

The Factors Shaping Entrepreneurial Intentions

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P U B L I S H I N G

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PREFACE

The decision to establish a new venture involves substantial uncertainties, risks and efforts in dealing with the challenges of the process of entrepreneurship. Through the process of creating and growing a new venture from acquiring the requisite knowledge and competencies, searching for a novel business idea, developing a business plan, mobilizing the human and financial resources, to realizing the idea and planning for the business growth and development, the entrepreneur plays dramatically important roles. The critical roles played by the entrepreneurs in the process of entrepreneurship, and consequently the social and economic growth of the nations, particularly developing countries, turn from specifying the personal and environmental factors that motivate and enable individuals to establish new businesses to one of the main concerns of researchers, educators and policy makers. This is evident from the numerous research on characteristics and qualities of entrepreneurs, the increasing number of journals and books on the subject, the large number of conferences and courses on the topic, and the growing infrastructures for entrepreneurial activities provided by the governments.

Yet, there are still many unaddressed questions in relation to who has a strong enough intention to accept all the risks and expend the effort required to establish a new venture, the factors that influence the formation of a firm intention in university students to establish their own ventures, how personal and environmental factors such as education prepare students for the challenging decision, and more importantly, how these factors interact to construct students' entrepreneurial intentions. To provide a better knowledge and understanding of the factors that affect students' selection of entrepreneurship, this book is organized into two main sections and 9 chapters. The first section explores entrepreneurial attributes, including self-regulation, self-efficacy, metacognition (knowledge of cognition and regulation of cognition) and entrepreneurial intentions. The second section examines the factors that significantly influence students' entrepreneurial intentions, such as personal attraction, perceived behavioural control, self-regulation, self-efficacy, gender and education. While the five chapters in the first section provide a descriptive perspective of the factors that have an impact on students' intentions to become entrepreneurs, the four chapters in the second section investigate

the interactions among the factors that affect the formation of entrepreneurial intentions in students.

The research-based structure of the chapters will help the reader to look at entrepreneurial intention and its antecedents from the perspective of previous studies as well as the current trends in Malaysia. Each chapter begins with an abstract which provides an overview of the study presented in the chapter, the importance of the study and research methodology followed by the discussion of the findings and limitations. It concludes with the implications of the findings for research, theory development, education and policy making in entrepreneurship. Finally, the agendas for future research are highlighted. Chapter one describes students' entrepreneurial attributes, including self-regulation and entrepreneurial self-efficacy in relation to the choice of an entrepreneurial career. Chapter two examines if students from public and private universities differ in terms of their entrepreneurial attributes, and chapter three explores entrepreneurial attributes and intentions only among students from private higher learning institutions. Chapters four and five approach students' entrepreneurial intentions through a metacognition (knowledge of cognition and regulation of cognition) perspective and attempt to open new windows for theory and practice development in entrepreneurship learning and education. Chapter six examines how factors such as personal attraction, perceived behavioural control, entrepreneurial skills, subjective norms and entrepreneurship norms in the close and social environment interact and form students' entrepreneurial intentions. Chapter seven explores the moderation effect of self-regulation on the relationship between entrepreneurial self-efficacy and students' entrepreneurial intentions, and chapter eight investigates the moderation role that gender plays in shaping students' intentions to become entrepreneurs. Finally, the moderating effect of entrepreneurship education on students' entrepreneurial intentions is suggested in chapter nine, highlighting attitudes toward entrepreneurship and self-efficacy as two of the potential mechanisms through which entrepreneurship education develops students' entrepreneurial intentions.

Reading the book

This book is a must-read for educators, researchers and policy makers, particularly in Malaysia. The findings of the studies presented in the book greatly assist educators and policy makers to review and improve the current university entrepreneurship education and training programs and guide new initiatives in entrepreneurship curriculum development to more

effectively improve students' entrepreneurial competencies and intentions. This book is suggested as suitable reading for lecturers and teachers who aim to guide students' entrepreneurship learning and develop their entrepreneurial capabilities. Students and nascent entrepreneurs will also find the book useful in guiding the process of learning and developing the knowledge and competencies required for starting their own ventures.

Acknowledgement

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CHAPTER ONE

STUDENTS' ENTREPRENEURIAL ATTRIBUTES: A FOCUS ON SELF-REGULATION, ENTREPRENEURIAL SELF-EFFICACY AND INTENTION

Abstract A tremendous amount of research has been devoted to identifying the attributes that motivate and enable individuals to pursue an entrepreneurship career path, particularly among university students. However, few researchers have examined a combination of students' entrepreneurial characteristics that can be learned and developed through education and training. This chapter aims to examine a set of entrepreneurial attributes, including self-regulation, self-efficacy and intention among Malaysian university students. A total of 722 students were randomly selected across five universities as the participants. Our results reveal that these students have moderate levels of self-regulation and entrepreneurial self-efficacy, but high intentions to become entrepreneurs. Furthermore, the students are more prevention focused than promotion focused. We discuss the implications of these findings for entrepreneurship research, theory development and education.

