

Entrepreneurial motivations, aspirations and formalisation decisions amongst informal women entrepreneurs in Nepal

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Abstract

It is assumed that entrepreneurs are motivated to engage in the informal economy out of necessity for survival rather than opportunity; therefore, lacking growth aspirations and avoiding formalisation. However, there is a lack empirical research exploring entrepreneurial motivations and aspirations in developing countries. This research aims to fill this gap by exploring informal women entrepreneurs' motivations, life aspirations and formalisation decisions in the case study of Nepal. Semi-structured interviews were conducted with 30 informal women entrepreneurs in Nepal's second largest city, Biratnagar. Women entrepreneurs' motivations to engage in the entrepreneurial activities were complex, dynamic and intertwined with wider social norms. These complex and dynamic motivations influenced their life aspirations in terms of business growth and personal development. Entrepreneurs, who aspired to grow perceived formalisation as next step towards business sustainability. The findings contribute to the debates on the formalisation of the informal economy and calls to recognise the variabilities among informal women entrepreneurs' motivations and aspirations. Given the role of informal activities and women entrepreneurs aspirations formalisation could have significant implications on their business sustainability.

Introduction

The informal economy is prevalent in developing countries, contributing to 40 - 60% of non-agriculture GDP and more than 60% of total employment in non-agricultural employment (Schneider, 2002). Despite its prevalence, one of the pressing concerns is that the informal economy absorbs the most vulnerable and marginalised groups in a society (ILO, 2013). It is assumed that these groups are motivated to engage in the informal economy out of necessity for their survival (Lagos, 1995; Perry et al., 2007), lack of growth aspirations (Langevang et al., 2012) and to avoid formalisation due to its costs (Perry et al., 2007). However, there is a growing recognition that informal entrepreneurs are also creative, and use informal economy as a transitional space to test their capability and towards formalisation (Adom and Williams, 2012; Williams and Martinez, 2014). Similarly, recent evidence has shown that businesses that started as informal (i.e. unregistered) had higher firm performance as the delay in firm registration enabled management of resources for stronger foundations for growth as a registered firm (Williams et al., 2016). These findings state that entrepreneurs make strategic decisions to engage in the informal economy and to transition towards formalisation.

Whilst research on entrepreneurial motivations has advanced significantly, the extant literature continues to separate motivations based on the opportunity-necessity distinction (Reynolds et al., 2002; Smallbone and Welter, 2004; Hughes, 2006; Hessels et al., 2008). Against this, researchers have argued that this simplified categorisation neglects the complex and intertwined nature of motivation (Kirkwood, 2009) as often necessity and opportunity motivation can co-present (Snyder, 2004; Williams, 2008; Williams and Round, 2009). As motivations are often considered drivers of future aspirations (Hessels et al., 2008), this categorisation has direct implications for formalisation decisions and government policies. However, there is a lack of empirical knowledge on entrepreneurial motivations in developing countries, particularly beyond the binary distinction, and their aspirations to grow (Rosa et al., 2006; Williams and Round, 2009; Langevang et al., 2012). With the aim to fill this research gap, this paper explores informal women entrepreneurs' motivations and life aspirations and how these might affect the choices they make in relation to business formalisation in the case study of Nepal. Three specific research questions guide the research aim:

1. What are entrepreneurs' motivation to engage in the informal economy?
2. In what ways entrepreneurs' motivations drive entrepreneurial aspirations?
3. How do entrepreneurial motivation and aspirations affect entrepreneurs' formalisation decisions?

Women entrepreneurs in a developing country context are an important empirical object because they are overrepresented, have lower business registration rates than men, and are less likely to see the value of formalisation (Hampel-Milagrosa, 2011; Kabeer, 2012). In addition, various constraints and preferences, such as cultural and social norms restricting mobility, reliance on close networks, and locational choice to remain close to home to manage family duties have been found to influence women's decisions in the informal economy (Williams, 2011; Babbitt et al., 2015). These decisions indicate that women's business preferences (including choice of industry and sector) reflect tacit choices based on distinct motivations around lifestyle, family and values; and sit within significant challenges around subsistence and livelihoods vulnerability (Bardasi et al., 2011).

The paper makes several contributions to the literature. First, it presents new knowledge on the role of motivations and aspirations on formalisation decisions. Extant literature places an emphasis on costs-benefits rationality for lack of formalisation (Perry et al., 2007). Moving forward, this research shows that formalisation decisions are intertwined with motivations, various business constraints and entrepreneurs' aspirations. Second, the relationship between motivations, aspirations and formalisation decisions are neither unidirectional nor static but dynamic. Third, building on previous studies on motivations, this research adds that informal entrepreneurs are motivated by diverse factors beyond opportunity-necessity bifurcations. These findings call for a recognition of women as heterogeneous groups, which should be considered when designing formalisation policies.

Entrepreneurial motivations and aspirations

Opportunity and necessity driven entrepreneurship

Entrepreneurial motivations have been a key focus of entrepreneurship studies and recently there has been a call to renew motivations research in new directions looking at the relationship between

motivations, aspirations and behaviour (Carsud and Brännback, 2011). Entrepreneurship literature on start-up motivations have evolved from personality traits theory to external factors focusing on 'necessity – opportunity entrepreneurship', also referred as 'pull-push' motivations (Reynolds et al., 2002; Smallbone and Welter, 2004; Hughes, 2006; Hessels et al., 2008). Necessity entrepreneurship refers to individuals pushed into entrepreneurship, influenced by structural factors such as unemployment and poverty, because of lack of alternatives, therefore, entrepreneurs are motivated to earn their livelihoods for survival (Minniti et al., 2006). Whereas, opportunity entrepreneurship refers to individuals who are pulled into entrepreneurship with a desire for autonomy, including independence and freedom, increased income, wealth, challenge, recognition and improved status (Kolvereid, 1996; Smallbone and Welter, 2004; Minniti et al., 2006). Opportunity-centred entrepreneurship emphasises individual choice whereby entrepreneurs exploit opportunity to create ventures.

This binary categorisation states that entrepreneurs are either necessity or opportunity oriented (Minniti et al., 2006). As evident on Global Entrepreneurship Monitor (GEM) surveys higher number of entrepreneurial activities in developing countries are driven by necessity-oriented entrepreneurship (40%) in comparison to developed countries where entrepreneurship is mostly opportunity-centred (20%) (Kelly et al., 2016). Mirroring the formal entrepreneurship literature, the structuralist view is also adopted on the informal sector stating that informal entrepreneurs are engaged in the informal economy out of necessity (Lagos, 1995; Adom, 2014). However, neo-liberal view emphasises on choices made by informal entrepreneurs to operate informally to avoid costs, time and effort in registration (Perry et al., 2007). Therefore, entrepreneurs choose to engage in the informal economy to achieve autonomy, freedom, and identity which is not available in the formal economy (Snyder, 2004; Aidis et al., 2006). In addition, recent evidence has shown that informal entrepreneurs are also motivated by opportunity and their motivations changed from necessity to opportunity over time (Williams and Gurtoo, 2011; Adom, 2014). Similarly, existing literature on the motives of informal entrepreneurs conventionally has stressed the static approach with research focussing on surveys at a specific time period (Adom and Williams, 2012). However, new research adopting in-depth qualitative approach have argued the "fluidity in the motives over time" (Adom and Williams, 2012:7). However, there is a lack of empirical knowledge exploring motivations in the developing countries (Rosa et al., 2006; Williams and Round, 2009).

Examining entrepreneurial motivations is important as often entrepreneurial motivations are associated with aspirations (Hessels et al., 2008). For instance, motivations associated with increased income are positively related with growth aspirations (Hessels et al., 2008). This has direct implications for the informal economy as it is considered that informal entrepreneurs motivated by necessity for survival have lower growth aspirations (Reynolds et al., 2002). This lack of growth aspirations might also influence their formalisation decisions as it is assumed that necessity focused entrepreneurs are pushed by circumstances outside their control rather than their choice. However, in a case study of Dominican Republic De Castro et al., (2014) show that informal entrepreneurs make multiple strategic choices to stage formalisation. As entrepreneurs were successful, they aspired to grow and decided to formalise to reduce costs of informality and capture wider benefits. Similarly, based on a World Bank Enterprise Survey (WBES) data, Williams et al., (2016) find that entrepreneurs made strategic choices to remain informal and delay formalisation in order to build relationships with suppliers and customers, and stronger foundations for growth leading to firm performance.

While these studies focusing on formalisation decisions and impact of being informal on firms' performance did not examine motivations and future aspirations directly they emphasise the choices informal entrepreneurs make in relation to business formalisation. This paper argues that entrepreneurs also make choices based on free will to engage in the informal economy rather than pushed by necessity; and they also aspire to grow as opportunity-oriented entrepreneurs, which affect the choices they make in relation to business formalisation. However, there is a lack of research on aspirations of informal entrepreneurs in developing countries, and where exists it links informal entrepreneurs with lack of aspirations or links growth aspirations with job creation and market expansion (Langevang et al., 2012). There is a need to understand in-depth the ways individuals are motivated to engage in the entrepreneurial activities and how these motivations are associated with future aspirations (Langevang et al., 2012).

Informal women entrepreneurs' motivations, aspirations and their formalisation decisions

Informal economy provides an important source of income for women in developing countries (Chen, 2007). However, women entrepreneurship in the informal economy are characterised as small scale, operating in a highly clustered, niche and 'saturated' sector, less efficient in terms of productivity, less profits, and less inclination towards formalisation (De Bruin et al., 2000; Bardasi et al., 2011). While women entrepreneurs are also viewed to be engaged in the informal economy motivated by necessity this narrow view neglects to reflect that women are also motivated by a desire for greater income, self-fulfilment, and ability to balance work and family roles (Kantor, 2002; Gurtoo and Williams, 2009). These motivations to start a business in the informal sector as well as their future aspirations and formalisation decisions are restricted by norms and expectations on women's work (Brush et al., 2009; Franck, 2012) and are outcome of various constraints faced by, and preferences of women entrepreneurs (Babbitt et al., 2015).

Cultural norms shape beliefs about gender roles both at home and outside, or what is appropriate for men and women (Nelson, 1999). Due to these beliefs women often choose to hide their activities and be submissive as a mean of maintaining their traditional social positions as 'mothers' and 'carers' rather than successful business women (Bowman and Cole, 2014); and when they are successful, 'success' does not mean that women perceive themselves to be a business woman or have any intention to pursue a successful business career in lieu of other expected roles (Rouse et al., 2013). Similarly, expectations on women's roles, marriage and family obviates investment in girls' formal education creating barriers to economic participation (Kantor, 2002). Women are perceived to choose informality because it allows combining household work with paid work, making use of household resources and skills based on domestic roles, particularly space and cooking and caring, facilitating effective use of time by avoiding travel to work, and remaining active, life satisfaction, independence and income (Tipple, 2005). The desire to engage in entrepreneurial activities to achieve greater 'life satisfaction' is predominantly held by women (Bardasi et al., 2011). While most of the literature emphasise that women entrepreneurs operate within the constraints of social norms and have no aspirations to grow, this paper argues against this and states that women also aspire to grow.

