Influence of fear of failure and kiasuism on entrepreneurial intention

Chua, Sheryl Hwee Chin

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**INFLUENCE OF
FEAR OF FAILURE AND KIASUISM ON ENTREPRENEURIAL INTENTION**

CHUA HWEE CHIN

School of Humanities and Social Sciences

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Abstract

Singapore is a world leader in business facilitation (The World Bank, 2016) yet entrepreneurial intention and entrepreneurial activities rates are low (Singer, Amorós, & Arreola, 2015). Although much is known about “what makes an entrepreneur”, few studies have looked at what prevents individuals from pursuing an entrepreneurial career path. Understanding the barriers to entrepreneurship is important as the removal of the barriers can promote entrepreneurship (Sarasvathy, 2004). Fear of failure (FoF) and *kiasuism*, literally translated as fear of losing out, were suggested by local officials to be the reasons for low entrepreneurial spirit among Singaporeans (Ho, Ang, Loh, & Ng, 1998; Koh, 2015; Low, 2006; Yu, 2015). This research is motivated by the lack of prior research on the roles of FoF and kiasuism in influencing entrepreneurship in Singapore. Three sets of studies were conducted. We attempt to address the limitations in the current available measures for FoF and kiasuism by developing and validating new measures for the two constructs. Next, we examine the influence of FoF and kiasuism on the intention to be an entrepreneur among Singaporean undergraduates. Theoretical and practical implications of this research are discussed.

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CHAPTER ONE: INTRODUCTION AND OVERVIEW

In many industrialized economies, new business ventures account for more than 25% of the economic growth (Carter, Gartner, Shaver, & Gatewood, 2003). Entrepreneurship contributes to the vitality of the economy (Bosma & Harding, 2006; Chen et al., 2011; Díaz-García & Jiménez-Moreno, 2010) by promoting innovation (Altinay, Madanoglu, Daniele, & Lashley, 2012; Franco, Haase, & Lautenschläger, 2010), generating new jobs (Altinay et al., 2012; Drost, 2010; Zarafshani & Rajabi, 2011), and creating competition (Nishimura & Tristan, 2011).

Over the past five decades, Singapore economy has evolved from labour-intensive industrialization in the 1960s to investment-driven economy in the 1970s and to knowledge-driven economy since the 1980s (Tan, Tan, & Young, 2000; Wong & He, 2005). Knowledge-driven economy refers to “economies which are directly based on the production, distribution, and use of knowledge and information” (OECD, 1996, p. 7). The knowledge spill-over theory of entrepreneurship suggests that knowledge is embodied in both technology and people and entrepreneurship translates knowledge into innovation, which contributes to economic growth (Acs, Audretsch, Braunerhkelm, & Carlsson, 2005).

The development of Small and Medium-Sized Enterprise (SME) is important as SMEs constitute 99% of enterprises in Singapore and contribute almost 50% of the national Gross Domestic Product (GDP). In addition to stimulating economic growth, SMEs also contribute to employment opportunities; 7 of every 10 workers in Singapore are employed by SMEs (SPRING Singapore, 2013). Hence, enterprise development and fostering entrepreneurship is of great importance in Singapore.

Due to the economic impact of entrepreneurship, many nations including Singapore have recognized the importance of providing a supportive environment and

investing in programs to channel resources to entrepreneurs. For instance, the Singapore government has played a pivotal role in launching several grants and schemes to assist new start-ups in gaining access to funding (SPRING Singapore, 2013). While these initiatives provide a supportive ecosystem for new business ventures, these resources usually go to people who already want to be an entrepreneur. But how can we encourage people to think about starting a business in the first place?

1.0 Importance of Examining Entrepreneurial Intention

Entrepreneurship is the process where the entrepreneur interacts with the environment to identify, evaluate, and exploit profitable opportunities (Shane & Venkataraman, 2000). Before engaging in initial entrepreneurial activities such as formulating a business plan and obtaining the resources for a business venture, one needs to have the intent to be an entrepreneur. Entrepreneurship is volitional, conscious, and requires planning; the formation of entrepreneurial intention is fundamental (Bird, 1988; Drost & McGuire, 2011; Krueger, Reilly, & Carsrud, 2000). *Entrepreneurial intention* refers to “a self-acknowledged conviction by a person that they intend to set up a new business venture and consciously plan to do so at some point in the future” (Thompson, 2009, p. 676). Entrepreneurial intention is a good predictor of entrepreneurial behaviour (Arasti, Pasvishe, & Motavaseli, 2012; Carr & Sequeira, 2007; Drost, 2010; Krueger et al., 2000; Liñán & Chen, 2009). Hence, identification of the drivers and barriers of entrepreneurial intention can bring insight that could impact national economic growth.

Many nations are looking for ways to increase entrepreneurial intention as a way to increase entrepreneurial activity. While many researchers have investigated the factors that promote entrepreneurial intention, few have examined the factors that prevent the formation of entrepreneurial intention. Understanding the barriers to

entrepreneurship is as important as understanding what induces individuals to become entrepreneurs (Sarasvathy, 2004); removal of the barriers can promote entrepreneurship.