1.1 Introduction

Entrepreneurial attributes are characteristics that motivate and enable individuals to begin the challenging process of creating new ventures (Gürol & Atsan 2006; Kuratko 2005; Mueller & Thomas 2000). These personal traits highly influence entrepreneurs' performance and success at different stages of the entrepreneurship process (Hmieleski & Baron 2008; Brockner et al. 2004; Markman & Baron 2003). Particularly, prospective entrepreneurs rely on these motivating attributes to explore new business opportunities, which is the first step in creating a new business (Trevelyan 2011). A tremendous amount of research has sought to identify entrepreneurial attributes, particularly among university students (Wu &

Wu 2008; Wilson et al. 2007; DePillis & Reardon 2007; Fayolle et al. 2006; Segal et al. 2005; Zhao et al. 2005; Shane et al. 2003; Chen et al. 1998). While some researchers have focused on specifying inborn entrepreneurial traits, such as “locus of control,” “need for achievement” and “tolerance for ambiguity” (Hansemark 1998; Teoh & Foo 1997; McClelland 1961), others have examined longer lasting entrepreneurial qualities that have a great impact on entrepreneurial behaviours and can be acquired and developed through education and training (Bryant 2006; Krueger et al. 2000; Mueller & Thomas 2000; Chen et al. 1998; Ajzen 1991).

Currently, the entrepreneurial attributes that can be taught to students, enabling them to successfully establish new ventures, comprise a hotly debated area (Wilson et al. 2007; Klein & Bullock 2006; Henry et al. 2005). This affects the preparation of effective entrepreneurship education programs that can develop students’ entrepreneurial capabilities and improve their success in creating new ventures, particularly in developing countries such as Malaysia (Cheng et al. 2009; Mastura & Abdul Rashid 2008; Horn 2006; Isaacs et al. 2007; North 2002). In this chapter we examine a set of entrepreneurial attributes that can be improved among university students through education and training. We offer one of the first empirical studies that explores and integrates self-regulatory focus, recently used to explain entrepreneurial motivation and behaviour (Tumasjan & Braun, 2012; Bryant 2009; 2007; McMullen & Shepherd 2002), and entrepreneurial self-efficacy and intention that have been used to evaluate the students’ desires and abilities to become entrepreneurs (Wilson et al. 2007; DePillis & Reardon 2007; Fayolle et al. 2006; Segal et al. 2005; Zhao et al. 2005; Shane et al. 2003; Chen et al. 1998). We first describe the theoretical foundations of the constructs under investigation and their influence on entrepreneurial behaviour. Then, after presenting our research methods and results, we conclude with a discussion of the findings in light of their implications for entrepreneurship research, theory development and education.

1.2 Self-regulation and entrepreneurship

The theory of self-regulation (Higgins 1998) is based on the belief that people tend to seek joy and comfort and avoid distress and conflict. However, this can also be modified by one’s self-regulatory focus, which is the ability to set and achieve goals despite the presence of personal and environmental obstacles (Higgins et al. 2001). Promotion and prevention are two driving forces that can direct people’s motivation towards the

accomplishment of their goals. When promotion-focused, people consider the pleasant and gainful outcomes of achieving their goals. When prevention-focused, however, they emphasize their security and avoid potential failures and losses (Bryant 2007; Brockner et al. 2004; McMullen & Shepherd 2002). An individual's sense of self-regulation is shaped by a combination of their past successes and failures as well as present environmental factors (Higgins et al. 2001). Since everyone's experiences are unique, their self-regulatory orientation will differ in terms of their motivations and abilities to set personal goals. Further, their cognitive ability to determine the outcomes of these goals, as well as their means and strategies to achieve them, will also be subject to their sense of self-regulation (Trevelyan 2011; Bryant 2009; 2007; Brockner et al. 2004; McMullen & Shepherd 2002).

The theory of self-regulation has recently been applied in entrepreneurship research to explain the levels and patterns of individuals' entrepreneurial attributes (Brockner et al. 2004). When faced with highly complex and risky situations, such as those found in entrepreneurial activities, self-regulatory focus can help define the manner by which individuals approach these situations and direct themselves to fulfil the required tasks. Self-regulation, therefore, plays a critical role in one's selection as an entrepreneur (Bryant 2006). It also affects the amount of effort entrepreneurs put into establishing new ventures, as well as their entrepreneurial success (Brockner et al. 2004). Promotion focus motivates entrepreneurs to explore various creative and innovative entrepreneurial opportunities (Tumasjan & Braun, 2012; Trevelyan 2011; Brockner et al. 2004), decide which entrepreneurial opportunities to exploit (Bryant 2007), and improve the performance of their new venture (Hmieleski & Baron 2008). In contrast, prevention focus directs entrepreneurs away from risky and uncertain tasks, such as entering a new industry or market (Trevelyan 2011). Brockner et al. (2004) have emphasized that entrepreneurs need to be competent in shifting from one focus to another to successfully perform their tasks in and across different stages of the entrepreneurship process. Scholars strongly believe that systematic and purposeful interventions, such as education and training, can improve self-regulation and thereby the students' desires and competences to become entrepreneurs (Tumasjan & Braun 2012; Bryant 2007; 2006; Brockner et al. 2004). However, there is little empirical research published that relates to students' self-regulation focuses and their intentions to become entrepreneurs (McMullen & Shepherd 2002).

