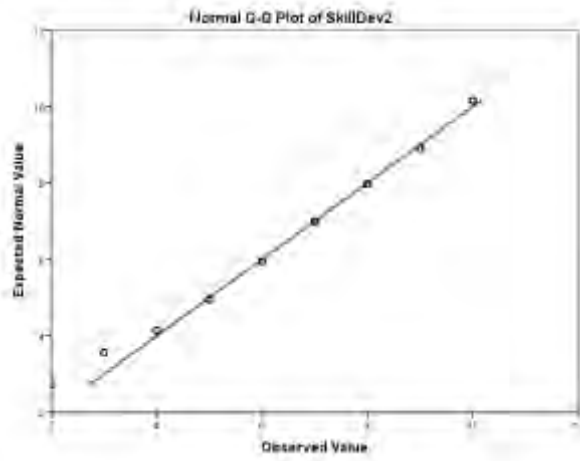




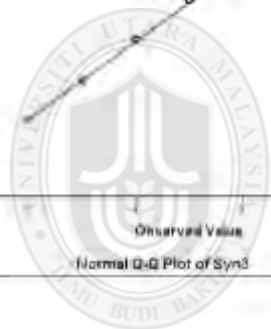
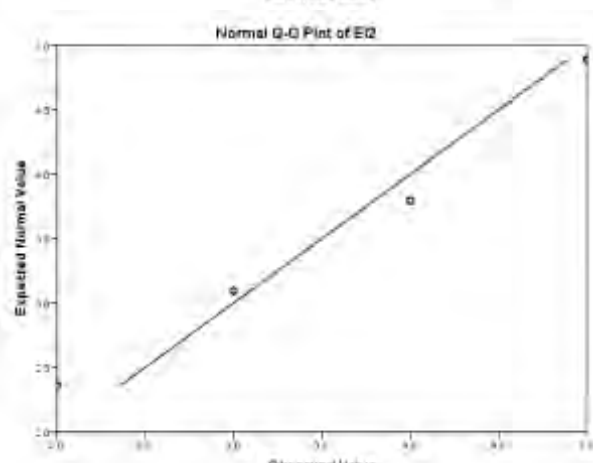
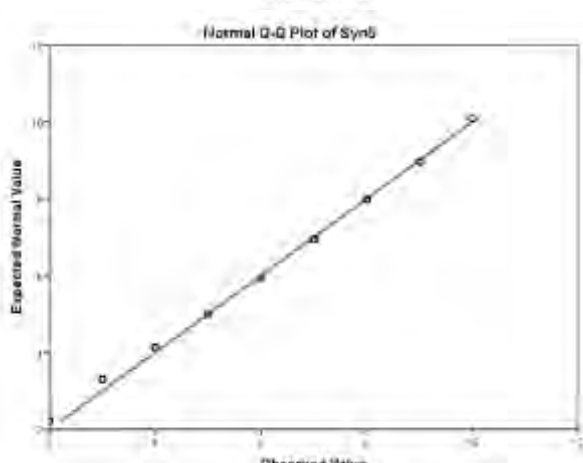
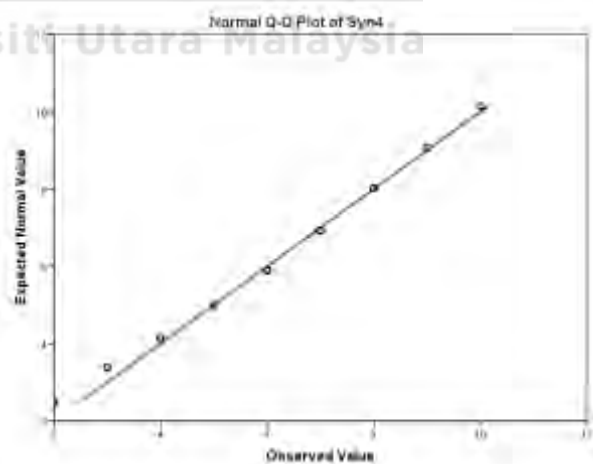
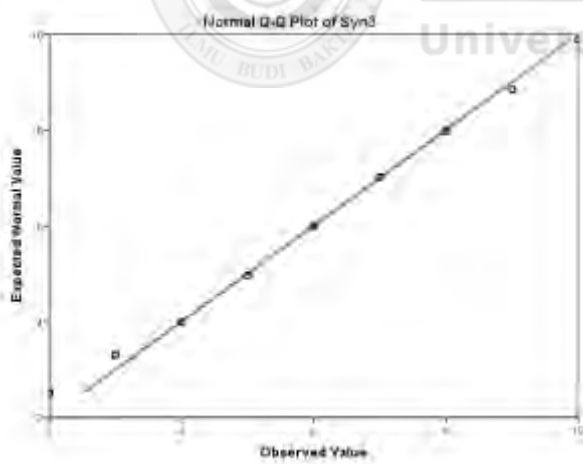
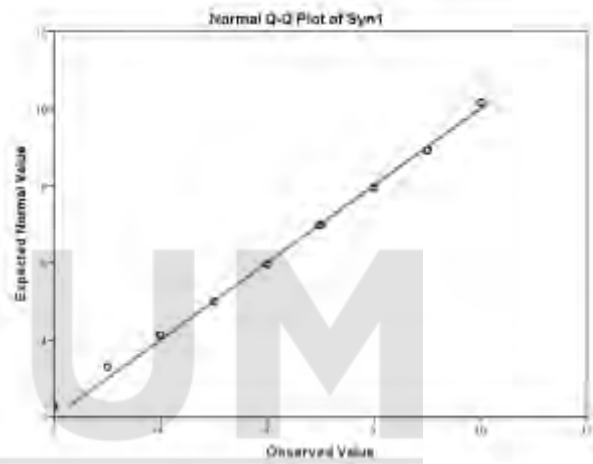
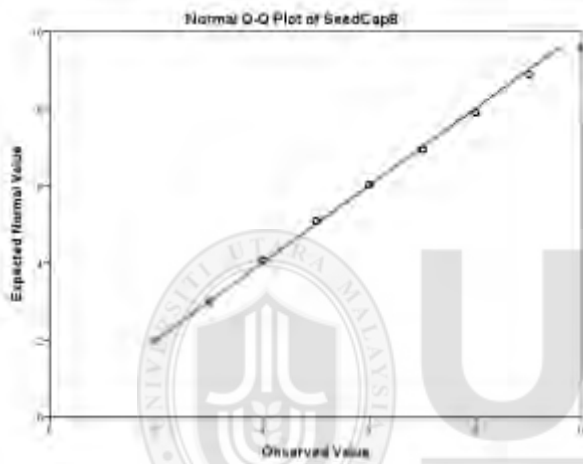
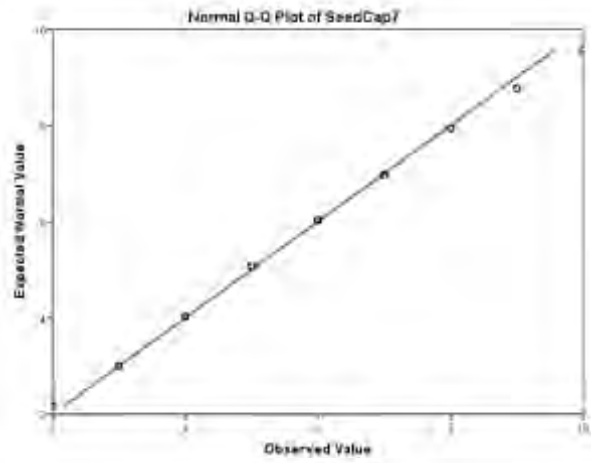
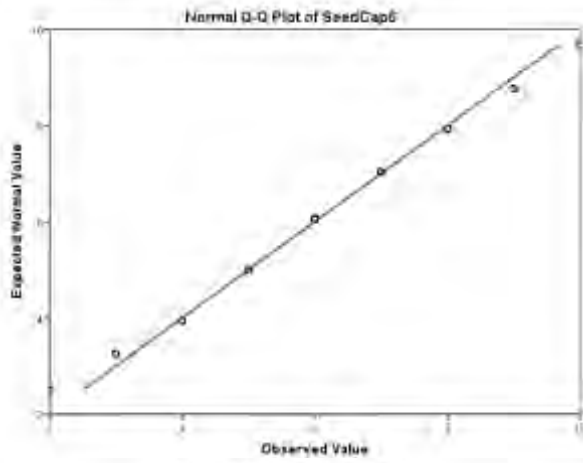