2.0 Psychological Barriers to Entrepreneurship in Singapore

Research on the barriers to entrepreneurship focused mainly on institutional factors (e.g., government regulations, market uncertainty). Psychological barriers to entrepreneurship have received little research attention. One of the reasons the psychological barriers to entrepreneurship have been neglected could be because studies on the barriers to entry were largely conducted from business and economic perspectives.

While investigation of the institutional barriers may be insightful for most countries, the business and economic perspectives are not able to provide the complete picture for barriers to entrepreneurial entry in the Singapore context. Singapore is a world leader in business facilitation (The World Bank, 2016) yet in the Global Entrepreneurship Monitor (GEM) survey, a leading entrepreneurship study conducted across over 100 countries annually, Singapore was ranked 54th (out of 71 economies) in entrepreneurial intention and ranked 35th (out of 71 economies) in the Total Early-Stage Entrepreneurial Activity Prevalence (TEA) rate (Singer et al., 2015). Fear of failure (FoF) and *kiasuism* were suggested to be the reasons for low entrepreneurial spirit among Singaporeans (Ho et al., 1998; Koh, 2015; Low, 2006; Yu, 2015).

3.0 Significance of Research

In a speech at the 2011 Start-up Enterprise Conference held in Singapore, Minister of State for Trade and Industry, Teo Ser Luck highlighted that the lack of entrepreneurs may be due to Singaporeans being “too afraid to make mistakes, too afraid to go beyond the boundaries and look at the opportunities” (Yong, 2011). More

recently, the Singapore government initiated the “Smart Nation” programme to encourage new innovations to create solutions for real-life problems. During the launch of the Smart Nation programme, Vivian Balakrishnan, Head of the Smart Nation Programme Office and Minister of Foreign Affairs, urged Singaporeans to change their attitudes towards success and failure (Lim, 2014). It is believed that FoF is a huge factor in impeding innovation in Singapore (Persaud, 2013). In the 2014 GEM Singapore report, 39% of the respondents indicated that FoF would prevent them from starting a business (Chernyshenko et al., 2015).

Recently, Cacciotti, Hayton, Mitchell, and Giazitzoglu (2016) proposed that the experience of FoF in entrepreneurship involves (i) the anticipation of certain aversive consequences during the entrepreneurial process and (ii) the experience of positive or negative affects associated with failing or succeeding to avoid failure. Both cognitive evaluation and affective arousal influence the behavioural responses to FoF: action, inaction, or repression.¹ FoF is believed to be an important construct in understanding entrepreneurial motivation (Cacciotti et al., 2016). We noted that the current available measures to assess FoF in the entrepreneurial context suffer some limitations. Additionally, to our knowledge, no studies have attempted to include both personal attributes and contextual factors when examining the influence of FoF.

FoF is not the only psychological barrier believed to play a role in low entrepreneurial spirit in Singapore. *Kiasuism* (怕输), a national characteristic of Singapore, is perceived to impede Singaporeans from starting their own business. *Kiasu* is a Hokkien term (a Chinese dialect) for *fear of losing out* and was dubbed as

¹ This thesis only focuses on the cognitive element of FoF. We adopted the cognitive-motivational-relational theory and conceptualized FoF in entrepreneurship as a hierarchical, multidimensional construct where FoF is measured by the perceived likelihood of facing the aversive consequences if one fails.

the “negative complement of competitiveness” (Kagda, 1993) as it stems from greed and does not breed motivation and commitment (Ho et al., 1998). It was also believed that kiasuism is related to conformity (Ang, Loh, & Ng, 1996), hence discourages entrepreneurship.

Although it is often mentioned that kiasuism is one of the reasons for the lack of entrepreneurial spirit in Singapore (Ho et al., 1998; Low, 2006; Ong, 2016), there were no empirical research conducted to examine the role of kiasuism in entrepreneurship. To the best of our knowledge, this is the first scientific investigation to examine the role of kiasuism in entrepreneurship. Individuals with high kiasuism may be sensitive to FoF, which leads them to have low entrepreneurial intention. However, kiasuism may also be positively related to entrepreneurial intention; individuals may not want to lose out potential entrepreneurial opportunities to someone else and this may result in a sense of compulsion to act. This compulsion may override FoF and motivates one to start a business. Given kiasuism may cut both ways, this research seeks to clarify the role of kiasuism in entrepreneurship. We also notice that the existing measures of kiasuism mainly assess the tendency to display kiasu behaviours. As the same behaviour can be performed for different reasons, it may not measure kiasuism accurately. Hence, we suggest that motivation should be included in any valid measure of kiasuism.

To summarize, while the Singapore government may be providing the necessary resources and support to help Singaporeans to start their own business, some people may shudder at the thought of failing a business and consequently give up on their business idea even before they begin. Singapore provides an interesting context for the examination of entrepreneurial intention given the strong institutional support coupled with relatively high FoF and kiasuism. We expect the findings from this

research to have practical implications for policy-makers interested in increasing entrepreneurial intention.