1.3 Self-efficacy and entrepreneurship

While self-regulatory focus has recently emerged as a theoretical framework in entrepreneurship research and education (Tumasjan & Braun, 2012; Bryant 2007; 2006; Brockner et al. 2004; McMullen & Shepherd 2002), self-efficacy has traditionally been used to explain entrepreneurs' motivations and performances as well as students' entrepreneurial intentions and behaviours (Tyszka et al. 2011; DePillis & Reardon 2007; Segal et al. 2005; DeNoble et al. 1999; Chen et al. 1998). Grounded in social cognitive theory (Bandura 1997), self-efficacy is the personal cognitive evaluation of one's ability to successfully perform a specific task. This personal assessment of task performance success is affected by various personal, behavioural and environmental factors. These environmental factors highly influence one's perceived capabilities when acquiring a new sense of self-efficacy or changing acquired skills to successfully complete a novel task (Bandura 2012). Entrepreneurial self-efficacy, therefore, is "the belief in one's efficacy in performing entrepreneurial tasks" (Bryant 2007, 735). Entrepreneurial self-efficacy has been highlighted as one of the key personal traits that motivates entrepreneurial behaviours (Tyszka et al. 2011; McGee et al. 2009; DePillis & Reardon 2007; Chen et al. 1998) and enhances individual's motivation and competence when beginning new ventures (Boyd & Vozikis 1994). It also enables entrepreneurs to cope with uncertainties and challenges during the entrepreneurship process from opportunity recognition to mobilizing resources and improving the performance and success of the new business (Tumasjan & Braun, 2012; McGee et al. 2009; Barbosa et al. 2007; Bryant 2006; Markman & Baron 2003).

The fundamental role that entrepreneurial self-efficacy plays in the process of entrepreneurship has led educators to provide opportunities for students to improve their self-efficacy in different tasks and roles as entrepreneurs (Baum & Locke 2004; Rae & Carswell 2000). Students' involvement in various learning experiences such as business plan writing, running a small business and working with an entrepreneur, helps them evaluate their capabilities to perform these tasks and decide on whether to pursue an entrepreneurial career path (Wilson et al. 2007; Fayolle et al. 2006; Zhao et al. 2005; Erikson 2003).

However, few researchers have measured the different dimensions of entrepreneurial self-efficacy (McGee et al. 2009; Barbosa et al. 2007), particularly in relation to other entrepreneurial attributes such as self-regulatory focus (Tumasjan & Braun, 2012; Tyszka et al. 2011; Bryant 2007; 2006). Most studies in educational settings have examined the

relationship between students' entrepreneurial self-efficacy and intention to become an entrepreneur (Kickul et al. 2009; Wilson et al. 2007; Fayolle et al. 2006; Zhao et al. 2005). While researchers such as Bandura (1997) have emphasized that self-efficacy affects one's behaviour through self-regulatory processes such as motivation, perseverance and confidence in accomplishing a task. Therefore, self-efficacy can influence an individual's behaviour both directly and indirectly through self-regulatory mechanisms (Bandura 2012). Bryant (2007; 2006), highlighting the urgent need to integrate these constructs to better understand entrepreneurial behaviour. Tumasjan and Braun (2012) have provided empirical evidence for the complementary impact of entrepreneurial self-efficacy and self-regulatory focus on entrepreneurial behaviours, such as opportunity recognition. However, few studies have used both of these constructs in educational settings to examine students' entrepreneurial intentions and behaviours (McMullen & Shepherd 2002). This limited understanding affects the provision of effective educational programs and pedagogical methods based on students' entrepreneurial strengths and weaknesses, which is important in the development of their entrepreneurial intention and competence (Chen et al. 1998). To this end, this study aims to measure the dimensions of entrepreneurial self-efficacy and self-regulatory focus among university students.

1.4 Entrepreneurial intention, self-regulation and self-efficacy

The decision to choose entrepreneurship as a career path has been one of the main focuses of entrepreneurship researchers and educators. Researchers have predominantly used the theory of planned behaviour (Ajzen 1991) to explain one's career choice as an entrepreneur, based on the assumption that this choice is a conscious and deliberate behaviour that can most accurately be predicted by intention (Guerrero et al. 2008; Souitaris et al. 2007; Segal et al. 2005; Ajzen 2002; Krueger et al. 2000; Boyd & Vozikis 1994). This theory considers the human decision to adopt behaviour, such as creating a new venture, as a function of the interactions between three motivational and enabling factors. These factors include control over behaviour (individual perceptions of their abilities to perform entrepreneurial tasks), attitude towards behaviour (individual awareness of the importance and value of entrepreneurship) and subjective and social norms (individual perception of the significance of how others value and support the establishment of a new business). Meek et al. (2010) further conclude that

social norms, defined as the widely accepted rules by groups of people, influence the intention to establish a new venture.

Education and training programs can improve entrepreneurial intentions. Several studies have demonstrated that entrepreneurial education significantly influences students' intention to start their own businesses (Wu & Wu 2008; Fayolle et al. 2006; Peterman & Kennedy 2003). These programs nurture students' intention to become entrepreneurs through developing their entrepreneurial skills, highlighting the merits and benefits of entrepreneurship for personal and social developments and giving them experience of managing a small simulated business (Souitaris et al. 2007; Fayolle et al. 2006; Segal et al. 2005; Ajzen 2002; Krueger et al. 2000).