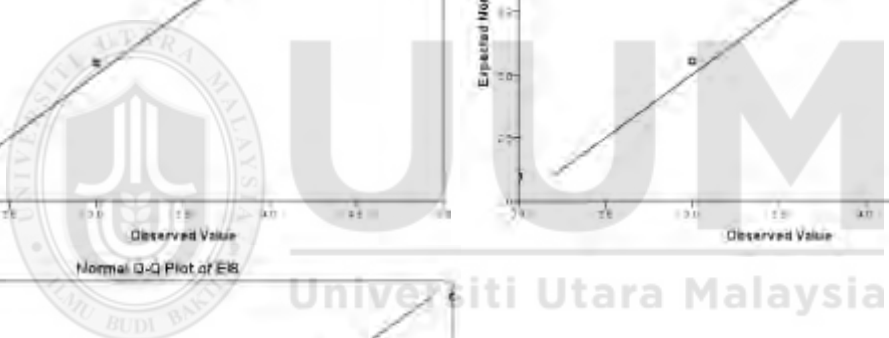
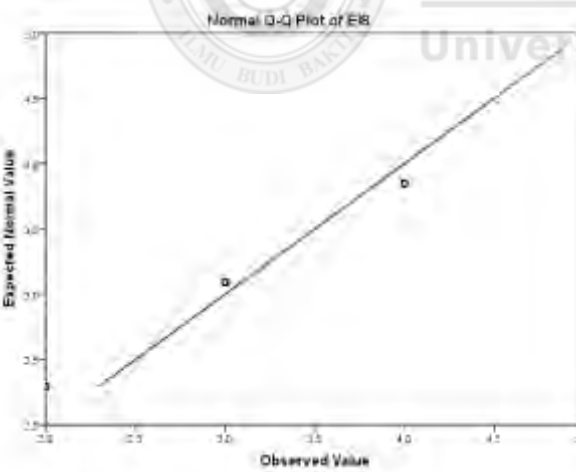
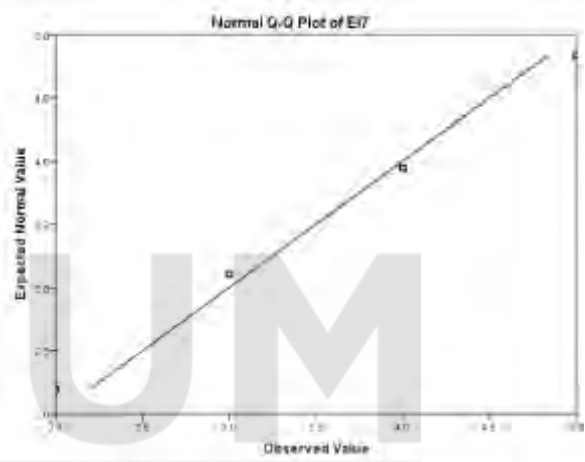
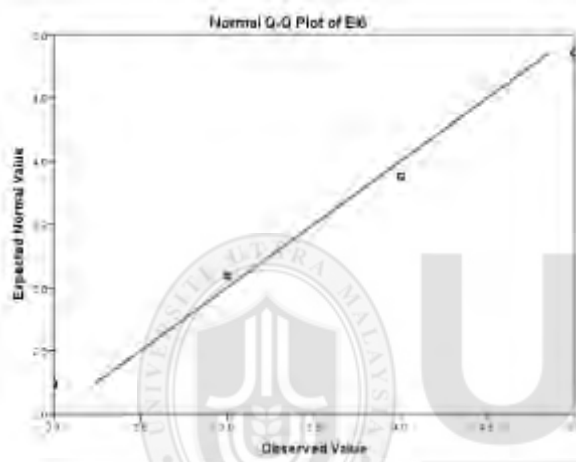
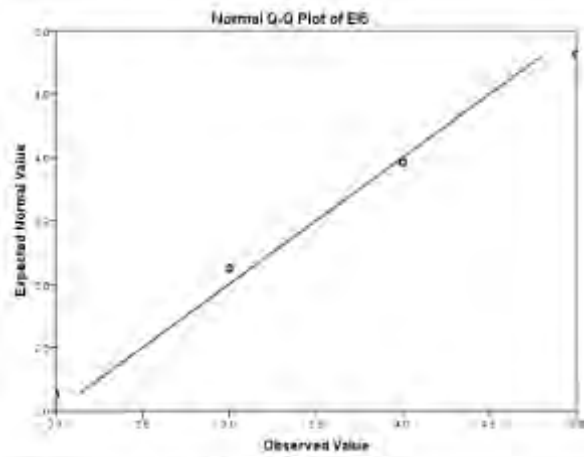
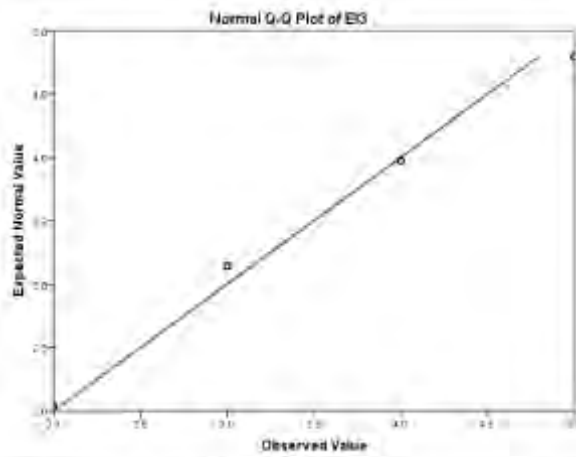