4.0 Outline of Thesis

Chapter 1 presented an overview of this research. Chapter 2 provides a review of the related literature: an overview of the entrepreneurship research and the existing studies on FoF and kiasuism. Chapter 3 presents the two studies that were conducted to develop and validate a new scale to assess FoF in the entrepreneurial context. Chapter 4 presents the two studies that were conducted to develop and validate a new scale to assess kiasu beliefs and motivations. Chapter 5 presents a study that investigates the roles of FoF and kiasuism in influencing entrepreneurial intention. Chapter 6 discusses the implications of this research.

CHAPTER TWO: LITERATURE REVIEW

This chapter begins by reviewing the research on entrepreneurial intention. Next, existing models of entrepreneurial intention are presented, followed by the literature on the predictors of entrepreneurial intention. We then present the barriers to entrepreneurship and the importance of examining psychological barriers in Singapore. The conceptual definitions of FoF and kiasuism are also presented. The concluding section of this chapter highlights the goals of this research.

1.0 Entrepreneurial Intention

Entrepreneurial intention is a fundamental construct and is commonly used in the literature to show the prevalence of entrepreneurship (Bird, 1988; Carr & Sequeira, 2007; Krueger et al., 2000; Wilson, Kickul, & Marlino, 2007). Entrepreneurial intention directs attention and effort towards the goal of starting a new business (Nishimura & Tristan, 2011; Shook & Bratianu, 2010). Without intention, one may refrain from starting a business even with the potential to be an entrepreneur (Krueger et al., 2000). Given the importance of entrepreneurial intention, many scholars have proposed conceptual frameworks to explain the process of intention formation (Davidsson, 1995; Krueger & Brazeal, 1994; Krueger & Carsrud, 1993; Robinson, Stimpson, Huefner, & Hunt, 1991).

1.1 Models of Entrepreneurial Intention

Two models emerged as the most dominant in explaining the relationships between personal characteristics and entrepreneurial intention: *Entrepreneurial Event Model* (EEM; Shapero & Sokol, 1982) and *Theory of Planned Behaviour* (TPB; Ajzen, 1991). In recent years, there are growing research utilizing an alternative framework, namely the Social Cognitive Career Theory model (SCCT; Lent, Brown, & Hackett, 1994), to examine the influence of personal attributes and contextual

factors on entrepreneurial intention (e.g., Bullough, Renko, & Myatt, 2014; Segal, Borgia, & Schoenfeld, 2002). The three models are presented in the following sections.

1.1.1 Entrepreneurial Event Model (EEM)

EEM (Shapero & Sokol, 1982), depicted in Figure 1, provides a framework to examine why individuals choose the entrepreneurial career path among others. Based on the model, *perceived feasibility*, *perceived desirability*, and *propensity to act* are determinants of entrepreneurial intention.

Figure 1. Entrepreneurial Event Model

Perceived feasibility refers to the capability to start a business and is based largely on evaluation of one's resources. *Perceived desirability* refers to the attractiveness of starting a business and is affected by cultural and social factors such as subjective norms. *Propensity to act* refers to personal disposition to act on one's decision; the volition to start a business (Krueger et al., 2000). Scholars have found empirical support for the use of EEM in predicting entrepreneurial intention (e.g., Byabashaija & Katono, 2011; Devonish, Alleyne, Charles-Soverall, Young Marshall, & Pounder, 2010; Krueger, 1993).

1.1.2 Theory of Planned Behaviour (TPB)

In the TPB model (Ajzen, 1991), depicted in Figure 2, intention is a direct predictor of behaviour and intention is influenced by *attitude towards behaviour*, *subjective norms*, and *perceived behavioural control*.

Figure 2. Theory of Planned Behaviour (TPB)

Attitude towards behaviour refers to one's positive or negative evaluation of the behaviour and depends on the beliefs about the consequences attributed to the behaviour (Ajzen, 2002). *Subjective norms* refer to social pressure to perform or not to perform the behaviour (Liñán & Chen, 2009) and depends on the approval or disapproval of important referent individuals or groups (Ajzen, 1991). *Perceived behavioural control* refers to the perception of controllability over the behaviour and the ease or difficulty in engaging in the behaviour (Liñán & Chen, 2009). Perceived behavioural control is similar to the concept of self-efficacy (Bandura, 1997).

TPB has received extensive approval in many areas of behavioural science disciplines (Segal, Borgia, & Schoenfeld, 2005). TPB has been used to predict behaviours such as smoking, voting decisions, and losing weight (Ajzen, 1991). Scholars have also adopted the model to predict entrepreneurial intention (e.g., Liñán, Rodríguez-Cohard, & Rueda-Cantuche, 2010; van Gelderen et al., 2008) and also to predict actual entrepreneurial behaviour (Kautonen, van Gelderen, & Fink, 2015).

1.1.3 Social Cognitive Career Theory (SCCT) model

The SCCT model, depicted in Figure 3, is a prominent model in explaining academic and vocational choices. The SCCT model builds on the social cognitive theory (Bandura, 1986), which focuses on the triadic interaction among personal attributes, environmental factors, and overt behaviour. The SCCT model includes personal attributes (e.g., gender, age, personality traits) and contextual factors (e.g., perceived contextual barrier and support) to provide an integrated view of the career development process. The SCCT model includes three interlocking models that depict the dynamic process of career development: formation of vocational interests (*interest model*), selection and pursuit of career choices (*choice model*), and expectation or performance in the selected career choice (*performance model*).