Furthermore, entrepreneurship education improves students' entrepreneurial intention by enhancing their self-efficacy (Souitaris et al. 2007; Fayolle et al. 2006; Zhao et al. 2005). Although the association between students' entrepreneurial intention and self-efficacy has been well established (Tumasjan & Braun, 2012; Culbertson et al. 2011; Kickul et al. 2009; Souitaris et al. 2007; Fayolle et al. 2006; Zhao et al. 2005; Krueger et al. 2000; Chen et al. 1998), little is known about the impact of students' self-regulatory focus on their intentions to launch new ventures (McMullen & Shepherd 2002). Although previous research has shown the influential role of self-regulation in a student's decision to become an entrepreneur (Bryant 2007), the role that self-regulatory focus plays in this decision making process has been largely overlooked. This study aims to address this issue by measuring university students' self-regulatory focus, entrepreneurial self- efficacy and intention.

1.5 Method

We used a descriptive research design to determine the level and pattern of self-regulatory focus, entrepreneurial self-efficacy and intention among university students. Data were collected via a questionnaire consisting of 25 items with four subsections. The first section included the students' demographic information such as age, gender, level and field of study, and nationality. The second section of the questionnaire measured both dimensions of the students' self-regulation, promotion and prevention focus (11 items), based on the regulatory focus questionnaire developed by Grant and Higgins (2003). Students' entrepreneurial self-efficacy was measured by 5 items using the self-efficacy skills questionnaire (Scherer et al. 1989). Finally, we assessed students' entrepreneurial intention by asking if they would like to become entrepreneurs by asking if they need to learn entrepreneurship. The participants were also asked to respond on a

5-point Likert scale, ranging from 1 “strongly disagree” to 5 “strongly agree.”

A total of 722 students were randomly selected from both public and private universities in Malaysia based on the rationale that situational factors highly affect individuals' senses of self-regulation and self-efficacy (Higgins et al. 2001; Bandura 1997). The majority of the students were between 16 to 25 (76.9%) years old. Of the 722 participants, 377 (52.2%) were male and 342 (47.4%) were female. Most of the students were pursuing Bachelor degrees (541, 74.9%). The students had different educational backgrounds: agricultural science (104, 14.4%), information technology (82, 11.4%), accounting and finance (41, 5.7%), and others (495, 68.5%). The majority of the students had no business experiences (491, 68%) and had never taken an entrepreneurship course (363, 50.3%). Of the students, 391 (54.2%) were from private universities and 331 (45.8%) were from public universities.

1.6 Findings

Data analysis revealed that most students intended to become entrepreneurs (510, 70.6%), and the majority also wanted to learn entrepreneurship (622, 86.1%). Furthermore, they scored moderately in both dimensions of self-regulatory focus as illustrated in Table 1.1 and 1.2 below. However, they are more prevention focused than promotion focused.

Additionally, the students showed moderate self-efficacy in all entrepreneurial tasks including marketing, accounting, organizing, human resource management and production management (Table 1.3 below).

Table 1.1. Students' promotion focus

Items on promotion focus	Mean	S.D	Level
1. Compared to most people, are you typically unable to get what you want out of life?	2.84	1.10	Moderate
2. Do you often do well at different things you try?	3.50	.82	Moderate
3. Growing up, would you ever "cross the line" by doing things that your parents would not tolerate?	3.17	1.09	Moderate
4. How often did you obey the rules and regulations that were established by your parents?	3.37	.94	Moderate
5. Growing up, did you ever act in ways that your parents thought were objectionable?	3.25	.93	Moderate
6. Not being careful enough has gotten me into trouble at times.	3.32	1.02	Moderate

Note: interpretation of mean scores (1-2.33) low, (2.34-3.67) moderate, (3.68-5) high.

Table 1.2. Students' prevention focus

Items on prevention focus	Mean	S.D	Level
1. How often have you accomplished things that got you "psyched" to work even harder?	3.41	.81	Moderate
2. When it comes to achieving things that are important to me, I find that I don't perform as well as I would ideally like to.	3.07	.97	Moderate
3. I feel that I have made progress toward being successful in my life.	3.54	.90	Moderate
4. I have found very few hobbies or activities in my life that capture my interest or motivate me to put effort into them.	3.45	1.07	Moderate
5. Did you often get on your parents' nerves when you were growing up?	3.29	1.02	Moderate

Note: interpretation of mean scores (1-2.33) low, (2.34-3.67) moderate, (3.68-5) high.

Table 1.3. Students' entrepreneurial self-efficacy

Items on entrepreneurial self-efficacy	Mean	S.D	Level
1. I can successfully complete the necessary marketing tasks related to owning a business (consider selling, selecting and customer service).	3.37	.94	Moderate
2. I can successfully complete the necessary accounting tasks related to owning a business (consider obtaining financial resources, book keeping, monitoring accounts and budgeting).	3.16	.97	Moderate
3. I can successfully complete the necessary personnel tasks related to owning a business (consider employee selection, discipline, motivation and job analysis).	3.47	.88	Moderate
4. I can successfully complete the necessary production tasks related to owning a business (consider inventory, quality control, manufacturing and layout of facilities).	3.32	.89	Moderate
5. I can successfully complete the necessary organizational tasks related to owning a business (consider planning, coordinating projects and assessing performance of the business).	3.41	.91	Moderate

Note: interpretation of mean scores (1-2.33) low, (2.34-3.67) moderate, (3.68-5) high.