Methodology

Study setting and the nature of informal economy

Nepal has a long history of conflict affecting private enterprise development, contributing to increase in the size and the nature of the informal economy, and displacing men forcing women to self-employment to maintain household livelihoods (Sharma and Donini, 2012; Menon and Rodgers, 2015). The stratified society with unequal power relations, primarily caste-based, and socially prescribed roles, behaviour and expectations for men and women (ILO, 2005) have contributed directly to the higher female labour participation rate (80%) in the informal economy, which is the highest among other South Asian countries (ILO Nepal, 2014). Women-owned enterprises are subsistence in nature, operate in highly clustered and saturated sectors, more concentrated in the microenterprise sector, and have low registration rate (5.4%) compared to men owned enterprises (47.1%) (ILO, 2005).

Data collection and analysis

Data for this paper were collected as part of a project concerned with the nuanced experiences of various groups of Nepali women in the informal economy along several socio-spatial contexts and enterprise sector dynamics. Given that entrepreneurial motivations are multi-faceted (Mallon and Cohen, 2001), quantitative surveys are unable to capture the complex decision process (Kirkwood, 2009). Therefore, this study adopts a qualitative approach as a research design and uses semi-structured interviews with 30 women entrepreneurs in Biratnagar, Nepal. Biratnagar is the industrial capital serving as the main economic and service hub for the eastern region, is the second largest city and borders India. A stratified sampling strategy design was used for the selection of women entrepreneurs on the basis of diverse sectors and a mix of formal and informal women entrepreneurs. This allowed to capture the diversity of women's life circumstances and a better understanding of their motivations, life aspirations and formalisation decisions. Interviews were conducted during December 2014 – March 2015 in Nepalese, and subsequently translated into English and entered in NVIVO for data analysis purposes. The semi-structured interviews lasted between 30 to 100 minutes. Interviews were analysed using thematic analysis and involved several iterative processes. At the first stage, the interview data was reviewed to identify three key themes: i) Motivations (motivations for engaging in the

entrepreneurial activities in the informal economy); ii) Aspirations (future ambitions/plans associated with business); and iii) Formalisation decisions (plans to formalise, no plans to formalise, and already formalised). At the second stage, the data was coded further to gain an in-depth understanding of the interviews within each theme. This stage was data-driven and new codes emerged through further analysis of interviews. At the final stage, codes were evaluated to identify patterns of relation between motivations, aspirations and formalisation decisions.

Findings and Discussion

Motivations to engage in the informal economy

As marginalised populations are widely engaged in the informal economy of developing countries, there is a widely held belief that they are motivated to do so out of necessity to sustain their livelihoods (Lagos, 1995; Minniti et al., 2006). However, others have argued against this view and stressed that informal entrepreneurs are also driven by their choice (Snyder, 2004; Williams, 2008). Whilst informal women entrepreneur in developing countries are mostly necessity driven, there is evidence of opportunity factors (Franck, 2012; Adom, 2014). Participants were motivated to engage in the informal economy based on opportunity and necessity oriented factors. Some participants stressed the opportunity factors, such as desire of independence, avoiding idleness and own one's business as motivators for engaging in entrepreneurial activities. As evident in previous studies, majority of the participants were driven by the need to earn a living or due to the lack of alternatives. They frequently mentioned a *'compulsion to get additional income for the household'* and highlighted their lack of education and skills as barriers to get into the formal economy. Lack of education and skills have been cited as the main reasons for higher number of women's participation in the informal economy, where women are trapped in low threshold sectors because of low requirements in terms of skills, investments and assets (Tipple, 2005; Chen, 2007). However, even educated participants in this study cited inability to find jobs in the formal sector and being engaged in the informal sector.

Although most participants were driven purely by necessity, a complex combination of both opportunity-necessity drivers were also found to be the case. Biratnagar (3.1.3) clarifies how despite being educated, a lack of formal jobs or very low salaries in the formal sector drove her to engage in entrepreneurial activities. Her experience of running a readymade clothing store led her to finding an establishment in a good location, where to open a new shop. Similarly, Biratnagar (3.3.4) states that her husband did not have a job and she needed to earn a living but the desire to own business and avoid idleness pulled her towards entrepreneurship. In addition, Biratnagar (3.4.8) highlights how the compulsion to earn living and a market opportunity drove her family to start a mushroom farming business. She states, *"We had gone to Kathmandu (capital of Nepal) last year looking for potential ways to earn income. In the suburban area, we saw mushroom farms and the demand in the market. We decided to come back to Biratnagar and start the farming rather than going abroad"*. These cases illustrate the combination of motivations, the need of earning a living and unemployment with desire for independence and own a business, market opportunity, and past experience (Kantor, 2002; Williams and Gurtoo, 2011). Consistent with previous research that motivations change over time (Adom and Williams, 2012), this research also found that different motivations were not only combined but also changed over time from necessity to opportunity. The case of Biratnagar (3.2.1) portrays this, *"When I had no alternative, I chose this business. We started commercial banana farming, but after first season strong wind destroyed all our plants. We did some research to identify plants with strong wind tolerance and came across lemon farming. We sold lemons of RS. 250,000 (\$1 = RS 105 Nepalese rupees). I used to feel bad as I wanted to do an office job, but now I am satisfied in this business. I am earning more and employing people"*.

Motivations as drivers of aspirations

Inquiry of the participants' aspirations associated with their business identified three groups. Firstly, participants did not have any future aspirations with their business in terms of growth. Secondly, participants aspired to expand their business. Thirdly, participants' business aspirations were associated with life aspirations of personal development. As motivations are drivers of aspirations (Hessels et al., 2008) and often necessity oriented motivation are not associated with growth aspirations (Reynolds et al., 2002), this research however, observed mixed findings. Some of the participants who were purely motivated by lack of alternatives and earn a living did not have any aspirations to grow. Their lack of aspirations were associated with lack of finance, human capital, high

competition and lack of sales, retirement and business exit and moving their business to the home location to reduce scale or remain invisible. As illustrated by the Biratnagar (3.2.2), *"I don't have money to expand, this belongs to my landlord I cannot do anything here. If I go somewhere else there might not be good sale or there could be high competition"*. As necessity oriented entrepreneurship is based on survival, it is subsistence in nature, small scale and operate on saturated sectors (Bardasi et al., 2011). Although necessity driven entrepreneurs are depended on their venture and might aspire to grow various constraints might limit their potential or aspirations to grow (Hessels et al., 2008). These constraints were also the reasons emphasised by the participants for their lack of growth aspirations.

Few necessity oriented participants still aspired to grow. Their distinct family circumstances such as husband being abroad and supporting with finances, previous successful business experience, husband with formal jobs, and older children drove them to gain additional income and recognition, built confidence and in the process aspiring them to grow. As illustrated by Biratnagar (3.1.2), *"I want to extend my business. I am now more confident on my business. When my husband returns from abroad I will extend my business. I will increase the number of pigs and also find large space for expansion"*. These findings highlight that close association between life stories, family trajectories, social relationships and enterprise development and motivations (Langevang et al., 2012).

Necessity oriented entrepreneurship is also associated with family and caring responsibilities where often women pursue entrepreneurship to fulfil their gender roles of being 'mother' and 'carer' (Bowman and Cole, 2014). Therefore, their motivations are often intertwined with the lack of aspirations to grow with a perception that greater time is required for ventures to the detriment of children's well-being. As Biratnagar (3.4.5) with two young children states, *"I chose this business as it is flexible, I don't need to go anywhere and I can be with my children at any time. This cannot be done as an employee"*. Her future aspiration is to shift the parlour to her home so that they can look after the children and family. This example illustrates the gendered nature of women entrepreneurship and the need to consider the wider environment in which women entrepreneurship is situated (Williams and Gurtoo, 2011; Langevang et al., 2012).

Participants who were driven to avoid idleness were aspired to grow their business. Their business growth were linked with expansion through increasing the size of their business, product diversification, increasing customer and clients, moving to larger space and hiring more workers. As illustrated by Biratnagar (3.2.6), *"There is a high demand for meat in the market. I have plans to invest more and extend the business. I am confident and believe that I will compensate the loss I have suffered. The suppliers trust us now, with their trust we can expand further"*. These participants chose informal economy to test their capability and viability of their business (Williams and Martinez, 2014). Having established themselves, gaining market knowledge and experience and developed trust with their suppliers they feel confident to survive and aspire to grow for long term sustainability. This case is also evident for participants where necessity and opportunity entrepreneurship co-existed. For instance, Biratnagar (3.4.8) was motivated to earn a living but also identified a market opportunity. She started her business and now has plans to grow further. She states, *"I want to hire 150 workers and increase production. Currently, I have four cottages to grow mushroom, I want to add two more. This will increase the production, in addition I will also add goats and cow for meat and milk. My next plan to produce mushroom soup powder as there is a high demand due to being a healthy product"*.

Participants also aspired more than just business growth but growth at personal level. Their personal development aspiration were associated with international business expansion and community development through acting as a role model of successful women entrepreneur and giving employment and encouraging other women towards self-employment. These entrepreneurs were mainly motivated by the desire to own a business and to do something. Often inspired through others (e.g. peers, successful entrepreneurs) these participants aspired to gain more knowledge in their field, manage their business well and employ more women in their community. As illustrated by Biratnagar (3.3.6), *"I want to do more work outside Biratnagar. I am involved in many organisations. They have assured me that they will support in exporting my products abroad. I have the confidence to grow beyond here"*.

Motivations and aspirations affecting formalisation decisions

Participants' motivations and life aspirations also affected their formalisation decisions in terms of: i) having no plans to formalise; ii) having plans to formalise; and iii) already formalised. First, most of the women entrepreneurs motivated purely by necessity (e.g. earn living/lack of alternatives/family and children) did not aspire to grow, hence they did not have plans to formalise. As illustrated by a participant 3.3.9, who is engaged in the economic activities to earn living, neither aspires to grow nor has plans to formalise. She states, *"I am satisfied with this business. I have no big dream. The business is running well. We bring coconuts of 2000 rupees and decorate with glitters and sell the next morning and again bring more materials. We go along with the flow of time. I have no plan to register"*. For these participants without any life aspirations but a determination to continue with the flow, exit or retire from their entrepreneurial activities formalisation is a costly exposure and non-essential for their business sustainability.