Figure 3. The SCCT model

The key social-cognitive variables in the SCCT *choice* model are: self-efficacy, outcome expectations, and choice goals. *Self-efficacy* is defined as “people’s beliefs about their ability to perform particular behaviours or courses of action” (Lent et al., 2003, p. 458). According to the SCCT model, self-efficacy is a dynamic set of self-beliefs that is domain-specific and interacts with person, behaviour, and contextual factors (Lent et al., 1994). *Outcome expectations* refer to personal beliefs about possible outcomes as a result of pursuing the choice goal. Adapted from the

expectancy-value model of work motivation (Vroom, 1964), the SCCT model posits that people are more likely to pursue a goal when they perceive desirable outcomes. *Choice goals* refer to the determination to engage in a particular activity, for instance, the determination to start a business venture (i.e., entrepreneurial intention). Similar to EEM and TPB, the SCCT choice model has been used to predict career choice (e.g., Lent, Brown, & Hackett, 2000; Lent, Paixão, Silva, & Leitão, 2010) and entrepreneurial intention (e.g., Bullough et al., 2014; Segal et al., 2002).

2.0 Predictors of Entrepreneurial Intention

Existing literature on the predictors of entrepreneurial intention have focused largely on the drivers of entrepreneurship. Two major themes related to the predictors of entrepreneurial intention predominate the literature: personality traits and contextual variables. Personality traits found to differentiate between entrepreneurs and non-entrepreneurs include Big-Five personality, risk-taking propensity, innovativeness, and proactive personality (e.g., Crant, 1996; Ferreira, Raposo, Rodrigues, Dinis, & Do Paço, 2012; Gurel, Altinay, & Daniele, 2010; Singh & DeNoble, 2003). Contextual variables include presence of parental role models and availability of social networks (e.g., Hmieleski & Corbett, 2006; Van Auken, Stephens, Fry, & Silva, 2006). We have summarized the past empirical studies that examined the predictors of entrepreneurial intention in Appendix A. In the following sections, we present the institutional and psychological barriers believed to impede entrepreneurial entry in Singapore.

3.0 Institutional Barriers to Entrepreneurship

The institutional perspective of entrepreneurship posits that institutional variables such as culture, government regulations, and economic policies can influence entrepreneurial activity (Estrin, Korosteleva, & Mickiewicz, 2013). Regulatory business cost was found to be negatively associated with opportunity-driven

entrepreneurial propensity; higher regulatory business cost increases the required returns for the entrepreneurs and acts as a deterrent to starting a new business (Ho & Wong, 2006).

Business ventures may face failures and can end up in bankruptcy, hence, countries with harsher bankruptcy laws can deter entrepreneurship development (Peng, Yamakawa, & Lee, 2009). It was reported that in countries where bankruptcy laws were more entrepreneur-friendly, such as having lower cost involved in the bankruptcy procedure, discharging the bankrupt from debts, and when assets are protected during bankruptcy, there are higher rates of new entry of firms as compared to countries with harsher bankruptcy laws (Lee, Yamakawa, Peng, & Barney, 2011). These studies on institutional barriers were consistent with the notion that government regulation can impose entry barriers to potential entrepreneurs (Porter 1980; as cited in Ho & Wong 2006).

The lack of resources such as financial capital has been recognized as one of the major barriers to entrepreneurship entry (Ho & Wong, 2006; Van Auken, 1999). Even with sound business ideas, the lack of capital can hinder the attempt to execute the plan (Dyck & Ovaska, 2011). Studies found that difficulties in obtaining financial support and perceived lack of support were some of the barriers to entrepreneurship in many countries (Kolvereid, Shane, & Westhead, 1993; Shinnar, Giacomini, & Janssen, 2012).

A corrupted environment can also impact entrepreneurial activity; corruption can be in the form of tax and can impose financial stress on entrepreneurs. It was found that government corruption was negatively associated with new firm start-ups in 64 countries (Dyck & Ovaska, 2011). Corruption not only is a barrier to entry, it was also found to constrain growth aspiration of entrepreneurs across 42 countries (Estrin

et al., 2013).

Institutional variables not only act as a barrier to entrepreneurial activities, multiple studies have also found these variables to be an obstacle to entrepreneurial intention. For instance, it was found that perceived unfavourable economic and political conditions discourage Turkish students from being an entrepreneur (Ozaralli & Rivenburgh, 2016). Taiwan university students perceived uncertainty in the economic situation as one of the reasons to why they did not want to be an entrepreneur (Chen et al., 2011). In a similar study, uncertainty and rivalry in the market were among the top perceived barriers in starting their own firms by Indonesian students (Soetanto, Pribadi, & Widyadana, 2010). Lack of funding, bribery and corruption, high taxes were found to be negatively associated with entrepreneurial intention among youths in Cameroon (Neneh, 2014).