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## **APPENDIX E:**

### **Descriptive Statistic Skewness and Kurtosis of Constructs**

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### Descriptives

Gender			Statistic	Std. Error
EI-av	Male	Mean	3.8046	.04605
		95% Confidence Interval for Mean	Lower Bound 3.7138	
			Upper Bound 3.8954	
		5% Trimmed Mean	3.8279	
		Median	3.6700	
		Variance	.460	
		Std. Deviation	.67837	
		Minimum	1.83	
		Maximum	5.00	
		Range	3.17	
		Interquartile Range	1.00	
		Skewness	-.219	.165
		Kurtosis	-.027	.329
			Female	Mean
95% Confidence Interval for Mean	Lower Bound 3.6890			
	Upper Bound 3.8677			
5% Trimmed Mean	3.7699			
Median	3.6700			
Variance	.336			
Std. Deviation	.57947			
Minimum	2.33			
Maximum	5.00			
Range	2.67			
Interquartile Range	.84			
Skewness	-.286			.190
Kurtosis	-.452			.377

### Descriptives

Entrepreneurial Orientation		Statistic	Std. Error
RTav	Mean	3.9098	.03429
	95% Confidence Interval for Mean		
	Lower Bound	3.8424	
	Upper Bound	3.9773	
	5% Trimmed Mean	3.9427	
	Median	4.0000	
	Variance	.448	
	Std. Deviation	.66940	
	Minimum	1.33	
	Maximum	5.00	
	Range	3.67	
	Interquartile Range	.66	
	Skewness	-.219	.125
	Kurtosis	.433	.249

### Descriptives

Entrepreneurial Orientation		Statistic	Std. Error
INOav	Mean	3.9760	.03294
	95% Confidence Interval for Mean		
	Lower Bound	3.9112	
	Upper Bound	4.0407	
	5% Trimmed Mean	4.0102	
	Median	4.0000	
	Variance	.413	
	Std. Deviation	.64289	
	Minimum	1.00	
	Maximum	5.00	
	Range	4.00	
	Interquartile Range	.83	
	Skewness	-.217	.125
	Kurtosis	.392	.249