Second, participants, who were motivated by a combination of necessity (e.g. earn living) and opportunity entrepreneurship (e.g. desire to own business/market opportunity) aspired to grow. These participants as they gained confidence on their capability, increased market knowledge and developed trust relationship perceived business growth through formalisation as pathways to their business sustainability. These group of women perceived that formalisation will give them visibility and legitimacy to access wider networks of employees, clients and suppliers enabling their growth and sustainability. These findings are similar to others which highlight how informal businesses who delay registration use their informal status to build stronger foundations (Williams et al., 2016).

Third, women entrepreneurs continuing the path of success and aspired to grow further in international arena, and influence other women in their community as a 'role model' had already formalised their business. These group of women, after testing their entrepreneurial capability in the informal economy, perceived that they can encourage other women towards economic independence. As illustrated by Biratnagar (3.3.4), *"I am satisfied with it. I want to extend this business further, and want to be famous woman entrepreneur. I will hire many women workers in my business"*. Their success as well as growth along the process aspires them to do more.

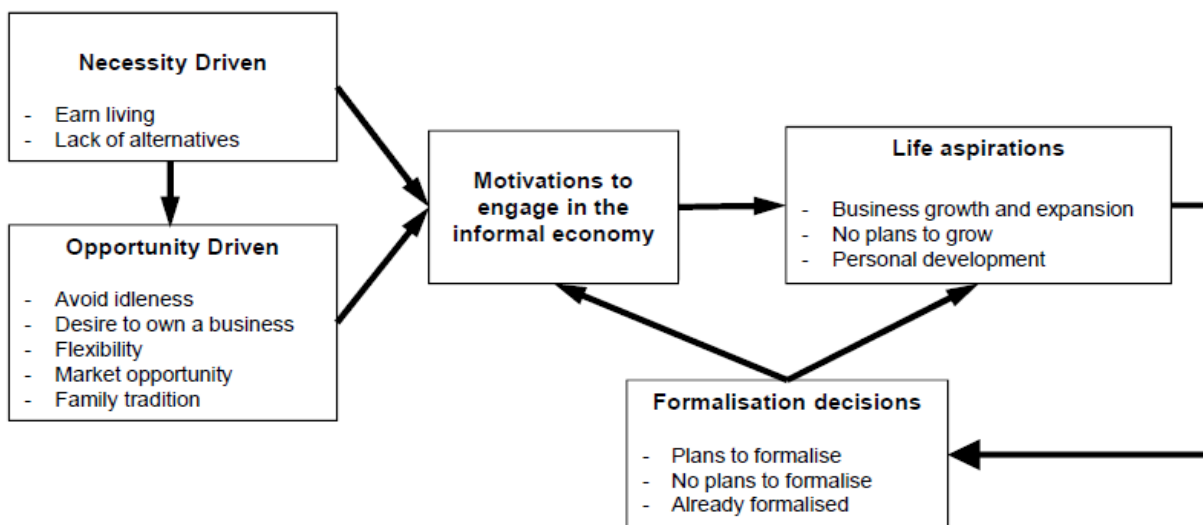


Figure 1. Conceptualising motivations, aspirations and formalisation decision within opportunity-necessity bifurcation and dynamic approach

The relationship between motivations, within the opportunity-necessity distinction, life aspirations and formalisation is shown in Figure 1. Despite this categorisation, the findings from this study and previous studies have shown that motivations are complex, dynamic and intertwined (Kirkwood, 2009; Langevang et al., 2012). Motivations influence life aspirations, and life aspirations influence formalisation decisions. However, as women entrepreneurs gain confidence and succeed in business, formalisation enables their business sustainability, which then again motivates them to engage in the entrepreneurial activities beyond their environment and pursue higher level aspirations, such as

international growth, personal development and community development. For others motivated by necessity, various constraints affected growth aspirations, influencing their decision not to formalise.

Conclusions and Implications

This research explored informal women entrepreneurs' motivations and life aspirations and how these might affect the choices they make in relation to business formalisation. Informal women entrepreneurs were motivated by necessity, opportunity and a combination of both necessity-opportunity entrepreneurship. In consistent with the recent research, the findings also show that motivation changes over time and intertwined with entrepreneurs life circumstances. Examining the role of motivations on aspirations to grow showed that various constraints limit the potential of necessity-driven entrepreneur to grow. In contrast to exiting literature which states that wider social and cultural norms influence women entrepreneurs' motivations and aspiration, this research shows that despite these some women aspire to grow. Their aspirations were associated with business success and confidence they gained in their venture. Business aspirations also influenced entrepreneurs' formalisation decisions, where those with growth aspirations considered formalisation as the necessary step on their growth stage. While others with increased confidence and success had already formalised and still aspired to grow but beyond the home boundaries influencing others in their communities through their work. Whereas those without any aspirations to grow were satisfied with what they were doing and wanted to continue without formalisation. One interesting finding was that participants' motivations and aspirations were closely associated with their distinctive life circumstances. This is a limitation of this study as the role of life circumstances, such as age, household size, household situation and access to networks were not examined. Future research could look into this and see how specific life circumstance can influence motivations, aspirations and formalisation decisions.

The findings make several contributions. First, it adds to the existing literature on entrepreneurial motivations in the informal economy stating that motivations are complex and dynamic, and women entrepreneurs are also motivated by opportunity. Second, women entrepreneurs also aspire to grow and that their aspirations are directly linked with confidence they gain from business experience. Finally, it makes a novel contribution to debates on the formalisation of the informal economy. Given that formalisation is continuously proposed as essential for business performance, it needs to recognise the variabilities among informal women entrepreneurs and the implications of formalisation on their business sustainability.

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Investigating Entrepreneurial Intention of Female Undergraduates in Malaysia: The Role of Education and Motivation

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ABSTRACT

Purpose:

It is well-documented that entrepreneurship is a key driver of economic development and well-being of individuals and societies alike. It is also known that women participation in entrepreneurship is becoming significantly more noticed and recognized. Thus, it is critical to understand what drives or hinders their participation in entrepreneurial activities. Guided by two prominent theories; self-determination theory and theory of planned behaviour, the main purpose of this study is to examine the role that intrinsic and extrinsic motivation play in fostering female students' intention to start their own businesses and become entrepreneurs. Further, it aims at investigating the effect of entrepreneurship education on their intention as well.

Methods:

Data were collected using questionnaires from 325 female students enrolled in two universities in Malaysia. Structural equation modeling was employed to test the hypothesized model and structural relationships.

Findings:

The findings show that entrepreneurship education, intrinsic and extrinsic motivation are very critical predictors of entrepreneurial intention. Both intrinsic and extrinsic motivation influenced the female students' intention. However, interestingly, extrinsic motivation is shown to exert more effect on the outcome. For entrepreneurship education, it directly and indirectly influenced the intention via intrinsic and extrinsic motivation where they played a partial mediation.

Implications:

This study contributes to female entrepreneurship research by integrating self-determination theory and theory of planned behaviour to have better understanding of their inclination to be entrepreneurs. Whether they are intrinsically or extrinsically motivated, a supportive culture that enhances such spirit should be acted upon. Further, entrepreneurship education plays a vital role and thus more programs, courses, events conferences etc should be readily available for students to make them realize their potentials.

Limitations:

The findings of the current study limit its generalizability to a wider population since participants were from two universities only.

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INTRODUCTION

The growing body of literature on entrepreneurial intention argues that intention plays a viable role in the decision to start a business (Almobaireek & Manolova, 2012; Krueger, Reilly, & Carsrud, 2000; Liñán & Chen, 2009). As entrepreneurship may be viewed as a process that occurs over time, entrepreneurial intention seems to be the first step to be taken by individuals when deciding on becoming entrepreneurs. This decision may be considered as a conscious and voluntary act in the evolving and long process of entrepreneurship (Gartner, Shaver, Gatewood, & Katz, 1994).

However, stereotype of gender role is argued to have great influence on people's cognitions and actions (Heilman, 2001). Such stereotypes are reflected on the divide between men and women in many domains including starting a business (Gupta, Turban, & Bhawe, 2008). Gender is argued to matter in the entrepreneurial intention formation as it matters in other aspects of the entrepreneurship process (Hindle, Klyver, & Jennings, 2009). In fact, several researchers argued that gender stereotype influences both males' and females' intention to start a business (e.g., Davis & Shaver, 2012; Gupta et al., 2008). As starting a business is perceived, to some extent, to be associated with masculine characteristics (Bird & Brush, 2002; Lewis, 2006; Wilson, Kickul, & Marlino, 2007), the stereotypical beliefs adversely affect the entry and development of women in entrepreneurship (Marlow & Patton, 2005). Many studies have found that female students showed lower self-efficacy and intention to start a business than their male counterparts (e.g., Chen, Greene, & Crick, 1998; Gatewood, Shaver, Powers, & Gartner, 2002; Kourilsky & Walstad, 1998; Wilson et al., 2007). To enhance their perception about the potential they have and about the fruitful outcome entrepreneurship may entail, earlier research suggested that entrepreneurship education plays a vital role in this perceptible. Not only it improves the skills and knowledge, but also it renders entrepreneurship more attractive and advantageous to them as well. Further, it enhances people's motivation to start their own business. Motivation is an essential ingredient of doing any activity. Therefore, the main objective of the present study is to examine the role of entrepreneurship education on predicting entrepreneurial intention directly and indirectly via the intrinsic and extrinsic motivation constructs of Self-Determination Theory. The rest of the paper is organized as follow: the next section provides theoretical background on entrepreneurship education, self-determination of motivation and entrepreneurial intention. It is then followed by the methods section. Then data analysis and results are presented section 4 followed by the discussion.

THEORETICAL BACKGROUND

Entrepreneurial Intention

It is defined "as a self-acknowledged conviction by a person that they will set up a new business venture and consciously plan to do so at some point in the future" (Thompson, 2009: p. 687). In the area of university graduates' entrepreneurship, entrepreneurial intention research has been widely used due to its predictive power of entrepreneurial behaviour (Almobaireek & Manolova, 2012; Krueger et al., 2000; Liñán & Chen, 2009).

Entrepreneurship Education and Entrepreneurial Intention

Entrepreneurship education is rapidly growing in universities and colleges around the world (Katz, 2003; Martin, McNally, & Kay, 2013). Indeed, entrepreneurship education plays a vital role in shaping and fostering students' attitudes and perceptions towards entrepreneurship. While there are few studies that found that entrepreneurship education is negatively related to intention to start a business (e.g., Oosterbeek, van Praag & Ijsselstein, 2010), many others have found that entrepreneurship education positively reinforces students' attitudes and intention towards entrepreneurial activity (Fayolle, Gailly, & Lassas-Clerc, 2006; Sánchez, 2013; Tkachev & Kolvereid, 1999; Yun, 2010).