Many studies have highlighted the institutional barriers to entrepreneurship entry. However, the institutional barriers to entry do not seem to be the major contributors to the lack of entrepreneurial spirit in Singapore. The World Bank group has ranked Singapore as the top economy (out of 189) in the “ease of doing business” (The World Bank, 2016). Some of the indicators used in the survey to assess the “ease of doing business” include the administrative burden in paying tax, credit information sharing, ease in securing property rights, and the time and cost to resolve bankruptcies.

The Singapore government and its agencies not only provide the resources, both financial and knowledge-based, to encourage new business ventures, government regulations and economic policies are also made to be more pro-business to facilitate setting up of new businesses. For example, in 1999, the bankruptcy law was amended to encourage entrepreneurship; for debts below S\$500,000 (US\$400,000) the bankruptcy may be discharged after three years (Tan, 2002). As compared to countries

such as Chile, where the bankruptcy process may take up to 4.5 years, the bankruptcy process only takes 10 months in Singapore and the overall cost of bankruptcy is only 1% of the value of the firm's assets (Peng et al., 2009). Similarly, in 2011, a tax amendment was passed to help entrepreneurs defray rising costs and inflation through tax incentives and rebates.

4.0 Psychological Barriers in Singapore

Despite the huge effort made by the Singapore government to promote entrepreneurship, entrepreneurial intention and entrepreneurship activity rates are low (Singer et al., 2015). Given that Singapore is geographically well-positioned, has a robust financial infrastructure, low taxes, strong anti-corruption policy, and the entrepreneurship ecosystem receives ample support from the government, what contributes to the low entrepreneurial spirit among Singaporeans? Psychological barriers, specifically, FoF and kiasuism, were suggested to be the reasons for the lack of entrepreneurial spirit in Singapore (Ho et al., 1998; Koh, 2015; Low, 2006; Yu, 2015).

4.1 Fear of Failure (FoF)

FoF is not unique to entrepreneurship; in fact, it has been widely studied in achievement settings such as the academic and sports domains. Early achievement motivation theory conceptualized FoF as an avoidant motivation that orients one to strive to attain success such that one will not experience shame or humiliation as a consequence of failure (Atkinson, 1966; McClelland, Atkinson, Clark, & Lowell, 1953). Similarly, Elliot and Church (1997) found that FoF is related to performance-avoidance goals, where individuals focus on avoiding unfavourable judgements of competence instead of focusing on demonstration of competence relevant to others (performance-approach goals). This conceptualization assumes that individual with

high FoF will exert effort in any task. More recent research has resulted in a modification of that assertion: individuals with high FoF only strive for success when the task is instrumental and relevant to their goals (Belanger, Lafreniere, Vallerand, & Kruglanski, 2013). However, the key point remains that FoF is linked to increased effort to avoid shame or humiliation.

Early researchers first operationalized FoF as a form of performance anxiety (e.g., Atkinson & Litwin, 1973; Burnstein, 1963; Rosenfeld, 1964; Zander & Wulff, 1966). They used test anxiety measures such as the Mandler-Sarason Test Anxiety scale to measure FoF. Birney, Burdick, and Teevan (1969) argued that the consequences of failure are more feared than the failure itself.

Building on the conceptualization that “it is the aversive consequences of failure that individuals fear and seek to avoid” (Birney et al., 1969, p. 201), Lazarus (1991) proposed a second theoretical perspective of FoF grounded in the cognitive-motivational-relational theory of emotion. Figure 4 illustrates the cognitive-motivational-relational theory.

Figure 4. Cognitive-motivational-relational theory

Based on this theory, emotions are associated with primary appraisal of how perceived threats in person-environment relationships affect an individual’s ability to attain goal(s). The appraisal of threat in evaluative situations will activate cognitive

schemas or beliefs associated with the aversive consequences of failing and the anticipation of the threatening outcomes will elicit fear (Lazarus, 1999). Based on this conceptualization, FoF is measured by the perceived likelihood of having to face the aversive consequences if one fails (Conroy, 2004).

4.1.1 FoF in the entrepreneurial context

Failure is common in business ventures (Mitchell & Shepherd, 2011), especially for new ventures (Knott & Posen, 2005). Studies conducted in the United States found that only half of the new firms are able to last for five years (Shane, 2008) and the typical rate of failure in entrepreneurship hovers between 20% to 60% (Timmons, 1994). Entrepreneurs who failed in their business reported emotional distress such as grief (Jenkins, Wiklund, & Brundin, 2014; Shepherd, 2009) as well as experiencing stigmatization (Singh, Corner, & Pavlovich, 2015; Ucbasaran, Shepherd, Lockett, & Lyon, 2013). The consequences associated with business failure can be daunting not just for entrepreneurs but it may also deter one from pursuing an entrepreneurial career path.