### Descriptives

Entrepreneurial Orientation		Statistic	Std. Error
PROav	Mean	3.9383	.03630
95% Confidence Interval for Mean			
	Lower Bound	3.8669	
	Upper Bound	4.0097	
	5% Trimmed Mean	3.9695	
	Median	4.0000	
	Variance	.502	
	Std. Deviation	.70859	
	Minimum	1.00	
	Maximum	5.00	
	Range	4.00	
	Interquartile Range	1.00	
	Skewness	-.219	.125
	Kurtosis	.272	.249



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### Descriptives

Social Support		Statistic	Std. Error
FSav	Mean	7.1488	.06209
95% Confidence Interval for Mean			
	Lower Bound	7.0267	
	Upper Bound	7.2709	
	5% Trimmed Mean	7.1977	
	Median	7.0800	
	Variance	1.469	
	Std. Deviation	1.21202	
	Minimum	2.00	
	Maximum	10.00	
	Range	8.00	
	Interquartile Range	.85	
	Skewness	-.188	.125
	Kurtosis	.316	.249

### Descriptives

Social Support		Statistic	Std. Error
PSav	Mean	7.7570	.07013
	95% Confidence Interval for Mean		
	Lower Bound	7.6191	
	Upper Bound	7.8949	
	5% Trimmed Mean	7.8779	
	Median	8.2200	
	Variance	1.874	
	Std. Deviation	1.36891	
	Minimum	1.89	
	Maximum	10.00	
	Range	8.11	
	Interquartile Range	1.34	
	Skewness	-.304	.125
	Kurtosis	.410	.249

### Descriptives

Entrepreneurial Self-Efficacy		Statistic	Std. Error
DevNProdav	Mean	6.1587	.08313
	95% Confidence Interval for Mean		
	Lower Bound	5.9953	
	Upper Bound	6.3222	
	5% Trimmed Mean	6.1817	
	Median	6.1700	
	Variance	2.633	
	Std. Deviation	1.62272	
	Minimum	1.67	
	Maximum	10.00	
	Range	8.33	
	Interquartile Range	2.16	
	Skewness	-.166	.125
	Kurtosis	-.172	.249

### Descriptives

Entrepreneurial Self-Efficacy		Statistic	Std. Error
BIEenAV	Mean	6.1430	.08431
	95% Confidence Interval for Mean		
	Lower Bound	5.9772	
	Upper Bound	6.3088	
	5% Trimmed Mean	6.1920	
	Median	6.0000	
	Variance	2.708	
	Std. Deviation	1.64567	
	Minimum	1.33	
	Maximum	10.00	
	Range	8.67	
	Interquartile Range	2.00	
	Skewness	-.318	.125
	Kurtosis	.123	.249

### Descriptives

Entrepreneurial Self-Efficacy		Statistic	Std. Error
InInvRelAV	Mean	6.1444	.08528
	95% Confidence Interval for Mean		
	Lower Bound	5.9767	
	Upper Bound	6.3120	
	5% Trimmed Mean	6.1793	
	Median	6.0000	
	Variance	2.771	
	Std. Deviation	1.66470	
	Minimum	1.00	
	Maximum	10.00	
	Range	9.00	
	Interquartile Range	2.50	
	Skewness	-.199	.125
	Kurtosis	-.097	.249

### Descriptives

Entrepreneurial Self-Efficacy		Statistic	Std. Error
DefCorpAV	Mean	6.2493	.08560
	95% Confidence Interval for Mean		
	Lower Bound	6.0810	
	Upper Bound	6.4176	
	5% Trimmed Mean	6.2814	
	Median	6.0000	
	Variance	2.792	
	Std. Deviation	1.67081	
	Minimum	1.00	
	Maximum	10.00	
	Range	9.00	
	Interquartile Range	2.00	
	Skewness	-.201	.125
	Kurtosis	-.022	.249

### Descriptives

Entrepreneurial Self-Efficacy		Statistic	Std. Error
CopUnxChalAV	Mean	6.2251	.08432
	95% Confidence Interval for Mean		
	Lower Bound	6.0593	
	Upper Bound	6.3909	
	5% Trimmed Mean	6.2889	
	Median	6.3300	
	Variance	2.709	
	Std. Deviation	1.64582	
	Minimum	1.67	
	Maximum	10.00	
	Range	8.33	
	Interquartile Range	2.33	
	Skewness	-.172	.125
	Kurtosis	.050	.249



### Descriptives

Entrepreneurial Self-Efficacy		Statistic	Std. Error
DevCriHRav	Mean	6.1129	.08328
	95% Confidence Interval for Mean		
	Lower Bound	5.9491	
	Upper Bound	6.2766	
	5% Trimmed Mean	6.1517	
	Median	6.0000	
	Variance	2.642	
	Std. Deviation	1.62557	
	Minimum	1.00	
	Maximum	10.00	
	Range	9.00	
	Interquartile Range	2.50	
	Skewness	-.234	.125
	Kurtosis	-.040	.249

### Descriptives

Entrepreneurial Internship Program		Statistic	Std. Error
EIPav	Mean	3.9950	.02995
	95% Confidence Interval for Mean		
	Lower Bound	3.9361	
	Upper Bound	4.0539	
	5% Trimmed Mean	4.0491	
	Median	4.2200	
	Variance	.342	
	Std. Deviation	.58460	
	Minimum	1.67	
	Maximum	5.00	
	Range	3.33	
	Interquartile Range	.77	
	Skewness	-.184	.125
	Kurtosis	.213	.249