1.7 Discussion

The present study aims to measure entrepreneurial attributes such as self-regulatory focus, entrepreneurial self-efficacy and intention among university students. Our results indicated that students had moderate scores in both promotion and prevention focus, which are dimensions of self-regulation. Regulatory focus is a function of personal successes and failures as well as situational factors (Higgins et al. 2001), so these moderate scores may reflect the students' past experiences in goal achievement. The majority of the students who participated in this research had no business experience and had never taken a course in

entrepreneurship. Therefore, the environmental factors that have influenced their self-regulatory focus have been predominantly shaped by their families and educations, which may have failed to create a strong sense of self-regulation in these students. Brockner et al. (2004) argue that the complex and challenging decision to become an entrepreneur and the subsequent intention to explore new business ideas require a high sense of regulatory focus. With a moderate level of self-regulation, students are less likely to explore new business ideas and enter into the challenging process of establishing new ventures.

Our findings also demonstrate that students are more prevention than promotion focused. This is in contrast with previous research indicating that entrepreneurs are more promotion focused (Tumasjan & Braun 2012; Trevelyan 2011; Hmieleski & Baron 2008; Bryant 2007; 2006). This shift in balance towards prevention suggests a lower probability of success in these students' entrepreneurial activities (Bryant 2007; Brockner et al. 2004). Our findings highlight an urgent need to improve students' promotion focus to motivate them to choose entrepreneurship as their future career path and improve the probability of their success in managing new ventures. To do so, educators may need to improve students' awareness of their regulatory orientation and provide them with opportunities to experience real entrepreneurial tasks (Trevelyan 2011; Bryant 2009; 2007). Involvement in these tasks not only helps students explore their capabilities in managing new businesses, but also improves their ability to see the benefits and rewards of entrepreneurial activities (Trevelyan 2011). For students who are prevention focused, highlighting these beneficial opportunities that they may not have otherwise explored may improve their motivations to pursue entrepreneurship as a future career (McMuller & Sheperd 2002). Tumasjan and Braun (2012) emphasize the critical role that educators can play in helping students reflect on their entrepreneurial skills to further enhance their promotion focus by adopting a promotion focused orientation. Educators can also improve students' abilities to see the benefits of entrepreneurial activities, rather than the costs and losses, to also improve their promotion focus (McMuller & Sheperd 2002). Therefore, entrepreneurship educators need to be well trained and equipped with the skills to design and implement various pedagogical methods to improve the regulatory focus of their students (Isaacs et al. 2007).

Interestingly, the findings of this study have revealed that students also perceived themselves as moderately successful in performing the different tasks and roles of an entrepreneur. This confirms the association between self-regulation and self-efficacy in entrepreneurial contexts (Tumasjan &

Barun 2012; Trevelyan 2011; Bryant 2007). Bandura (2012) argues that self-efficacy is the strongest predictor of behaviour. Being moderately efficacious in successfully fulfilling entrepreneurial tasks, students may not have the sufficient motivation and ability to enter the challenging process of entrepreneurship (Zhao et al. 2005). As emphasized by Chen et al. (1998), only students who are highly confident in their entrepreneurial skills have the strong intentions and abilities to become entrepreneurs. Furthermore, once becoming entrepreneurs, various behavioural and environmental factors reduce the sense of self-efficacy and hinder their success (Bandura 2012). Therefore, students need high entrepreneurial self-efficacy to face not only the challenges of entering entrepreneurship, but also the environmental difficulties that may interfere with their new businesses.

Entrepreneurship education can improve students' sense of entrepreneurial self-efficacy by engaging them in various learning opportunities, such as business plan writing, role modelling and case studies (Wilson et al. 2007; Fayolle et al. 2006; Chen et al. 1998). Importantly, entrepreneurship education can provide an encouraging and supportive environment for students to manage a real new venture with low risk to develop their entrepreneurial self-efficacy rather than focusing only on theoretical aspects of entrepreneurship (Trevelyan 2011; Fayolle & Gailly 2008; Fuchs et al. 2008; Pittaway & Cope 2007; Zhao et al. 2005). This is an issue that has been almost neglected by Malaysian entrepreneurship education (Cheng et al. 2009). Entrepreneurship education can also benefit from the associative and complementary relationship between entrepreneurial self-efficacy and regulatory focus (Tumasjan & Barun 2012; Bryant 2007). To do so, entrepreneurship educators should utilize the previously established pedagogical methods for improving self-efficacy to also improve students' self-regulatory focus by emphasizing on more challenging and experimental learning methods and stressing successful goal achievement (Tumasjan & Barun 2012; Heinonen 2007; Wilson et al. 2007).

We also found that while university students have high intentions to learn entrepreneurship and to start their own businesses, the majority had no business experience and had never enrolled in an entrepreneurship course. This high entrepreneurial intention and desire to learn entrepreneurship should be exploited by educators, who should then provide university students with opportunities to engage in entrepreneurship education and practical training (Fuchs et al. 2008). It also confirms the need to integrate entrepreneurship education into the Malaysian university curriculum and to offer entrepreneurship courses to students in all fields through a

coherent and comprehensive framework and structure (The World Bank Report, March 2007).