The GEM survey included a measurement of FoF to examine its influence on entrepreneurial activities and also to investigate national differences in FoF. The majority of studies that have adopted the GEM's FoF measurement have reported FoF to be one of the barriers that prevent individuals from starting a business (e.g., Bosma & Schutjens, 2011; Hormiga & Bolívar-Cruz, 2012; Wagner, 2007). Additionally, FoF was suggested to be one of the reasons for lower entrepreneurial intention observed among women (Noguera, Alvarez, & Urbano, 2013; Sánchez Cañizares & Fuentes García, 2010). Scholars have also found FoF to be negatively associated with engagement in nascent behaviours (Arenius & Minniti, 2005) and involvement in

entrepreneurial activities (Anwar ul Haq, Usman, Hussain, & Anjum, 2014; Vaillant & Lafuente, 2007).

Using the Performance Failure Appraisal Inventory (PFAI) developed by Conroy (2001), scholars have found FoF to influence entrepreneurs' investment decision (Mitchell & Shepherd, 2010, 2011; Wood, McKelvie, & Haynie, 2014; Wood & Pearson, 2009). For instance, utilizing conjoint analysis, Mitchell and Shepherd (2011) found some dimensions of FoF (*fear of devaluing self* and *fear of having an uncertain future*) to impede entrepreneur's likelihood of investment in potential opportunities.

While FoF may distinguish entrepreneurs from non-entrepreneurs (Urbano & Alvarez, 2013), it may not be true that entrepreneurs have no FoF; such fear is still ubiquitous and may have an impact on subsequent entrepreneurial behaviours. Studies of FoF in the sports and academic domains have suggested FoF to motivate an individual to strive to achieve success in order to avoid failure (e.g., Kim & Dembo, 2001; Martin & Marsh, 2003; Rice et al., 2009). Recent studies have also supported the notion that FoF can have motivating effects on entrepreneurship. Mitchell and Shepherd (2011) found that not all dimensions of FoF inhibit entrepreneurs; *fear of upsetting important others* (a dimension of FoF) was found to motivate entrepreneur's likelihood of investment in potential opportunities. Similarly, Morgan and Sisak (2016) proposed possible dualistic nature of FoF for entrepreneurs. For low aspiration entrepreneurs, FoF can act as a hurdle; entrepreneurs invest lesser in their venture to mitigate possible losses. Conversely, FoF can motivate entrepreneurs to strive; FoF may serve as a fuel for high aspiration entrepreneurs and motivate them to invest more in their venture to avoid failing. These studies suggest that FoF may play an important

role in the entrepreneurial process with the implication that it does not have a sole avoidant impact.

4.1.2 Existing FoF measures

The current available measures for examining FoF are constrained within the GEM measure and the PFAI. The GEM measures FoF using a single item: “*Would FoF prevent you from starting a business?*” The GEM measure assumes a wholly avoidant outcome of FoF; it presents the leading opinion that FoF is an obstacle to business start-up. Researchers have also cautioned against the assumption that FoF is always or only a barrier to entrepreneurship (Cacciotti & Hayton, 2014). Second, FoF was measured using single binary-choice item, which may not be comprehensive in understanding FoF in the entrepreneurial context. Finally, as FoF is broadly defined as a societal attitude, there is a lack of consensus in the definition of FoF in studies using the GEM data. For instance, some studies defined FoF as risk aversion (e.g., Arenius & Minniti, 2005; Bosma & Schutjens, 2011; Hormiga & Bolívar-Cruz, 2012), while others have defined FoF as a socio-cultural factor, where FoF is a consequence of the social stigma on entrepreneurial failure (e.g., Noguera et al., 2013; Vaillant & Lafuente, 2007).

Birney et al. (1969) were the first to describe fears that are associated with the consequences of failure: fear of devaluating self-esteem, fear of non-ego punishment (e.g., withdrawal of tangible rewards), and fear of reduction in social value. Despite its theoretical richness, there is lack of empirical research that examines the relevance of the proposed consequences of failure. Only until recently, Conroy, Poczwardowski, and Henschen (2001) interviewed athletes and performing artists to explore their beliefs related to the consequences of failing in their performance domain. By using inductive content analysis, they identified a multidimensional model of the

consequences of failure. Conroy (2001) then developed the PFAI based on the dimensions identified in his qualitative study (Conroy et al., 2001).

Although the PFAI provides a more detailed view of the consequences of failure as compared to the single-item GEM measure, it was only validated within the sports (e.g., Sagar, Boardley, & Kavussanu, 2011; Sagar & Jowett, 2010) and academic domains (e.g., De Castella, Byrne, & Covington, 2013). These perceived consequences of failure may differ from business failure and it remains unclear whether the PFAI is applicable to entrepreneurship. Table 1 summarizes the current available measures for assessing FoF.

Due to the limitations in the existing measures of FoF, we aim to develop and validate a new measure to assess FoF in the entrepreneurial context. With the new measure, we then examine the role of FoF in influencing entrepreneurial intention.

Table 1

Available Measures for Assessing FoF

Name of Measure	No. of items	Context	Purpose of Measure	Limitations
1. GEM single-item FoF Measure: <i>“Would FoF prevent you from starting a business?”</i>	1	Entrepreneurship	Included in GEM surveys to examine national differences in FoF level.	<ul style="list-style-type: none"> Assumes wholly avoidant outcome. Not comprehensive. Lack of consensus in the definition for studies utilizing the GEM measure.
2. Performance Failure Appraisal Inventory (PFAI; Conroy, 2001) Sample items: <i>“When I am failing, my future seems uncertain.”</i> <i>“When I am failing, I blame my lack of talent.”</i>	25	Sports/academic	To assess FoF in performance domains (academic, sports).	<ul style="list-style-type: none"> Consequences of failure in sports/academic context may be different for business failure. Applicability of PFAI to entrepreneurial context is unclear.