### Descriptives

Business Incubation Program		Statistic	Std. Error
SpaceAV	Mean	6.4402	.08365
	95% Confidence Interval for Mean		
	Lower Bound	6.2757	
	Upper Bound	6.6046	
	5% Trimmed Mean	6.5407	
	Median	6.3300	
	Variance	2.666	
	Std. Deviation	1.63269	
	Minimum	1.83	
	Maximum	9.50	
	Range	7.67	
	Interquartile Range	1.67	
	Skewness	-.287	.125
	Kurtosis	.375	.249

### Descriptives

Business Incubation Program		Statistic	Std. Error
SharedAV	Mean	6.4023	.08033
	95% Confidence Interval for Mean		
	Lower Bound	6.2444	
	Upper Bound	6.5603	
	5% Trimmed Mean	6.5016	
	Median	6.5000	
	Variance	2.459	
	Std. Deviation	1.56807	
	Minimum	1.88	
	Maximum	9.25	
	Range	7.37	
	Interquartile Range	1.38	
	Skewness	-.214	.125
	Kurtosis	.452	.249

### Descriptives

Business Incubation Program		Statistic	Std. Error	
ServAV	Mean	6.3907	.08596	
	95% Confidence Interval for Mean	Lower Bound	6.2217	
		Upper Bound	6.5597	
	5% Trimmed Mean	6.4589		
	Median	6.3750		
	Variance	2.815		
	Std. Deviation	1.67785		
	Minimum	2.00		
	Maximum	14.13		
	Range	12.13		
	Interquartile Range	1.69		
	Skewness	-.364	.125	
	Kurtosis	.406	.249	

### Descriptives

Business Incubation Program		Statistic	Std. Error	
SuppAV	Mean	6.2717	.08195	
	95% Confidence Interval for Mean	Lower Bound	6.1105	
		Upper Bound	6.4328	
	5% Trimmed Mean	6.3416		
	Median	6.2900		
	Variance	2.559		
	Std. Deviation	1.59970		
	Minimum	1.43		
	Maximum	10.00		
	Range	8.57		
	Interquartile Range	1.28		
	Skewness	-.189	.125	
	Kurtosis	.013	.249	

### Descriptives

Business Incubation Program		Statistic	Std. Error
SkillDevAV	Mean	6.2230	.08540
	95% Confidence Interval for Mean		
	Lower Bound	6.0550	
	Upper Bound	6.3909	
	5% Trimmed Mean	6.2950	
	Median	6.3300	
	Variance	2.779	
	Std. Deviation	1.66697	
	Minimum	1.83	
	Maximum	10.00	
	Range	8.17	
	Interquartile Range	1.66	
	Skewness	-.224	.125
	Kurtosis	.420	.249

### Descriptives

Business Incubation Program		Statistic	Std. Error
SeedCapAV	Mean	5.9148	.07949
	95% Confidence Interval for Mean		
	Lower Bound	5.7585	
	Upper Bound	6.0711	
	5% Trimmed Mean	5.9779	
	Median	6.0000	
	Variance	2.407	
	Std. Deviation	1.55158	
	Minimum	1.50	
	Maximum	9.33	
	Range	7.83	
	Interquartile Range	1.66	
	Skewness	-.138	.125
	Kurtosis	.418	.249

### Descriptives

Business Incubation Program		Statistic	Std. Error
SynAV	Mean	6.2461	.08745
	95% Confidence Interval for Mean		
	Lower Bound	6.0741	
	Upper Bound	6.4180	
	5% Trimmed Mean	6.3085	
	Median	6.2500	
	Variance	2.913	
	Std. Deviation	1.70689	
	Minimum	2.00	
	Maximum	10.00	
	Range	8.00	
	Interquartile Range	2.00	
	Skewness	-.284	.125
	Kurtosis	.270	.249

### Descriptives

Entrepreneurial Intention		Statistic	Std. Error
Elav	Mean	3.7933	.03264
	95% Confidence Interval for Mean		
	Lower Bound	3.7291	
	Upper Bound	3.8575	
	5% Trimmed Mean	3.8055	
	Median	3.6700	
	Variance	.406	
	Std. Deviation	.63701	
	Minimum	1.83	
	Maximum	5.00	
	Range	3.17	
	Interquartile Range	1.00	
	Skewness	.015	.125
	Kurtosis	-.120	.249

**APPENDIX G:**

**Mahalanobis Distance (Testing the outlier)**



**Observations farthest from the centroid (Mahalanobis distance) (All)**

Observation number	Mahalanobis d-squared	p1	p2
286	116.065	.032	.000
23	98.959	.035	.000
101	94.027	.037	.000
89	86.877	.038	.000
135	81.823	.049	.000
305	80.898	.050	.000
99	47.385	.053	.000
367	47.103	.056	.000
229	46.821	.056	.000
2	46.805	.056	.000
355	46.792	.059	.000
6	46.524	.070	.000
11	45.654	.072	.000
378	45.548	.074	.000
364	45.401	.075	.000
19	45.309	.077	.000
76	45.191	.084	.000
13	44.714	.085	.000
245	44.669	.088	.000
359	44.456	.088	.000
69	44.437	.092	.000
360	44.201	.098	.000
18	43.831	.110	.000
53	43.230	.112	.000
222	43.101	.113	.000
171	43.065	.120	.000
371	42.688	.121	.000
219	42.651	.124	.000
16	42.519	.125	.000
49	42.483	.125	.000
113	42.460	.128	.000
47	42.314	.129	.000
380	42.310	.129	.000
50	42.310	.131	.000
357	42.178	.134	.000
1	42.051	.135	.000
88	42.016	.138	.000
368	41.867	.140	.000
376	41.823	.142	.000
374	41.721	.144	.000
70	41.618	.145	.000
235	41.608	.151	.000