1.8 Conclusion

This chapter provides a better knowledge of the level and pattern of entrepreneurial attributes among university students in Malaysia. In addition to investigating students' entrepreneurial self-efficacy, as has been done previously (Wilson et al. 2007; Fayolle et al. 2006; Zhao et al. 2005; Chen et al. 1998), we have also measured students' self-regulation and its dimensions. Furthermore, we have explored the impact of self-regulation and self-efficacy on entrepreneurial behaviour in educational settings. Previously, researchers have studied this based on samples only from entrepreneurs, attempting to relate those results to entrepreneurship education (Tumasjan & Braun 2012; Bryant 2009; 2006). Since previous research findings on personal traits of entrepreneurs have been contradictory (Bryant 2006; Krueger et al. 2000; Mueller & Thomas 2000; Ajzen 1991), self-regulation, entrepreneurial self-efficacy and intention may provide a more helpful framework for investigating entrepreneurial capabilities among students (Trevelyan 2011; Bryant 2007; 2006; Wilson et al. 2007; Zhao et al. 2005; Chen et al. 1998). While our study provides an overall look at these attributes in both private and public university students, further research may seek to compare the entrepreneurial attributes between these types of universities as well; thus allowing educators to more specifically tailor their programs for their students.

A combination of related constructs explaining entrepreneurial attributes (self-regulation, self-efficacy and intention) may contribute to the development of new theories in entrepreneurial behaviour, including for university students. Assessing the entrepreneurial attributes may also help educators in three ways. First, educators can determine the different dimensions of these attributes in their students and provide them with more purposive and effective entrepreneurship education and training. Second, based on these strengths and weaknesses, educators can provide appropriate learning opportunities and an encouraging environment to strengthen students' regulatory focus and self-efficacy (Brockner et al. 2004). Third, educators can use the synergistic and complementary nature of these constructs to provide students with more effective entrepreneurship education.

Our findings raise critical questions for further investigations. Which aspects of self-regulatory focus (promotion and/or prevention) have a greater effect on students' entrepreneurial intention? Which aspects of

students' self-regulatory focus lead to actual new business creation? How do students' self-regulation and entrepreneurial self-efficacy interact to regulate their entrepreneurial intention? How can different aspects of the entrepreneurial attributes emerging from this study, particularly promotion focus, be utilized to improve entrepreneurship education? Which aspects of entrepreneurial self-efficacy education can be applied to improve students' self-regulatory orientation? Finally, which skills and training do educators need to improve students' entrepreneurial self-regulatory focus, self-efficacy and intention? The answers to these questions will undoubtedly give educators the knowledge to create better and more efficient entrepreneurship education programs, and so help increase the propensity and success of their students as entrepreneurs.

CHAPTER TWO

DO STUDENTS FROM PUBLIC AND PRIVATE UNIVERSITIES DIFFER IN THEIR ENTREPRENEURIAL ATTRIBUTES?

Abstract This chapter aims to explore public and private university students' entrepreneurial attributes. We focused on a set of entrepreneurial attributes including self-regulation, self-efficacy and intention. These attributes can be developed in students by being involved in entrepreneurship education and training. A total of 722 students were randomly selected from three public and two private universities as the participants. Our results indicate that students from both public and private universities have only moderate levels of self-regulation and entrepreneurial self-efficacy, but high intentions to become entrepreneurs. Furthermore, the students are more prevention than promotion focused. We discuss the implications of these findings for entrepreneurship research, theory development and education.

2.1 Introduction

Entrepreneurial attributes are characteristics that motivate and enable individuals to begin the challenging process of creating new ventures (Gürol & Atsan 2006; Kuratko 2005; Mueller & Thomas 2000). These personal traits highly influence entrepreneurs' performance and success at different stages of the entrepreneurship process (Hmieleski & Baron 2008; Brockner et al. 2004; Markman & Baron 2003). Particularly, prospective entrepreneurs rely on these motivating attributes to explore new business opportunities, the first step in creating a new business (Trevelyan 2011). A tremendous amount of research has sought to identify entrepreneurial attributes, particularly among university students (Wu & Wu 2008; Wilson et al. 2007; DePillis & Reardon 2007; Fayolle et al. 2006; Segal et al. 2005; Zhao et al. 2005; Shane et al. 2003; Chen et al. 1998). While some researchers have focused on specifying inborn entrepreneurial traits, such as "locus of control," "need for achievement" and "tolerance for

ambiguity” (Hansemark 1998; Teoh & Foo 1997; McClelland 1961), others examined longer lasting entrepreneurial qualities that have great impacts on entrepreneurial behaviours and can be acquired and developed through education and training (Bryant 2006; Krueger et al. 2000; Mueller & Thomas 2000; Chen et al. 1998; Ajzen 1991).

Currently, what entrepreneurial attributes can be taught to students, enabling them to successfully establish new ventures, is a hotly debated area (Wilson et al. 2007; Klein & Bullock 2006; Henry et al. 2005), affecting the preparation of effective entrepreneurship education programs that can develop students’ entrepreneurial capabilities and improve their success in creating new ventures, particularly in developing countries such as Malaysia (Cheng et al. 2009; Mastura & Abdul Rashid 2008). This chapter explores a set of entrepreneurial attributes that can be improved among university students through education and training. We offer one of the first empirical studies that explores and integrates a self-regulatory focus, recently used to explain entrepreneurial motivation and behaviour (Tumasjan & Braun 2012; Bryant 2009; 2007; McMullen & Shepherd 2002), and entrepreneurial self-efficacy and intention that have been used to evaluate the students’ desires and abilities to become entrepreneurs (Wilson et al. 2007; DePillis & Reardon 2007; Fayolle et al. 2006; Segal et al. 2005; Zhao et al. 2005; Shane et al. 2003; Chen et al. 1998). We first describe the theoretical foundations of the constructs under this investigation and their influence on entrepreneurial behaviour. Following this, we present our research methods and results, concluding with a discussion of the findings in light of their implications for entrepreneurship research, theory development and education.