To address the conflicts in the findings of the previous studies, Martin et al. (2013) conducted a meta-analysis and found support for entrepreneurship education and training. The study was based on the theory of human capital that indicates that those with higher knowledge and skills and other competencies are more likely to demonstrate better and greater performance than those with less or no

knowledge and skills. The results of the 42 independent samples, comprising a total of 16,657 students, reveal that entrepreneurship education and training were associated with higher levels of (a) total entrepreneurship-related human capital assets, (b) entrepreneurship-related knowledge and skills (c) positive perceptions of entrepreneurship, and d) intentions to become an entrepreneur. Further, the study found that entrepreneurship education and training was positively associated with (a) entrepreneurship outcomes in general (b) start-up and (c) entrepreneurship performance. In line with these findings, Morris et al. (2013) demonstrate that entrepreneurship education enhances the entrepreneurial competencies and intentions to start a business.

In support of the above studies, several studies have shown how entrepreneurship education positively affect students' attitudes, skills and intentions to start a business. For instance, in the United States, Wilson, Kickul and Marlino (2007) conducted a study to investigate whether targeted education like entrepreneurship education can play a role in fostering self-efficacy and increasing confidence level among students. The study used two different student samples. The first sample comprised middle and high school students whereas the other set of sample was among MBA students from different American schools and universities. More than five thousand students participated in this study. The findings suggest that entrepreneurship education played a crucial role in fostering the perception of self-efficacy and intention in both sample groups, though the perception of self-efficacy was stronger among female MBA students. Another study in the U.S. has further investigated the role of entrepreneurship education and training in business venture effectiveness (Elmuti, Khoury & Omran, 2012). The findings of the study, which utilized two sample groups entrepreneurs and prospective entrepreneurs, found that entrepreneurship education and training were vital to the success of business ventures.

Consistent with Wilson et al.'s (2007) study, similar findings were found in the Chinese context (Wu & Wu, 2008; Yun, 2010). Yun (2010) conducted a study to empirically test the impact of entrepreneurship education on entrepreneurial intention mediated by self-efficacy using undergraduate management students. According to the study, there are three benefits of entrepreneurship education to students that included learning, inspiration and incubation resources. Findings suggest that learning and inspiration had significant influence on the intention to become an entrepreneur mediated by self-efficacy, whereas incubation resources impacted intentions directly.

Wu and Wu's (2008) study focused on investigating how intention to start a business is influenced by the higher educational background of Chinese students. They employed TPB model for better prediction of entrepreneurial intention in a sample of 150 students of Tongji University in Shanghai, China and utilized structural equation modeling for analysing the data. They also investigated how the TPB's four constructs were associated with different educational backgrounds (engineering, entrepreneurship related major and non-entrepreneurship related major). Results show that attitude was the most influential factor on intention followed by perceived behavioural control. Subject norm was not significant. Findings also suggest that intention was influenced by educational level through attitudes, where postgraduate students seemed less attracted to entrepreneurship. Further, it has been found that engineering students had more tendencies to start their own business followed by entrepreneurship related major. These findings highlight the importance of education and more specifically, entrepreneurship education. In line with these findings and still in the Asian context, Keat, Selvarajah and Meyer (2011) found that entrepreneurship education contributed to university students' inclination towards entrepreneurship in Malaysia.

In Turkey, the moderating effect of higher education between personality and entrepreneurial intentions was investigated. Results show that students with a higher level of education tended to have higher entrepreneurial intention. Another key finding is that students' risk-taking propensity interacted with education, so that for higher risk-taking students, university education tended to increase entrepreneurial intentions even more (Ertuna & Gurel, 2011).

In summary, entrepreneurship education and training are of particular relevance, interest and importance to governments and universities. From the discussion above, it is clearly demonstrated that it has an impact in shaping students' perception, beliefs and intentions by equipping them with the necessary and right knowledge, skills and tools that make them more entrepreneurially-oriented. The role of entrepreneurship education cannot be neglected if we are to aim at improved economic growth

and better societies. To conclude, economic growth needs more entrepreneurs and, in turn, entrepreneurs need entrepreneurship education.

Self-Determination Theory

Self-determination theory (SDT) is a macro-theory of human motivation, development and wellness. It has been extensively researched and widely used in different settings and various contexts such as parenting, education, work, relationships, physical activity, health care, sports environmental issues, psychotherapy and so forth (Baard, Deci, & Ryan, 2004; Deci & Ryan, 2008; Gagne & Deci, 2005; Hagger, Chatzisarantis, & Biddle, 2002; Vallerand, Pelletier, & Koestner, 2008).

It posits that human beings have an inherent motivation for growth and achievement (Stone, Deci, & Ryan, 2009) and they have natural motivational tendencies and readiness to learn, explore and assimilate knowledge and develop new skills (Deci & Ryan, 2000). These natural tendencies, however, can be either facilitated and supported or hindered by social contexts (Ryan & Deci, 2000b). Not only what makes people motivated is the interest of SDT, but also, what makes them thrive and flourish (Ryan & Deci, 2011). As it views motivation as the core of biological, cognitive and social regulation and it (motivation) involves the energy, direction and persistence of activation and intention (Deci & Ryan, 2000), SDT distinguishes between two types of motivation: intrinsic and extrinsic motivation. That is, SDT, unlike many other theories, is more concerned with the types of motivation, not the amount of motivation.

Intrinsic and Extrinsic Motivation

Intrinsic motivation refers the extent that individuals feel more autonomous and endorsed. They engage in activities, such as starting a business, because of the inherent personal satisfaction interest and enjoyment derived from that activity *per se* (Ryan & Deci, 2002). When intrinsically motivated, people do activities including acting entrepreneurially for the potential fun, excitement and challenge. These behaviours originate from within the self-associated feelings of curiosity and interest, rather than influenced by any external contingencies (Niemi & Ryan, 2009). SDT maintains that people feel intrinsically motivated when they believe that they have fully chosen and endorsed their behaviours (Bloom & Colbert, 2011). Under the intrinsic motivation, the perceived locus of causality is believed to be internal and from within the self.

Vallerand (1997) categorizes intrinsic motivation into three forms: intrinsic motivation to know, to accomplish and to experience stimulation. The first refers to performing an activity “for the pleasure and satisfaction that one experiences while learning, exploring, or trying to understand something new” (p. 280). The second refers to the feeling of the sense of accomplishing and creation of new things, which is the source of pleasure and satisfaction. The latter refers to experiencing pleasurable intellectual or physical sensations. Intrinsic motivation is linked to many positive outcomes that has been found in a numerous of studies. For instance, it has been associated with higher self-esteem and coping with failure (Ryan & Deci, 2000), greater persistence (Vansteenkiste, Simons, Lens, Sheldon, & Deci, 2004), creativity (Sheldon, 1995) and etc. These are characteristics that shape the entrepreneurial personality and most needed by entrepreneurs. Therefore, intrinsic motivation will contribute greatly to the positive attitudes and intentions to be entrepreneurs.

Due to the fact that not all activities/jobs are intrinsically interesting and enjoyable to derive satisfaction from them. As such engaging in them is not for reasons inherent in them, individuals may engage in such activities for some instrumental extrinsic factors to get them motivated. Extrinsic motivation is thought to occur when people behave because they expect some desirable consequences or to avoid undesirable ones. That is, extrinsically motivated behaviours are pursued because separable outcomes such as receiving money, pride and prestige or even avoiding avoid punishment, guilt and unemployment are expected (Gagne & Deci, 2005; Ryan & Deci, 2000b).

Extrinsic motivation is treated as a multidimensional motivational construct that, according to Ryan & Deci (2002) comes in four types: external regulation, introjected regulation, identification regulation and integrated regulation. It is argued that extrinsic motivation can vary in degree from fully controlled by contingences external to individuals, such as expecting reward or avoiding punishment (being fired from work, salary cut, avoiding unemployment, etc.), to autonomous motivation which can be considered as the same degree as intrinsic motivation.

SDT argues that one can feel autonomously motivated when s/he engage in activities and work environments that facilitate the fulfilment of three basic organismic human needs namely: autonomy, competence and relatedness. If these needs are not supported or fully met by the social contexts, people's intrinsic motivation will be undermined and diminished (Chirkov, Ryan, Kim & Kaplan, 2003; Deci & Ryan, 2000; Ryan & Deci, 2000b). Conversely, if these needs are satisfied, people will likely be more inclined to persistently complete the task with intrinsic motivation (Ryan & Deci, 2000b). That is, intrinsically motivated individuals will likely engage in activities with more quality ideas and persistent behaviours. On the other hand, people whose social contexts do not support their psychological needs will likely be controlled in their motivation and have less quality entrepreneurial ideas and behaviours (Deci & Ryan, 2000; Weinstein & Ryan, 2011; Wilson, Mack & Grattan, 2008).

Based on the above discussion, the following hypotheses are formulated:

- H1a: Entrepreneurship education has a positive effect on female students' intrinsic motivation. H1b: Entrepreneurship education has a positive effect on female students' extrinsic motivation. H1c: Entrepreneurship education has a direct positive effect on female students' intention to become entrepreneurs.
- H2a: Intrinsic motivation has a positive effect on the students' intention to become entrepreneurs. H2b: Intrinsic motivation mediates the relationship between entrepreneurship education and students' intention to become entrepreneurs.
- H3a: Extrinsic motivation has a positive effect on the students' intention to become entrepreneurs. H3b: Extrinsic motivation mediates the relationship between entrepreneurship education and students' intention to become entrepreneurs.

METHODOLOGY

The final sample of this study consisted of 320 female university students enrolled in entrepreneurship program at two private universities in Malaysia. The age distribution of the sample ranged from 18 years old (minimum) to 32 years (maximum). The mean age was 21.56 (SD= 2.32). All but 12 students are single and they come from three main ethnic groups: Malay (38.4%), Indian (28.7%), Chinses (28.4%) and 4.4% are others.

Entrepreneurial intention was assessed by a 6-item scale and entrepreneurship education was assessed by a 5-item scale, ranging from 1= "total disagreement" to 5 = "total agreement" (Liñán, Rodríguez-Cohard, & Rueda-Cantuche, 2011). Motivational constructs were measured using adapted scale from (Guay, Vallerand, & Blanchard, 2000).

ANALYSIS AND RESULTS

Descriptive Statistics

The descriptive statistics and intercorrelations among the constructs included in the study are displayed in Table 1.