Observation number	Mahalanobis d-squared	p1	p2
372	41.346	.153	.000
9	41.247	.159	.000
365	41.018	.170	.000
316	40.612	.172	.000
381	40.552	.173	.000
231	40.489	.175	.000
103	40.403	.177	.000
178	40.381	.181	.000
71	39.199	.182	.000
90	39.008	.184	.000
354	38.814	.187	.000
342	38.698	.188	.000
60	38.407	.189	.000
67	38.179	.191	.000
124	38.120	.194	.000
253	38.113	.195	.000
78	37.595	.196	.000
109	37.521	.198	.000
362	37.385	.199	.000
201	37.103	.201	.000
352	36.821	.204	.000
258	36.805	.206	.000
14	36.792	.208	.000
296	36.524	.211	.000
363	35.654	.214	.000
66	35.548	.215	.000
291	35.401	.216	.000
52	35.309	.217	.000
73	35.191	.218	.000
17	34.714	.218	.000
358	34.669	.219	.000
366	34.456	.302	.000
85	34.437	.305	.000
74	34.201	.307	.000
77	33.831	.309	.000
282	33.230	.404	.000
87	33.101	.404	.000
79	33.065	.408	.000
22	32.688	.409	.000
370	32.651	.502	.000
373	32.519	.503	.000
3	32.483	.504	.000
84	32.460	.505	.000
51	32.314	.507	.000



Observation number	Mahalanobis d-squared	p1	p2
119	32.310	.509	.000
224	32.310	.602	.000
151	32.178	.606	.000
228	32.051	.608	.000
114	32.016	.701	.000
216	31.867	.706	.000
10	31.823	.708	.000
91	31.721	.709	.000
8	31.618	.803	.000
57	31.608	.804	.000
34	31.346	.805	.000
98	31.247	.806	.000
142	31.018	.808	.000
288	31.112	.809	.000



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**APPENDIX H:**  
**MSA Independent Variables**

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### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.906
Bartlett's Test of Sphericity	Approx. Chi-Square
	10185.911
	df
	351
	Sig.
	.000

a. Based on correlation

### Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.071	26.188	26.188	7.071	26.188	26.188
2	6.120	22.665	48.853	6.120	22.665	48.853
3	4.902	18.157	67.010	4.902	18.157	67.010
4	2.119	7.849	74.859	2.119	7.849	74.859
5	1.241	4.595	79.454	1.241	4.595	79.454
6	.705	2.610	82.064			
7	.528	1.954	84.018			
8	.483	1.790	85.809			
9	.404	1.497	87.306			
10	.346	1.283	88.589			
11	.327	1.211	89.800			
12	.284	1.051	90.851			
13	.250	.926	91.777			
14	.238	.882	92.659			
15	.224	.829	93.488			
16	.209	.775	94.263			
17	.195	.721	94.984			
18	.188	.697	95.681			
19	.173	.640	96.321			
20	.161	.594	96.915			
21	.153	.567	97.482			
22	.138	.512	97.995			
23	.128	.474	98.469			
24	.119	.440	98.909			
25	.106	.392	99.301			
26	.096	.356	99.656			
27	.093	.344	100.000			

Extraction method : Principal Component Analysis

**Component Matrix<sup>a</sup>**

	Component				
	1	2	3	4	5
RTav	.389	.381	-.092	.560	-.407
INOav	.386	.356	-.032	.491	-.404
PROav	.313	.280	-.031	.458	-.574
FSav	.181	.207	.054	.744	.520
PSav	.287	.217	-.051	.702	.523
DevNProdav	.286	.487	.727	-.104	.032
BIEnAV	.249	.450	.780	-.081	.000
InInvRelAV	.297	.436	.736	-.056	-.011
DefCorpAV	.245	.412	.793	-.080	.028
CopUnxChalAV	.245	.406	.791	-.150	-.003
DevCriHRav	.258	.374	.786	-.113	.052
EIP1	-.535	.558	-.127	-.068	.004
EIP2	-.682	.598	-.088	-.037	-.047
EIP3	-.677	.607	-.091	.035	.019
EIP4	-.681	.577	-.103	-.011	.045
EIP5	-.648	.488	-.081	.015	-.047
EIP6	-.636	.538	-.023	.070	-.010
EIP7	-.695	.567	-.108	-.004	-.014
EIP9	-.682	.528	-.105	-.011	.013
EIP10	-.553	.521	-.127	.055	.034
SpaceAV	.587	.560	-.393	-.208	.075
SharedAV	.597	.512	-.428	-.199	.049
ServAV	.573	.537	-.396	-.156	.033
SuppAV	.627	.514	-.413	-.177	.052
SkillDevAV	.638	.519	-.385	-.140	.077
SeedCapAV	.469	.289	-.528	-.247	-.008
SynAV	.578	.570	-.394	-.102	.084

Extraction Method: Principal Component Analysis.

a. 5 components extracted.