4.2 Kiasuism

“Everything also I want”, “Everything also must grab”, “Everything also number one”: with these mottos in a series of comic books published in the 1990s by Johnny Lau, *Mr. Kiasu*, a local comic character, became an icon in Singapore. Since the release of the first comic book, a range of popular merchandise such as magazines, mugs, watches, T-shirts, 13-inch rulers (an inch longer than normal), bumper stickers, and even a television series featuring Mr. Kiasu was introduced. What sparked the popularity of this comic character among Singaporeans? Although Mr. Kiasu is extreme, Singaporeans relate to him because he mirrors the behaviours they see in daily life and captures a key characteristic of Singapore’s cultural fabric: kiasuism (Lee, 2010).

Kiasuism (from the Hokkien term, *kiasu* (怕输), which is literally translated as fear of losing out) is an entrenched feature of Singaporean society (Kirby & Ross, 2007; Van de Vijver & Tanzer, 2004). The Australian Macquarie Dictionary, which records many colloquial terms, first defined kiasuism as “an obsessive desire for value for money, hailed as a national fixation in Singapore” (*The Macquarie Dictionary*, 1997). Kiasuism also connotes self-centeredness, greed, inconsideration, and crass behaviours (Tan, 2003).

Three studies attempted to conceptualize kiasuism (i.e., Ho et al., 1998; Hwang, Ang, & Francesco, 2002; Wierzbicka, 2003). In a pioneering study, Ho et al. (1998) asked participants ranked a list of 17 adjectives to determine how the adjectives were associated with kiasuism. Kiasuism was found to be associated with the fear of losing out, which refers to “an innate unwillingness to be disadvantaged or always wanting to be ahead of others” (Ho et al., 1998, p. 363), selfishness, being calculative, greedy, and *kiasi-ism* (怕死, a Hokkien term, which refers to risk-averse

behaviours). Ho et al. (1998) indicated that kiasuism is distinct from competitiveness, and emphasized that unlike competitiveness, which promotes drive and commitment, kiasuism promotes greed and selfishness. Hwang et al. (2002) defined kiasuism as “an obsessive tendency to get the most out of every transaction and drive to get ahead of others” (p. 75). Unlike Ho et al. (1998), Hwang et al. (2002) suggested that kiasuism is a Chinese form of competitiveness, where individuals strive for academic or career success to gain face (Stevenson & Lee, 1996). On the contrary, Wierzbicka (2003) used semantic analysis of texts by Singaporean authors and proposed that kiasuism is a form of mental attitude, driven by opportunity and apprehension, which leads to the display of kiasu behaviours.

Behaviours perceived to be kiasu are easy to observe in Singapore. Examples include piling up food at buffets, taking airline cutlery as souvenirs, and queuing for freebies (Ho et al., 1998). The portrayal of Singaporeans as kiasu and selfish, the “ugly Singaporean” phenomenon, was especially prominent in the local media in the early 1990s (Hodkinson & Poropat, 2013; *The Economist*, 1995). The raised profile of kiasuism became a concern to the Singapore government (Ho et al., 1998). The government initiated campaigns, such as the 1993 National Courtesy Campaign, to target kiasu behaviours, and politicians urged Singaporeans to gain control of their own kiasuism (National Archives of Singapore, 1996). However, kiasuism has remained a consistent element of Singaporean society. A recent survey of 2,000 Singapore residents found that 58% still perceive Singaporeans as kiasu, competitive, materialistic, and self-centred (Chan, 2012).

In 2012, the Prime Minister, Mr Lee Hsien Loong, cautioned against “ugly Singaporean” behaviour in his National Day speech (Chang, 2012). A member of parliament, Miss Kuik Siao-Yin worried that the “kiasu syndrome runs deep in the

Singaporean blood” (Saad, 2014) and advocated the need to eliminate kiasuism to drive entrepreneurship in Singapore (Ong, 2016).

4.2.1 Role of kiasuism in entrepreneurship

Kiasuism is believed to be one of the reasons for Singapore’s low entrepreneurial spirit among young adults (Low, 2006; Tan, 2003). Kiasuism was also suggested to be one of the reasons why young people prefer stable professional jobs to entrepreneurship (Ho et al., 1998; Low, 2006; Ong, 2016). The association of kiasuism with competitiveness by Hwang et al. (2002) questions the assumption that kiasuism is a barrier to entrepreneurship especially in view of the Entrepreneurial Orientation (EO) theory.