Table 1 Means, Standard Deviations, reliabilities and Correlation among Study Constructs

Constructs [No. of Items]	Mean SD)	Alphas	1	2	3	4
Entrepreneurial Intention [6]	3.52 (.85)	.924	1			
Intrinsic Motivation [5]	3.72 (.71)	.838	.658**	1		
Extrinsic Motivation [4]	3.04 (1.1)	.909	.637**	.556**	1	
Entrepreneurship Education [5]	3.85 (.72)	.887	.627**	.593**	.426**	1

Correlation is significant at the 0.01 level (2-tailed).

Structural Equation Modeling

Structural equation modeling (SEM) has become enormously popular among researchers (Kline, 2011; Ullman, 2006) and without a doubt it is regarded as one of the most important data analysis techniques (Kaplan, 2009). SEM has become a preferred tool for investigating the plausibility of theoretical models

in many scientific disciplines (Hu & Bentler, 1999).

Measurement Model

The hypothesized measurement model consisted of four unobserved latent constructs that were measured by 20 observed variables (indicators). To test the study’s measurement model, confirmatory factor analysis was performed. As depicted in Figure 1, the CFA yielded good and acceptable good fit indices: $\chi^2 = 493.554$, $df = 164$, $CFI = .926$, $TLI = .914$, $RMSEA = .079$, suggesting for further analysis.

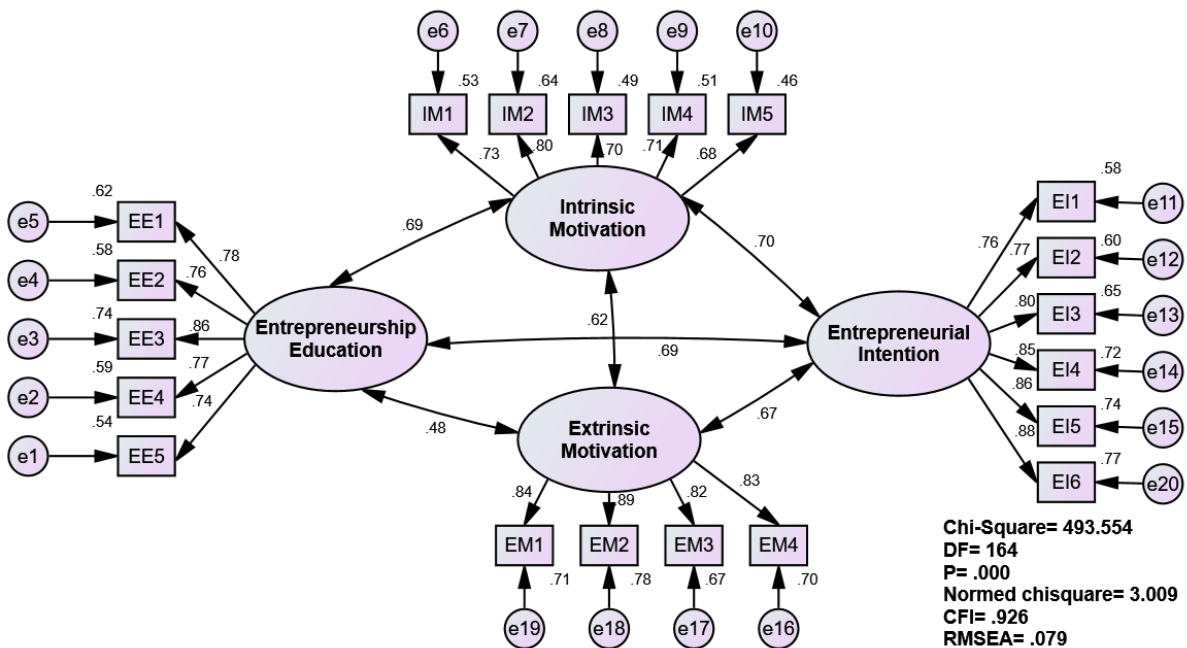


Figure 2 Measurement Model

The Structural Model

Following the successful fitting of measurement model, a full structural equation modeling (containing both measurement model and structural model) was then conducted using Amos 22. As mentioned earlier, the present study sought to examine the following relationships to understand students’ motivation and intention to start their own business. The hypothesized relationships among latent variables are as follow: entrepreneurship education (EE) → intrinsic and extrinsic motivation (IM & EM) and entrepreneurial intention (EI); intrinsic and extrinsic motivation → entrepreneurial intention. As depicted in Figure 2, these structural relationships had been tested and the results show that the full hypothesized structural model had achieved a good fit to the observed data: $\chi^2 = 535.201$, $df = 165$, $CFI = .919$, $TLI = .907$, $RMSEA = .083$.

Entrepreneurship Education to Entrepreneurial Intention							
Total Indirect	0.360	0.063	5.726	0.000	0.237	0.483	
EE → IM → EI	0.172	0.066	2.602	0.009	0.042	0.301	Partial Mediation
EE → EM → EI	0.188	0.038	4.907	0.000	0.113	0.263	Partial Mediation
Direct: EE → EI	0.356			Significant			

DISCUSSION AND CONCLUSION

The present study contributes to body of knowledge regarding entrepreneurial intention. Its originality lies in the attempt to examine the relevancy of self-determination theory to entrepreneurial intention. The main objective of the current study was to examine how entrepreneurship education is related to the shaping female students' motivations and intentions to start their businesses. Specifically, the study tested the direct effect of EE on entrepreneurial intention and the its indirect effects through intrinsic and extrinsic motivation.

The results from the structural equation modeling show that entrepreneurship education is an influential factor in shaping female students' inclination to be entrepreneurs. This is in line with earlier evidence that EE make students have more confidence about their skills and abilities and also make them aware of the positive outcome entrepreneurship may entails (e.g., Wu & Wu, 2008; Yun, 2010). Results also stress on the role of motivation in enhancing their motivations. In fact, EE explained around 72% and 52% of variance on the intrinsic and extrinsic motivation respectively.

Further, the results show that intrinsic and extrinsic motivation have a moderate direct effect on entrepreneurial intention and they play a partial mediation between EE & EI. That is, although

Overall, the model has explained 63% of variance in the entrepreneurial intention. This highlights the importance of entrepreneurship education as well as both intrinsic motivation and extrinsic motivation in forming female students' intention to start a business.

In conclusion, with respect research on women entrepreneurship, the current study contributes to our understanding of women motivation to be entrepreneurs and how education can enhance such propensity. It is the role of governments and particularly universities to improve the entrepreneurial ecosystem so that such potential that the women have is not wasted. Women are a very powerful social force that can be effectively involved in shaping our societies.

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The Proposed Model of the Measurement of Gender Differences and Family Background toward Entrepreneurial Orientation and Intention of University Students in Thailand

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Abstract

Youth and next generation. Most of startup companies establish by young generation. Based on GEM data in 2013, showed that Thailand is a world leader in terms of its rate of established business owners – both male and female. Thailand has shown consistently high levels of female entrepreneurship over time. As a positive trend over the last three years, start-ups and young business owners are increasingly starting their businesses with a higher level of education, with more and more having attained a bachelor degree. Previous studies by scholars confirmed that entrepreneurial intention is one of antecedents of behaviors (Shapero, 1982; Robinson, Stimpson, Huefner, & Hunt, 1991; Krueger, Reilly, & Carsrud, 2000)

The purposes of this study are (1) to formulate the unique model to measure the entrepreneurial orientation (EO) and intention (EI) effected by gender differences and family background among undergraduate students in Thailand. (2) to investigate the impacts of attitudes, aptitude, and demographic factors, which have an impact on entrepreneurial orientation and intention of young adults in Thailand. Based on the survey sample includes 200 undergraduate students in Bangkok. The questionnaires will be delivered to universities. Previous studies investigate on “gender differences and entrepreneurial intention” or “family business and entrepreneurial intention”, however, our study will be investigated “gender differences, family business and entrepreneurial intention”

This paper will extensively literate relevant theories on entrepreneurial intention, impact of gender difference on entrepreneurial intentions and family business background. The purpose of the research methodology is to find out the situation of entrepreneurial phenomenon in Thailand context.

Key words: Entrepreneurial Orientation and Intention, Undergraduate Students, Gender and Family background

Introduction

According to GEM Policy Brief 2017 report, during the last 30 years, Thailand's economy has changed dramatically: from exporting primarily raw commodities such as rice and rubber to becoming one of the world's largest exporters of hard disk drives, integrated circuit packages, cars, and auto parts. Electrical, electronic and automotive products now comprise about 40% of Thailand's exports. The start-up ecosystem in Thailand has grown rapidly in the past four years – almost a hundred times in terms of total funds raised. Thailand has one of the highest levels of entrepreneurship in the world, as measured by the Global Entrepreneurship Monitor Total Entrepreneurial Activity indicator (GEM TEA), which measures the proportion of adults (18 to 65 years in Thai figures) engaged in starting up a business in the previous 42 months OECD (2011). Recently, the Royal Thai government has been involved in the promotion of start-up in Thailand. It has assigned considerable priority to the development of the start-up, with the expectation that it can make a positive contribution to economic growth in the next few years and possibly in the future. The Thai government has also been actively engaged in the formulation of policy measures and related support mechanisms in an attempt to boost start-up development.

With above mentioned, this study will be investigated the impacts of attitudes, aptitude, and demographic factors, and also gender differences and family background which have an impact on entrepreneurial orientation and intention of university students. The model of the measurement will be proposed and intend to find out the factors on entrepreneurial orientation and intention of university students in Thailand. Thus, we believe that cultural influence, gender differences and family business backgrounds may contribute to the findings of this research. Results from this research may also have very important development of entrepreneurship education in Thailand in the future. The organization of this paper is as follows: after this introduction, the section two presents the conceptual framework and hypothesis development. Section three presents research methodology. The last section gives the conclusion and future plan for this study.

Literature Review

Entrepreneurial Orientation

The definition of entrepreneurial orientation (EO) is originated by Lumpkin and Dess (1996). In accordance to Lumpkin and Dess (1996), EO refers to the processes, practices, and decision-making actions that lead to new entry as characterized by one, or more of the following dimensions: an inclination to act freely, a readiness to innovate and take-risks, and a propensity to be insistent toward competitors and proactive relative to business opportunities. EO consists of 5 dimensions; namely, Risk taking, Proactiveness, Innovativeness, Autonomy, and Competitive aggressiveness. Rauch, Wiklund, Lumpkin and Frese (2009) describes risk taking as an involvement of taking bold actions by venturing into the unknown, borrowing heavily, and/or committing significant resources to ventures in uncertain environments. Proactiveness is an opportunity-seeking, forward-looking perspective characterized by the introduction of new products and services ahead of the competition and acting in anticipation of future demand. Innovativeness is the predisposition to engage in creativity and experimentation through the introduction of new products/services as well as technological leadership via research and development in new processes. Autonomy is the independent action undertaken by entrepreneurial leaders or teams directed at bringing about a new venture and seeing it to fruition. And, Competitive aggressiveness is the intensity of a firm's effort to outperform rivals and is characterized by a strong offensive posture or aggressive responses to competitive threats (Rauch, et al, 2009).