**Rotated Component Matrixa**

	Component				
	1	2	3	4	5
RTav	-.009	.263	.078	.813	.216
INOav	-.032	.238	.129	.761	.166
PROav	-.030	.143	.077	.830	.009
FSav	.008	.026	.085	.165	.932
PSav	-.050	.160	.032	.167	.918
DevNProdav	.026	.102	.918	.063	.043
BIEnAV	.021	.023	.933	.081	.029
InInvRelAV	-.017	.057	.897	.113	.044
DefCorpAV	-.003	-.004	.928	.051	.044
CopUnxChalAV	-.007	.011	.933	.030	-.028
DevCriHRav	-.037	-.001	.915	.008	.034
EIP1	.780	.075	.010	-.034	-.043
EIP2	.910	-.026	.018	-.004	-.068
EIP3	.914	-.030	.013	-.004	.029
EIP4	.898	-.025	-.004	-.058	.010
EIP5	.812	-.084	-.023	.011	-.041
EIP6	.829	-.092	.044	.030	.031
EIP7	.902	-.046	-.019	-.016	-.028
EIP9	.865	-.055	-.029	-.046	-.017
EIP10	.771	.010	-.028	.007	.058
SpaceAV	-.003	.919	.085	.091	.042
SharedAV	-.038	.910	.035	.108	.025
ServAV	-.006	.879	.060	.145	.046
SuppAV	-.060	.915	.053	.126	.047
SkillDevAV	-.068	.902	.077	.133	.093
SeedCapAV	-.082	.772	-.173	.044	-.090
SynAV	.012	.888	.070	.150	.124

Extraction Method: Principal Component Analysis

Rotation Method : Varimax with Kaiser Normalization

a. Rotation converged in 5 iterations.



**APPENDIX I:**  
**MSA Dependent Variable**

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### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.900
Bartlett's Test of Sphericity	Approx. Chi-Square
	2587.950
	df
	15
	Sig.
	.000

### Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.828	80.459	80.459	4.828	80.459	80.459
2	.510	8.495	88.954			
3	.300	5.004	93.958			
4	.188	3.135	97.093			
5	.096	1.593	98.686			
6	.079	1.314	100.000			

Extraction Method: Principal Component Analysis.

### Component Matrix<sup>a</sup>

	Component
	1
EI2	.856
EI3	.938
EI5	.928
EI6	.855
EI7	.922
EI8	.879

Extraction Method : Principal Component Analysis

a. 1 component extracted



**APPENDIX J:  
MEASUREMENT MODEL OUTPUT**

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**CMIN**

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	90	849.124	471	.216	2.037
Saturated model	561	.000	0		
Independence model	33	13499.175	528	.000	25.567

**RMR, GFI**

Model	RMR	GFI	AGFI	PGFI
Default model	.080	.892	.929	.729
Saturated model	.000	1.000		
Independence model	.607	.200	.150	.188

**Baseline Comparisons**

Model	NFI	RFI	IFI	TLI	CFI
	Delta1	rho1	Delta2	rho2	
Default model	.929	.920	.963	.958	.962
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

**Parsimony-Adjusted Measures**

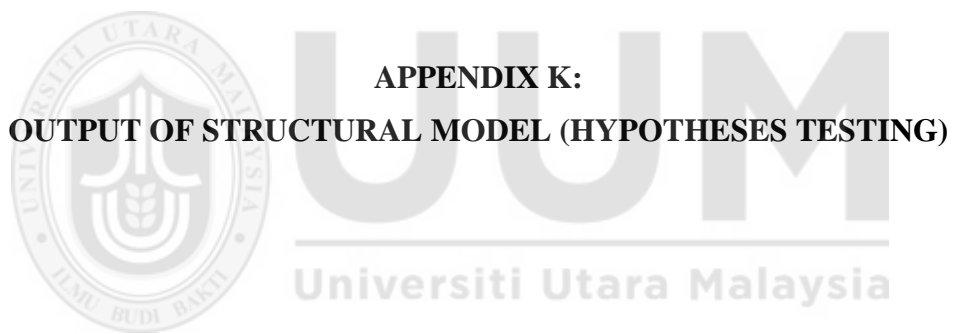
Model	PRATIO	PNFI	PCFI
Default model	.874	.829	.858
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

**Parsimony-Adjusted Measures**

Model	PRATIO	PNFI	PCFI
Default model	.874	.829	.858
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

**RMSEA**

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.052	.047	.057	.216
Independence model	.254	.251	.258	.000



Regression Weights: (All - Default model)