2.2 Self-regulation and entrepreneurship

The theory of self-regulation (Higgins 1998) is based on the belief that people tend to seek joy and comfort, and avoid distress and conflict. However, this can also be modified by one’s self-regulatory focus, which is the ability to set and achieve goals despite the presence of personal and environmental obstacles (Higgins et al. 2001). Promotion and prevention focuses are two driving forces that can direct people’s motivation towards the accomplishment of their goals. When promotion-focused, people consider the pleasant and gainful outcomes of achieving their goals. When prevention-focused, however, they emphasize their security and avoid potential failures and losses (Bryant 2007; Brockner et al. 2004; McMullen & Shepherd 2002). An individuals’ sense of self-regulation is shaped by a combination of their past successes and failures as well as

present environmental factors (Higgins et al. 2001). Since everyone's experiences are unique, their self-regulatory orientations will differ in terms of their motivations and abilities to set personal goals. Further, their cognitive abilities to determine the outcomes of these goals, as well as the means and strategies to achieve them, will also be subject to their senses of self-regulation (Trevelyan 2011; Bryant 2009; 2007; Brockner et al. 2004; McMullen & Shepherd 2002).

The theory of self-regulation has recently been applied in entrepreneurship research to explain the levels and patterns of individuals' entrepreneurial attributes (Brockner et al. 2004). When faced with highly complex and risky situations, such as those found in entrepreneurial activities, the self-regulatory focus can help define the manner in which individuals approach these situations and direct themselves to fulfil the required tasks. Self-regulation, therefore, plays a critical role in one's being an entrepreneur (Bryant 2006), and also affects the amount of effort entrepreneurs put into establishing new ventures, as well as their entrepreneurial success (Brockner et al. 2004). Promotion focus motivates entrepreneurs to explore various creative and innovative entrepreneurial opportunities (Tumasjan & Braun 2012; Trevelyan 2011; Brockner et al. 2004), decide which entrepreneurial opportunities to exploit (Bryant 2007) and improve the performance of their new ventures (Hmieleski & Baron 2008). In contrast, prevention focus directs entrepreneurs away from risky and uncertain tasks, such as entering a new industry or market (Trevelyan 2011). Brockner et al. (2004) have emphasized that entrepreneurs need to be competent in shifting from one focus to the other to successfully perform their tasks in and across different stages of the entrepreneurship process. Scholars strongly believe that systematic and purposeful interventions, such as education and training, can improve self-regulation and thereby the students' desires and competences to become entrepreneurs (Tumasjan & Braun 2012; Bryant 2007; 2006; Brockner et al. 2004). However, there is little empirical research published that relates to students' self-regulation focus and their intention to become entrepreneurs (McMullen & Shepherd 2002).

2.3 Self-efficacy and entrepreneurship

While self-regulatory focus has recently emerged as a theoretical framework in entrepreneurship research and education (Tumasjan & Braun 2012; Bryant 2007; 2006; Brockner et al. 2004; McMullen & Shepherd 2002), self-efficacy has traditionally been used to explain entrepreneurs' motivations and performances as well as students' entrepreneurial

intentions and behaviours (Tyszka et al. 2011; DePillis & Reardon 2007; Segal et al. 2005; DeNoble et al. 1999; Chen et al. 1998). Grounded in social cognitive theory (Bandura 1997), self-efficacy is the personal cognitive evaluation of one's ability to successfully perform a specific task. This personal assessment of task performance success is affected by various personal, behavioural and environmental factors. These environmental factors highly influence one's perceived capabilities when acquiring a new sense of self-efficacy or changing acquired skills to successfully complete a novel task (Bandura 2012). Entrepreneurial self-efficacy, therefore, is "the belief in one's efficacy in performing entrepreneurial tasks" (Bryant 2007, 735). Entrepreneurial self-efficacy has been highlighted as one of the key personal traits that motivates entrepreneurial behaviours (Tyszka et al. 2011; McGee et al. 2009; DePillis & Reardon 2007; Chen et al. 1998) and enhances the individual's motivation and competence when beginning new ventures (Boyd & Vozikis 1994). It also enables entrepreneurs to cope with uncertainties and challenges during the entrepreneurship process, from opportunity recognition to mobilizing resources and improving performance and success of the new business (Tumasjan & Braun 2012; McGee et al. 2009; Barbosa et al. 2007; Bryant 2006; Markman & Baron 2003).

The fundamental role that entrepreneurial self-efficacy plays in the process of entrepreneurship has led educators to provide opportunities for students to improve their self-efficacy in different tasks and roles as entrepreneurs (Baum & Locke 2004; Rae & Carswell 2000). Students' involvement in various learning experiences, such as business plan writing, running a small business and working with an entrepreneur, help them to evaluate their capabilities, perform these tasks, and decide whether to pursue an entrepreneurial career path (Wilson et al. 2007; Fayolle et al. 2006; Zhao et al. 2005; Erikson 2003).