Entrepreneurial Intention

The previous researches concerning with entrepreneurial intention have focused on the internal and external factors influencing people to become entrepreneurs. There have been the previous studies representing the evidences of reasons people choosing to become business owners than employees such as desires of freedom, self-controlling, and potential affluent (Fernandez et al., 2009). Intention is the precedent variable of behaviour (Chuttur, 2009). In entrepreneurship field, Entrepreneurial Intention defined as the search for information that can be used to help fulfil the goal of venture creation (Krueger et al., 2000). Guerrero et. al. (2008) defined entrepreneurial intention as a

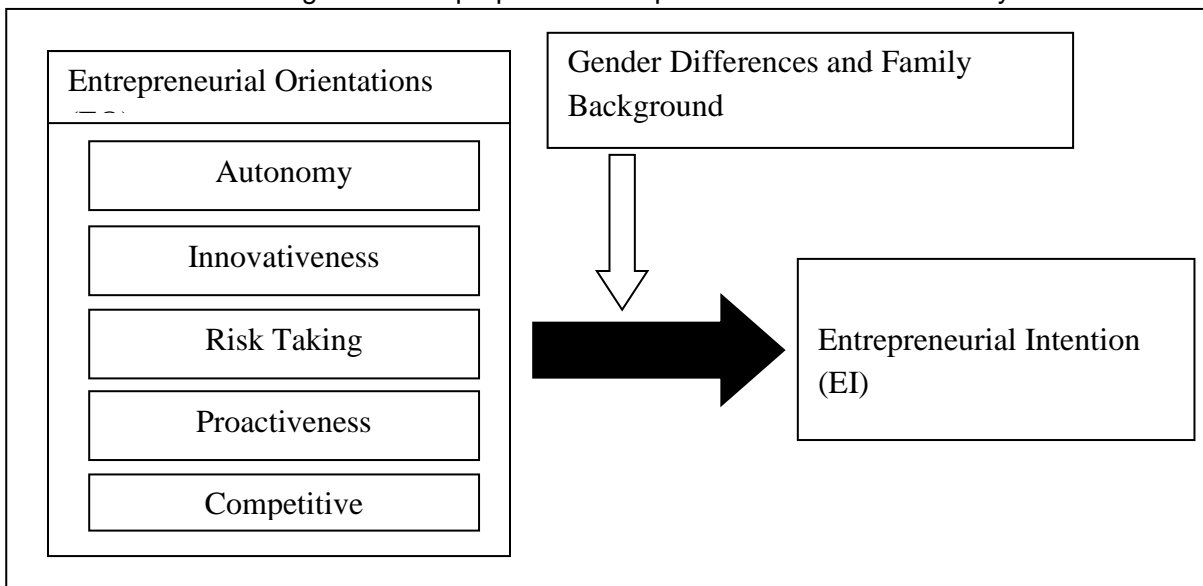
state of mind that people wish to create a new firm or a new value driver inside existing organizations. Starting a new business is a process with a planning rather than impulsive decision making. Krueger et al. (2000) also stated that a person who have a potential to start a new business, or sees a good business opportunity may choose not to start his business if he lack of an entrepreneurial intention. Entrepreneurial intention is influenced by three perception factors; namely, personal attraction to entrepreneurial activity, Perceived subjective norms, and Perceived behavioural control or self-efficacy (Krueger et al., 2000).

The relationship between entrepreneurship and risk perception has received some attention from researchers who have considered the relationship between entrepreneurial decisions and risk aversion. Risk perception or fear of failure is an important variable to have a negative influence to start a new business. A reduced perception of the likelihood of failure should increase the probability that an individual will start a new business (Arenius & Minniti, 2005). According to Wagner (2007), there is a direct relationship between risk perception and entrepreneurial intention. Fear of failure is recognized as one of the barriers to pursue entrepreneurship (Shinnar, Giacomini, & Janssen: 2012). Arenius & Minniti (2005) stated that reducing fear of failure's perception should increase the probability that an individual will start a new business.

Conceptual Framework and Hypothesis development

The purpose of this study is to study the impact of gender differences and family background toward entrepreneurial orientations (EO) and Intention (EI). Based on the literature review of previous studies (Bolton, 2012; Lumpkin & Dess, 1996; Covin & Slevin, 1991), the proposed conceptual framework is as the figure xx.

Figure xx: the proposed conceptual framework of this study



The hypothesizes are

H1: The overall entrepreneurial orientations (EO) significantly positive effects on entrepreneurial intention (EI) of university students in Thailand.

H1a: Autonomy dimensions significantly positive effects on entrepreneurial intention (EI).

H1b: Innovativeness dimensions significantly positive effects on EI.

H1c: Risk taking dimensions significantly positive effects on EI.

H1d: Proactiveness dimensions significantly positive effects on EI.

H1e: Competitive Aggressiveness dimensions significantly positive effects on EI.

H2: Male students have higher level of entrepreneurial orientations (EO) than female.

H3: Male students have higher level of entrepreneurial intention (EI) than female.

H4: Students with family business background have higher level of EO than counterpart.

H5: Students with family business background have higher level of EI than counterpart.

Research Methodology

Samples

This study used a survey research method. The population of our study is undergraduate students in Thai universities. The sample will be 4 years-students from Bangkok University International (BUI) and Bangkok University School of Entrepreneurship and Management (BUSEM). They will be contacted and collected the questionnaires. Expected to complete the empirical data collection in July 2017.

Questionnaire development

This research adapted the previous study of Bolton (2012) and Lumpkin & Dess (1996) to measure entrepreneurial orientations (EO). 5 dimensions of entrepreneurial orientations (EO); namely, autonomy, innovativeness, risk taking, proactiveness, and competitive aggressiveness, will be measured by 15 items. And, entrepreneurial intention (EI) will be examined by 6 items of Linan & Chen (2009) study. The summary of constructs is as the figure 1.

Figure1: the summary of constructs and items of this study

Risk taking Bolton (2012)	I like to take bold action by venturing into the unknown. I am willing to invest a lot of time and/or money on something that might yield a high return. I tend to act 'boldly' in situations where risk is involved.
Innovativeness Bolton (2012)	I often like to try new and unusual activities that are not typical but not necessarily risky. I tend to do things the same and not try different, unproven approaches. I prefer to try my own unique way when learning new things rather than doing it like everyone else does. I favor experimentation and original approaches to problem solving rather than using methods others generally use for solving problems.
Proactiveness Bolton (2012)	I usually act in anticipation of future problems, needs or changes. I tend to plan ahead on projects. I prefer to 'step up' and get things going on projects rather than sit and wait for someone else to do it.
Autonomy Lumpkin and Dess (1996)	My employees have enough autonomy in their job to do their work without continual supervision. My business allows me and my employees to be creative and try different methods to do our job. Employees in our business are allowed to make decisions without going through elaborate justification and approval procedures.
Competitive Aggressiveness Lumpkin and Dess (1996)	In dealing with competitors our business typically adopts a very competitive "undo-the-competitor" posture. Our business is very aggressive and intensely competitive. Our business effectively assumes an aggressive posture to combat trends that may threaten our survival or competitive position
Entrepreneurial intentions Linan & Chen (2009)	I am ready to do anything to be an entrepreneur. My professional goal is to become an entrepreneur. I will make every effort to start and run my own firm. I am determined to create a firm in the future. I have very seriously thought of starting a firm.

Conclusion

Considerable research has established the significance conceptual framework and hypothesizes of the impact of gender differences and family background toward entrepreneurial orientation (EO) and intention (EI) based on 200 samples of students from Bangkok University International (BUI) and Bangkok University School of Entrepreneurship and Management (BUSEM). This study will show the importance of differences in sex, age, educational background, family business background, perceived desirability, personal attitude and subjective norm considered as the moderating effects that have an impact on orientations and intentions to start a new business. The results of this study will help to explain the factors that influence entrepreneurial orientation and intention of university students. The next step of this study is to create the questionnaires in order to collect information and analyze data.

Further research should examine other specific aspects and also find the exact effect on each other in more depth to gain a greater results and understanding of how all the variables and factors are significantly related to each other. Such research would provide insight into how further develop Entrepreneurship education in Thailand.

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Gender Difference in Entrepreneurial Intent

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ABSTRACT

This paper presents entrepreneurial intent measurement among university students. One research question is presented: “whether there is gender difference in entrepreneurial intent?” The answer to this question would provide practical utility for entrepreneurship education or project funding decision for entrepreneurial projects. We surveyed university students of mixed majors and nationalities. Students came from entrepreneurship and marketing faculties; they were comprised of Thai and non-Thai nationals. The instrument used was written survey. We collected 201 surveys from two sampling periods. The first sample consists of 91 surveys and the second survey is comprised of 110 surveys. Six months were allowed to elapse between the two data collection in order to affect Poisson testing. The dependent variable was entrepreneurial intent (Y). Three independent variables are used: personality traits (x1), social environment (x2), and desire to own business (x3). A proxy variables were employed to verify planned behavior, namely eBusiness (x4) as a stimulus. We found gender difference between male and female subjects in their entrepreneurial intent formation. Male subjects require social environment, desire to own business and business stimulus to form entrepreneurial intent ($F = 25.43$). In contrast, female subjects require only two parameters for intent formation, namely personality traits ($F = 7.79$) and desire to own business or personality traits and business stimulus ($F = 15.15$). This paper is a contribution to the field because we found empirical evidence to prove that females are more risk affine than males

Keywords: ANOVA, entrepreneurial intent, gender difference, interaction effect

1.0 INTRODUCTION

The issue of whether entrepreneurship could be taught no longer occupies current research focus. The research question presented in this paper is *whether there is a significant gender difference in entrepreneurial intent?* We identify the followings as stakeholders to whom this research question is relevant: academics, lending institutions, and investors. If significant gender difference in entrepreneurial intent exists, academics and educational institution are faced with the challenge of balancing uniform educational content with nurturing a new generation of entrepreneurs along gender line.