			Estimate	S.E.	C.R.	P	Label
EI	<---	SS	.078	.031	2.483	.013	
EI	<---	EO	.472	.089	5.329	***	
EI	<---	EIP	.304	.050	6.071	***	
EI	<---	BIP	.142	.028	5.030	***	
EI	<---	ESE	.080	.024	3.377	***	
RTav	<---	EO	1.000				
INOav	<---	EO	.845	.059	14.315	***	
PROav	<---	EO	.832	.065	12.879	***	
PSav	<---	SS	1.000				
Fsav	<---	SS	.779	.067	11.571	***	
EIP3	<---	EIP	1.000				
EIP2	<---	EIP	1.012	.036	28.265	***	
EIP1	<---	EIP	.836	.045	18.462	***	
EIP4	<---	EIP	.963	.038	25.627	***	
EIP5	<---	EIP	.851	.042	20.229	***	
EIP6	<---	EIP	.847	.038	22.417	***	
EIP7	<---	EIP	.972	.036	27.365	***	
EIP9	<---	EIP	.916	.037	24.834	***	
EIP10	<---	EIP	.803	.046	17.381	***	
ServAV	<---	BIP	1.000				
SharedAV	<---	BIP	.970	.037	26.447	***	
SpaceAV	<---	BIP	1.022	.037	27.402	***	
SuppAV	<---	BIP	.995	.037	26.978	***	
SkillDevAV	<---	BIP	1.046	.038	27.379	***	
SeedCapAV	<---	BIP	.743	.045	16.645	***	
SynAV	<---	BIP	1.036	.041	25.535	***	
EI2	<---	EI	1.000				
EI3	<---	EI	.924	.047	19.689	***	
EI5	<---	EI	.911	.046	19.757	***	
EI6	<---	EI	.943	.050	18.854	***	
EI7	<---	EI	.981	.050	19.738	***	
EI8	<---	EI	.991	.043	23.300	***	
BIEenAV	<---	ESE	1.000				
DevNProdav	<---	ESE	.963	.030	31.698	***	
InInvRelAV	<---	ESE	.964	.033	29.302	***	
DefCorpAV	<---	ESE	.998	.031	32.330	***	
CopUnxChalAV	<---	ESE	.974	.031	31.321	***	
DevCriHRav	<---	ESE	.932	.033	28.392	***	

**Standardized Regression Weights: (All - Default model)**

		Estimate
EI	<--- SS	.124
EI	<--- EO	.328
EI	<--- EIP	.270
EI	<--- BIP	.253
EI	<--- ESE	.148
RTav	<--- EO	.858
INOav	<--- EO	.755
PROav	<--- EO	.674
PSav	<--- SS	.957
Fsav	<--- SS	.842
EIP3	<--- EIP	.892
EIP2	<--- EIP	.916
EIP1	<--- EIP	.742
EIP4	<--- EIP	.877
EIP5	<--- EIP	.782
EIP6	<--- EIP	.831
EIP7	<--- EIP	.904
EIP9	<--- EIP	.865
EIP10	<--- EIP	.715
ServAV	<--- BIP	.876
SharedAV	<--- BIP	.909
SpaceAV	<--- BIP	.920
SuppAV	<--- BIP	.914
SkillDevAV	<--- BIP	.922
SeedCapAV	<--- BIP	.703
SynAV	<--- BIP	.892
EI2	<--- EI	.737
EI3	<--- EI	.952
EI5	<--- EI	.955
EI6	<--- EI	.761
EI7	<--- EI	.955
EI8	<--- EI	.768
BIEnAV	<--- ESE	.933
DevNProdav	<--- ESE	.911
InInvRelAV	<--- ESE	.888
DefCorpAV	<--- ESE	.916
CopUnxChalAV	<--- ESE	.908
DevCriHRav	<--- ESE	.880

**Covariances: (All - Default model)**

	Estimate	S.E.	C.R.	P	Label
EIP <--> BIP	-.091	.057	-1.596	.111	
EO <--> SS	.314	.048	6.580	***	
SS <--> BIP	.439	.107	4.100	***	
EO <--> BIP	.374	.054	6.968	***	
SS <--> EIP	-.063	.052	-1.215	.224	
SS <--> ESE	.194	.109	1.780	.075	
EIP <--> ESE	.008	.060	.130	.896	
EO <--> ESE	.180	.052	3.484	***	
BIP <--> ESE	.238	.120	1.981	.048	
EO <--> EIP	-.023	.024	-.962	.336	
e22 <--> e27	.290	.032	9.084	***	
e10 <--> e12	.063	.011	5.741	***	
e9 <--> e14	.071	.013	5.383	***	
e8 <--> e13	-.057	.012	-4.667	***	
e7 <--> e11	-.052	.009	-5.856	***	
e11 <--> e12	-.043	.008	-5.357	***	
e25 <--> e27	.166	.026	6.345	***	
e22 <--> e25	.171	.029	5.993	***	
e16 <--> e19	-.128	.028	-4.588	***	
e33 <--> e34	.145	.035	4.102	***	

**Correlations: (All - Default model)**

	Estimate
EIP <--> BIP	-.085
EO <--> SS	.418
SS <--> BIP	.229
EO <--> BIP	.445
SS <--> EIP	-.066
SS <--> ESE	.097
EIP <--> ESE	.007
EO <--> ESE	.204
BIP <--> ESE	.106
EO <--> EIP	-.055
e22 <--> e27	.562
e10 <--> e12	.377
e9 <--> e14	.315
e8 <--> e13	-.263
e7 <--> e11	-.381
e11 <--> e12	-.308

	Estimate
e25 <--> e27	.366
e22 <--> e25	.341
e16 <--> e19	-.304
e33 <--> e34	.273



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**APPENDIX L:  
THE MODEL FIT**

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**CMIN**

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	273	2382.996	1410	.088	1.690
Saturated model	1683	.000	0		
Independence model	99	27691.260	1584	.000	17.482

**RMR, GFI**

Model	RMR	GFI	AGFI	PGFI
Default model	.088	.890	.914	.710
Saturated model	.000	1.000		
Independence model	.613	.197	.147	.186

**Baseline Comparisons**

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.923	.903	.963	.958	.963
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

**Parsimony-Adjusted Measures**

Model	PRATIO	PNFI	PCFI
Default model	.867	.814	.857
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

**RMSEA**

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.030	.028	.032	1.000
Independence model	.147	.146	.149	.000