However, few researchers have measured the different dimensions of entrepreneurial self-efficacy (McGee et al. 2009; Barbosa et al. 2007), particularly in relation to other entrepreneurial attributes such as self-regulatory focus (Tumasjan & Braun 2012; Tyszka et al. 2011; Bryant 2007; 2006). Most studies in educational settings have examined the relationship between students' entrepreneurial self-efficacy and intention to become entrepreneurs (Kickul et al. 2009; Wilson et al. 2007; Fayolle et al. 2006; Zhao et al. 2005). Meanwhile, researchers such as Bandura (1997) have emphasized that self-efficacy affects one's behaviour through self-regulatory processes such as motivation, perseverance and confidence in accomplishing a task. Therefore, self-efficacy can influence an individual's behaviour both directly and indirectly through self-regulatory

mechanisms (Bandura 2012). Bryant (2007; 2006) highlights the urgent need to integrate these constructs to better understand entrepreneurial behaviour. Tumasjan and Braun (2012) have provided empirical evidence for the complementary impact of entrepreneurial self-efficacy and self-regulatory focus on entrepreneurial behaviours such as opportunity recognition. Yet, few studies have used both of these constructs in educational settings to examine students' entrepreneurial intention and behaviours (McMullen & Shepherd 2002). This limited understanding affects the provision of effective educational programs and pedagogical methods based on students' entrepreneurial strengths and weaknesses, which is important in the development of their entrepreneurial intention and competence (Chen et al. 1998). To this end, this study aims to measure the dimensions of entrepreneurial self-efficacy and self-regulatory focus among university students.

2.4 Entrepreneurial intention, self-regulation and self-efficacy

The decision to choose entrepreneurship as a career path has been one of the main focuses of entrepreneurship researchers and educators. Researchers have predominantly used the theory of planned behaviour (Ajzen 1991) to explain one's career choice as an entrepreneur, based on the assumption that this choice is a conscious and deliberate behaviour that can most accurately be predicted by intention (Guerrero et al. 2008; Souitaris et al. 2007; Segal et al. 2005; Ajzen 2002; Krueger et al. 2000; Boyd & Vozikis 1994). This theory considers the human decision to adopt behaviour, such as creating a new venture, as a function of the interactions between three motivational and enabling factors. These factors include control over behaviour (individual perceptions of their abilities to perform entrepreneurial tasks), attitude towards behaviour (individual awareness of the importance and value of entrepreneurship) and subjective and social norms (individual perception of the significance of how others value and support the establishment of a new business). Meek et al. (2010) further conclude that social norms, defined as the widely accepted rules by groups of people, influence the intention to establish a new venture.

Education and training programs can improve entrepreneurial intentions. Several studies have demonstrated that entrepreneurial education significantly influences students' intentions to start their own businesses (Wu & Wu 2008; Fayolle et al. 2006; Peterman & Kennedy 2003). These programs nurture students' intentions to become entrepreneurs through developing their entrepreneurial skills, highlighting the merits and benefits of

entrepreneurship for personal and social developments and giving them the experience of managing a small simulated business (Souitaris et al. 2007; Fayolle et al. 2006; Segal et al. 2005; Ajzen 2002; Krueger et al. 2000).

Furthermore, entrepreneurship education improves students' entrepreneurial intention by enhancing their self-efficacy (Souitaris et al. 2007; Fayolle et al. 2006; Zhao et al. 2005). Although the association between students' entrepreneurial intention and self-efficacy has been well established (Tumasjan & Braun 2012; Culbertson et al. 2011; Kickul et al. 2009; Souitaris et al. 2007; Fayolle et al. 2006; Zhao et al. 2005; Krueger et al. 2000; Chen et al. 1998), little is known about the impact of students' self-regulatory focus on their intention to launch a new venture (McMullen & Shepherd 2002). Although previous research has shown the influential role of self-regulation in a student's decision to become an entrepreneur (Bryant 2007), the role that self-regulatory focus plays in this decision making process has been largely overlooked. This study aims to address this issue by measuring university students' self-regulatory focus, entrepreneurial self-efficacy and intention.

2.5 Method

We used a descriptive research design to determine the level and pattern of self-regulatory focus, entrepreneurial self-efficacy and intention among university students. Data were collected via a questionnaire consisting of 25 items having four subsections. The first section included the students' demographic information such as age, gender, level and field of study and nationality. The second section of the questionnaire measured both dimensions of the students' self-regulation, promotion and prevention focus (11 items), based on the regulatory focus questionnaire developed by Grant and Higgins (2003). Students' entrepreneurial self-efficacy was measured by 5 items using the Self-efficacy Skills questionnaire (Scherer et al. 1989). Finally, we assessed students' entrepreneurial intention by asking if they would like to become entrepreneurs and their desire to learn entrepreneurship by asking if they need to learn entrepreneurship. The participants were also asked to respond on a 5 point Likert scale, ranging from 1 "strongly disagree" to 5 "strongly agree".

A total of 722 students were randomly selected from both public and private universities in Malaysia based on the rationale that situational factors highly affect individuals' sense of self-regulation and self-efficacy (Higgins et al. 2001; Bandura 1997). The majority of the students were between 16 to 25 (76.9%) years old. Of the 722 participants, 377 (52.2%)