An intentional disregard of gender difference may hinder the development of one gender at the expense of the other. Secondly, for lending institutions, gender difference in entrepreneurial intent may translate into differences in risk perception. This information is relevant to risk assessment and lending decisions. Lastly, the answer to the research question presented in this paper is relevant to decision making by investors. If intent correlates with actions, arguably gender difference in intent formation may leads to different course of actions in a given investment project. Therefore, differences in perceived risk may be gender relevant. This information would be helpful in investment decision.

We treat male and female students on equal footing. Students are tagged by their demographic data: sex, nationality and major. The rationale for these demographic tagging is to verify whether there is a significant gender difference in entrepreneurial intent formation. The use of nationality as a demographic indicator is supported by the needs to verify whether cultural factor plays a role in

determining entrepreneurial intent. Lastly, the use of students from marketing entrepreneurship faculties allows us to seek empirical evidence to support the efficacy of entrepreneurship education.

2.0 LITERATURE REVIEW

Gender difference in entrepreneurship research remains significant interests in the field. Gender equality in the business world remains a contested frontline. Although there had been a rise in women entrepreneurs in recent years (Weiler and Bernarsk, 2001), the gain remains unequal in comparison to their male counterpart. One study involving 43 countries showed that there was a rise in women entrepreneurs; however, this increase remains lower than men (Allen *et al.*, 2007). Interests in gender difference in entrepreneurship research remain an active issue (Boyd, 2005; Bruni *et al.*, 2004; Brush *et al.*, 2006; Learner and Pines, 2010; and Pines and Schwartz, 2008).

Some literature explained gender difference in entrepreneurship by circumstances that “pushed” or “pulled” people into entrepreneurship. Thus, these publications divided entrepreneurship into two types: entrepreneurship by necessity (Allen *et al.*, 2007) and entrepreneurship by opportunity (Orham and Scott, 2001). This dichotomous approach to entrepreneurship may be incomplete by focusing only on the environment or social factors. In this paper, we explore gender differences in entrepreneurial intent by looking at both innate and environmental factors.

Entrepreneurial intent is important because it converts ideas into action (Jenkins and Johnson, 1997; and Korunka *et al.*, 2003). Thus, in entrepreneurship research, entrepreneurial intent becomes a focal point for dependent variable (Lüthje and Frank, 2003).

Current literature asserts that there are several factors influencing entrepreneurial intent (Boyd and Vozikis, 1994). These factors include personality traits (X1), social environment conducive to entrepreneurship (X2), desire for business ownership (X3) and eBusiness proxy (X4) (Zhao and Seivert, 2006). Some research findings also confirmed that cultural influence also plays a role in entrepreneurial intent (Mitchell *et al.*, 2000; and Mueller and Thomas, 2001). The role of gender in entrepreneurial intent formation is a continuing research issue in the field (Wagner, 2007, and Wilson *et al.*, 2007).

3.0 METHODOLOGY

This paper employed quantitative method to present a model under multiple regression. The dependent variable is entrepreneurial intent. Independent variable include personality traits (X1) (Krueger *et al.*, 200), social environment conducive to entrepreneurship (X2) (Caesar, 2007), desire for business ownership (X3) (Carter *et al.*, 2003; Sagie & Elizur, 1999; and (Wagner, 2007) and eBusiness proxy (X4) (Rotefoss and Kolvereid, 2005). The proposed model for non-interactive case is presented as:

$$Y = \beta_0 + \beta_1 X_1 + \dots + \beta_k X_k + \varepsilon \quad (1)$$

The hypothesis test for (1) is accomplished by:

$$F = \frac{MSR}{MSE} \quad (2)$$

where $MSR = SSR / p$ with $SSR = \sum (Y_i - \hat{Y})^2$; and $MSE = SSE / n - p - 1$ with

$$SSE = \sum (\hat{Y}_i - \bar{Y})^2.$$

If there was interaction effect among the variable, the proposed model is:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_1 X_2 \dots + \beta_k X_k + \varepsilon \quad (3)$$

where $\beta_3 X_1 X_2$ is the interaction term. The hypothesis test for (3) is accomplished by:

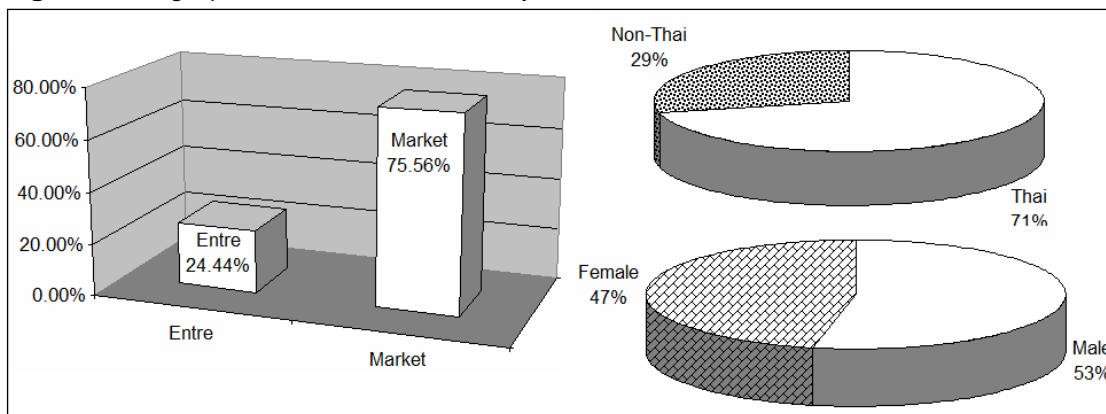
$$T_{x1x2} = \frac{\beta_1 - \beta_2}{\sqrt{\frac{n_1 SE_1^2 + n_2 SE_2^2}{n_1 + n_2 - 2}}} \quad (4)$$

where SE = standard error which is given by: $\frac{\sigma}{\sqrt{n}}$.

3.1 DATA

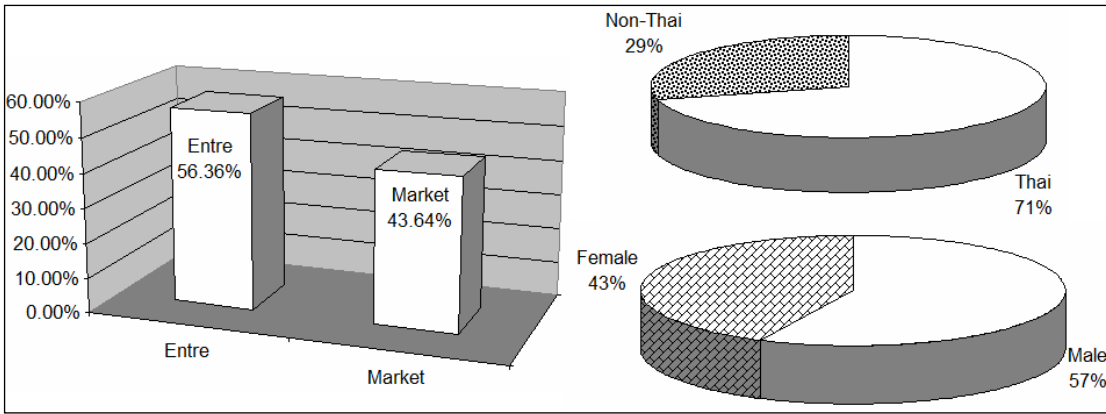
One set of written questionnaire was used in collecting two sets of data with six months gap between the two surveys. The rationale for using two surveys from two periods was to test the Poisson effect: whether there was any significant difference in response with the lapse of time. We collected 91 surveys for the first set and 110 for the second set of data. The amount of survey collected was verified by minimum sample size requirement. In total, 201 surveys were collect for this research.

Fig. 1: Demographic Information of Survey 1



In the first survey: $n = 91$, there were more students from the Marketing Faculty than from Entrepreneurship Faculty. In the second survey: $n = 110$, there difference between the faculty mixing was about 6%. The difference in both periods was due to student enrollment, not discretionary design. In both period, sex and nationality distribution were approximately the same.

Fig. 2: Demographic Information of Survey 2



3.2 INSTRUMENT CALIBRATION

The instrument used in this research consists of written questionnaire seeking quantitative data. Quantitative data was obtained through a scale in a form of (0,1,2,3) where 0 = none, 1 = low, 2 = medium and 3 = high. The reliability of this scale was calibrated through:

$$\hat{R} = \frac{R + \hat{Z}}{2} \quad (5)$$

The terms of (5) are defined as:

$$R = \sqrt{1 - df(\alpha)} \quad (6)$$

$$\hat{Z} = Z_{obs} + Z * \sqrt{\frac{1}{n-3}} \quad (7)$$

$$Z_{obs} = 0.50 \ln \left(\frac{1+R}{1-R} \right) \quad (8)$$

Under this instrument calibration method, the scale (0,1,2,3) has a reliability score of 0.955 or 95.50% compared to the Likert scale (1,2,3,4,5) (Likert, 1932) which has a reliability score of 0.887 or 88.70%.

3.3 MINIMUM SAMPLE SIZE DETERMINATION

In this paper, we introduced a new minimum sample size calculation based on the Monte Carlo simulation (Metropolis & Ulam, 1949). The rationale for this novel approach is supported by the Central Limit Theorem (CLT) manifesting through repeated measurements as indicated by the iteration count. The new minimum sample size is given by:

$$\langle n \rangle = N\alpha^2 \quad (9)$$

where n = minimum sample size, N = Monte Carlo iteration counts and α = level of precision. The Monte Carlo iteration is determined by:

$$N = \left(\frac{3\sigma}{E} \right)^2 \quad (10)$$

where $\sigma = [(\bar{x} - \mu) / z] \sqrt{n}$ taken from the components of Monte Carlo three elements: $x_1 = \max$, $x_2 = \min$ and $x_3 = (\max + \min) / 2$; and mid-point of the distribution curve $E = [(\max - \min) / 2] \div 50$.

In the present case, 30 items from each variable were used to determine the minimum sample size. These variables include: entrepreneurial intent (Y), and three independent variables X1 (personality traits), X2 (social environment), X3 (desire for business ownership), and X4 (eBusiness proxy). The resulted minimum sample requirement was 56.25 or 56 using 99% confidence interval. In this research, we collected 91 surveys in the first group and 110 surveys in the second group. The sample used for this paper meets the minimum sample size requirement.

3.4 DATA TESTING

Preliminary data tests were made in order to verify randomness and data distribution. Both continuous and discrete data were tested for randomness. Distribution test was accomplished by verifying skewness and kurtosis.

The randomness test for continuous data was accomplished by the Adjacent Test (Kanji, 2016):

$$L = \frac{\sum_{i=1}^{n-1} (X_{i+1} - X_i)^2}{\sum_{i=1}^n (X_i - \bar{X})^2} \quad (11)$$

For discrete data, the Runs Test (Wald & Wolfowitz, 1940) was used to verify randomness:

$$R = \frac{R - \bar{R}}{S_R} \quad (12)$$

where R = runs count; $\bar{R} = (2n_1n_2) / (n_1 + n_2)$, and $S_R = \sqrt{\frac{2n_1n_2(2n_1n_2 - n_1 - n_2)}{(n_1 + n_2)^2(n_1 + n_2 - 1)}}$.

Table 1: Randomness Test

Variable	$L_{obs}(t_0)$ $n = 91$	$L_{obs}(t_1)$ $n = 110$	Conclusion
Y	1.57	1.40	Random
X1	2.03	1.78	Random
X2	2.11	1.87	Random

X3	1.81	1.65	Random
X4	1.70	1.73	Random

Quantitative data for all variables showed that the data were randomly distributed. The decision rule states that the data is random is $1.37 < L < 2.63$. In the present case, all data points fall within the range in both periods.

Distribution testing was accomplished by looking at skewness (Groenwald & Madsen, 1984) and kurtosis (Westfall, 2014). Skewness test was determined by:

$$g_1 = \frac{n}{(n-1)(n-2)} \sum_{i=1}^n \left(\frac{X_i - \bar{X}}{S} \right)^3 \quad (13)$$

Kurtosis is given by:

$$g_2 = \left(\frac{n(n-1)}{(n-1)(n-2)(n-3)} \sum_{i=1}^n \left(\frac{X_i - \bar{X}}{S} \right)^4 \right) - \left(\frac{3(n-2)^2}{(n-1)(n-3)} \right) \quad (14)$$

Table 2: Skewness and Kurtosis

Variable Tested	First survey; n = 91		Second survey; n = 110	
	Skewness	Kurtosis	Skewness	Kurtosis
Y	-0.51	-0.49	-0.78	0.38
X1	-0.39	-0.31	0.24	0.68
X2	-0.41	0.35	-0.10	-0.51
X3	-0.41	-0.34	-0.05	-0.29
X4	-0.43	0.00	-0.35	0.00

The decision rule for evaluating skewness is: highly skewed if $-1 < skew < 1$; moderately skewed if $-1 < skew < -0.5$ or $0.5 < skew < 1$, and approximately symmetrical if $-0.5 < skew < 0.5$. The first survey shows approximate symmetry and the second data has one instance of moderate skewed (Y: 0.78); otherwise, the data from all variables in both periods are approximately symmetrical.

The decision rule for evaluating kurtosis is ± 3.00 ; the data is considered non-normally distributed, if the kurtosis exceeds ; and approximately symmetrical if ± 3.00 . In the present case, the data distributions are within the acceptable bound for both t_0 and t_1 periods.

There is no significant change in the data skewness and kurtosis with the lapse of time of six months. The T-values for the difference between t_0 and t_1 are $T_d = -1.47$ for skewness and $T_d = -0.62$ for kurtosis compared to the theoretical value of $\hat{T}_d = \pm 1.64$ for 95% confidence interval.

4.0 FINDINGS AND DISCUSSION

This paper attempts to answer one research question: "whether there is gender difference in entrepreneurial intent?" We answer this question in three parts in two time periods: (i) combined genders, (ii) male subjects, and (iii) female subjects.

4.1 General Findings without Gender Segmentation

4.1.1 First Survey

In the first survey where a sample of 91 students were used, the combined genders model for male and female was $Y = -0.91 + 0.51X_2 + 0.66X_4$. When separated by gender, male subjects showed entrepreneurial intent as $Y_m = -0.05 + 0.99X_4$ and female $Y_f = -0.25 + 0.58X_2 + 0.54X_3 + 0.54X_4$. There was a marked difference in the number and type of explanatory factors for entrepreneurial intent among male and female subjects. The dependent variable X_4 (business infrastructure) as a stimulus was present in both male and female; therefore, this factor did not contribute to the difference between male and female. For male subjects, the formation of entrepreneurial intent had a natural basis of -0.05 which is almost nil yet with a stimulus, the stimulus contributes by a factor of 0.99. If intent foretells behavior and the behavior from entrepreneurial intent entails risk taking, male subjects are more risk affine than female because Y_f requires more parameters in order for entrepreneurial intent to form. For female subjects, social environment conducive to entrepreneurial activity (X_2) and the desire to own business (X_3) are required to stimulate entrepreneurial intent. These facts couple with an intrinsic entrepreneurial intent level of -0.25 showed that female subjects are risk averse. This finding was later refuted by the second survey with larger sample size.

It should be pointed out that the dichotomy between risk averse and risk affine is not an adequate basis to predict future success or failure of an entrepreneur. These perceptions may change over time as the entrepreneurs are exposed to business transactions. These two risk perception could only indicate the current risk perception of the individual. Therefore, this risk perception dichotomy should not lead to gender discrimination.

4.1.2 Second Survey

The general finding for the proposed model without gender segmentation is: $Y = -0.18 + 0.27X_1 + 0.28X_2 + 0.20X_3 + 0.35X_4$. The test for model efficacy was accomplished by ANOVA F-test which showed $F = 21.25$ compared to the theoretical value of $F = 1.35$.

Social environment (X_2) are independent from all factors and could not be combined with the other three factors. When X_2 was combined with the other three factors, the proposed model failed. However, when X_2 was regressed with Y separately, X_2 was statistically significant. This finding provides an interesting interpretation.

Social environment conducive to entrepreneurship (X_2) is an independent factor that does not correlate with other factors: personality traits (X_1), desire to own business (X_3) and eBusiness stimulus (X_4). The implication here is that in entrepreneurial intent analysis, we must treat personal and environmental factors independently. These two types of explanatory factors should not be combined.

4.1.3 Combined Survey

In the combined model, where all subjects are analyzed without gender separation, there is a difference between the first and second survey. In the first survey, two explanatory variables were significant, namely environment (X_2) and business stimulus (X_4).

In a follow up study six months later, the same population had been re-sampled. While business stimulus (X_4) remains a significant factor, business environment (X_2) had been replaced with personality traits (X_1) and desire to own business (X_3). When the two sets of data from survey 1 and survey 2 are combined, all factors are shown to be significant, including personality traits. These proposed models are presented in Table 3.

Table 3: General Model without Gender Segmentation

Proposed Model		F Test ANOVA	R^2 ANOVA
Survey 1 $n = 91$	$Y = -0.48 + 0.52X_2 + 0.71X_4$	37.29*	0.46
Survey 2 $n = 110$	$Y = -0.11 + 0.50X_1 + 0.26X_3 + 0.33X_4$	21.25	0.38
Combined survey $n = 201$	$Y = -0.18 + 0.27X_1 + 0.28X_2 + 0.20X_3 + 0.35X_4$	29.79	0.38

The model was evaluated on the basis of the coefficient of determination for ANOVA. The theoretical value is $F = 1.35$ for all cases in this study.

$$R^2 = 1 - \frac{SSE}{SST} \quad (15)$$

where $SSE = \sum (Y_i - \hat{Y})^2$ and $SST = SSE + SSR$ given that $SSR = \sum (\hat{Y}_i - \bar{Y})^2$.

4.2 Gender Difference in Entrepreneurial Intent

In both time periods, one common factor in combined calculation is X_3 (desire to own business). This nascent entrepreneurship is an unchanged characteristic of the group. Among the male subjects, there is a noticeable change in the y-Intercept. In the first survey, male subjects showed negative intercept; this value became positive six months later. This change may be attributed to the acclimatizing in the study environment, especially those who enrolled in entrepreneurship education. This result may be used to prove that entrepreneurship may be taught.

Table 4: Proposed Model for Entrepreneurial Intent among Male Subjects

Proposed Model for Male		F Test ANOVA	R^2 ANOVA
Survey 1 $n = 48$	$Y = -0.94 + 0.64X_2 + 0.78X_4$	29.80	0.60
Survey 2 $n = 63$	$Y = 0.35 + 0.50X_1 + 0.38X_3$ $Y = 0.25 + 0.59X_1 + 0.33X_4$	7.94 8.46	0.29 0.30
Combined survey $n = 111$	$Y = 0.36 + 0.34X_2 + 0.25X_3 + 0.26X_4$	25.43	0.32

When we examine the combined data from two periods, it is surprising to see the gender difference between male and female. The combined data for male produces the following model: $Y = 0.36 + 0.34X_2 + 0.25X_3 + 0.26X_4$. According to this proposed model, male subjects requires social environment (X_2), desire to own business (X_3) and business stimulus (X_4) to form entrepreneurial intent. For male subjects, there are three requisite parameters for entrepreneurial intent formation.

In contrast, female subjects require only two parameters for intent formation: $Y = -0.60 + 0.34X_1 + 0.94X_4$ where X_1 is personality traits and X_4 is business stimulus. In the alternative, female entrepreneurial intent also could be produced by $Y = -0.03 + 0.35X_1 + 0.67X_3$ where X_3 is desire to own business. In both scenarios, female subjects showed negative y-intercept; this entails risk averse. Compared to their male counterpart, this value is positive. Nevertheless, the minimal number of parameters required for entrepreneurial intent formation among female subjects signified that female subjects are “risk affine.” This finding contradicts popular belief that females are risk averse.

Further perceptual difference between male and female subjects is found in the role of personality traits. In the combined surveys, males do not require personality trait as an explanatory factor for entrepreneurial intent. However, personality trait is requisite for females.

Table 5: Proposed Model for Entrepreneurial Intent among Female Subjects

Model for Female		F Test ANOVA	R-Squared ANOVA
Survey 1 $n = 43$	$Y = 0.20 + 0.45X_3 + 0.44X_4$	8.13	0.29
Survey 2 $n = 47$	$Y = -0.38 + 0.44X_1 + 0.40X_2 + 0.38X_3$	10.65	0.43
Combined survey $n = 43$	$Y = -0.60 + 0.34X_1 + 0.94X_4$	7.97	0.28
	$Y = -0.03 + 0.35X_1 + 0.67X_3$	15.15	0.42

5.0 CONCLUSION

This scope of this research is limited to verifying gender differences among male and female subjects in entrepreneurial intent. The study is limited to university students sampled at one private university in Bangkok, Thailand in two time periods. The result of the research revealed interesting information. Firstly, personality is a significant factor among female but not for male subjects in this research. Secondly, there are gender differences between male and female in entrepreneurial intent formation. Male subjects require more parameters to stimulate entrepreneurial intent than female. This parametric requisite may be an indicator of risk perception. More parameters mean risk averse; less parameters means risk affine. We found that males are risk averse and females are risk affine. This finding breaks stereotypical assertion that males are aggressive and, therefore, are risk affine.

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