According to the EO theory, an organization’s entrepreneurial orientation may be reflected through the processes, practices and decision-making styles of the firm (Lumpkin & Dess, 1996). The EO theory posits that autonomy, innovativeness, risk-taking, proactiveness, and competitive aggressiveness are the characteristics of an entrepreneurial organization (Lumpkin & Dess, 1996). Although the EO theory was proposed to clarify the characteristics of organizations that are more likely to undertake new ventures (i.e., more entrepreneurial), it can also be extended to individuals and considered as personality traits that may distinguish entrepreneurs from non-entrepreneurs (Wooten, Timmerman, & Folger, 1999). Competitive aggressiveness was proposed to be an important characteristic of entrepreneurship as new start-ups are more likely to fail than established firms (Lee & Peterson, 2000). If competitiveness is a characteristic of entrepreneurs and kiasuism reflects a Chinese form of competitiveness as suggested by Hwang et al. (2002), does kiasuism motivate individuals to start a business or would the fear of losing hinder such motivation?

4.2.2 Existing kiasuism measures

We could only find nine published studies related to kiasuism (i.e., Ellis, 2014; Ho et al., 1998; Hwang, 2003; Hwang et al., 2002; Hwang & Arbaugh, 2006; Kirby, Kirby, Bell, & Schafer, 2010; Kirby & Ross, 2007; Li & Fang, 2002; Wierzbicka, 2003). Of these nine studies, only two studies focused on developing a scale to measure kiasuism (i.e., Ho et al., 1998; Hwang et al., 2002). We review these two studies next.

Ho et al. (1998) asked participants to classify whether various commonly encountered social behaviours were viewed as kiasu and the results were used for the construction of the kiasu tendency scale. Based on the qualitative interviews, kiasu behaviours ranging from social to academic context were written as items (e.g., “piling on food at a buffet”, “studying before semester commences”). The kiasu tendency scale comprises of ten hypothetical scenarios associated with kiasu behaviours. Level of kiasuism is measured by the frequency of engaging in the kiasu behaviours.

One of the limitations of the kiasu tendency scale is the sole focus on behaviours and the assumption that the display of kiasu behaviours is a representation of kiasuism. The assumption that these behaviours are motivated by kiasu reasons can be problematic as engagement in the behaviours may be motivated by non-kiasu reasons. For example, items such as “queuing way ahead of time to buy tickets” and “stowing reference books in other shelves” reflects general social behaviours that may not have a kiasu nature. That is, “queuing way ahead of time to buy tickets” may be due to genuine interest in attending a concert and “stowing reference books in other shelves” may be due to laziness.

Hwang et al. (2002) equated kiasuism with a “highly competitive spirit” (p. 75), and indicated that “a review of reports from the popular press in Singapore” (p.

74) suggested a distinction between positive and negative kiasu attitudes. A positive kiasu attitude “reveals itself through diligence and hard work by individuals to stay on top of the situation” and a negative kiasu attitude “reveals itself through personal envy and selfish behaviours” (p. 75). A qualitative analysis of 11 interviews supported their two posited forms of kiasuism. Based on these results, they developed a six-item kiasuism scale targeting the academic context. Like Ho et al. (1998) before them, the authors generated items based on kiasu behaviours. Three items represented positive kiasu behaviour (e.g., “I do research on my coursework”) and three items represented negative kiasu behaviour (e.g., “I try not to let others know the right answers”).

Two follow-up studies (i.e., Hwang, 2003; Hwang & Arbaugh, 2006) utilized Hwang et al. (2002) kiasuism scale and emphasized that both facets of kiasuism (positive and negative) encompass “a desire to get ahead of others” (Hwang, 2003, p. 564) and “include a comparative competitive component that is directed at being ahead of others” (Hwang & Arbaugh, 2006, p. 9). Despite the consistent conceptual emphasis on comparison with others, the kiasuism scale developed by Hwang et al. (2002) does not appear to emphasize comparison with others consistently. Although the negative items in Hwang et al. (2002)’s scale reflect a desire to get ahead of others, the positive items do not encompass any comparative aspect. For example, although one might “*do research on coursework*” to get ahead of other students, it is also possible to be motivated by an intrinsic interest in the course material, or the desire to develop oneself regardless of what others are doing. Similar to the kiasu tendency scale, the items used to measure kiasu attitudes were also behavioural-based (e.g., “*I do not share useful knowledge with others*”, “*I try not to let others know the right answers*”).

To summarize, the current available measures for kiasuism are largely based on the display of kiasu behaviours. As discussed, these measures may not be an accurate measurement of kiasuism as the display of such behaviours may be motivated by non-kiasu reasons. The disparity between the definition of kiasuism and the content of the items lead us to question the conceptual validity of the measures, especially in light of Wierzbicka (2003)'s conceptualization of kiasuism as a form of attitude that drives the display of kiasu behaviours. Wierzbicka highlighted the importance of examining the motivations behind behaviour to determine whether it is kiasu, as the same behaviour can have differing motivations. Therefore, we suggest that beliefs and motivations associated with kiasuism should be included in any valid measure of kiasuism. Table 2 presents the current available measures to assess kiasuism.

Table 2

Available Measures for Assessing Kiasuism

Name of Measure	No. of items	Context	Purpose of Measure	Limitations
1. Kiasu Tendency Scale (Ho et al., 1998) Sample items: <i>"Queuing way ahead of time to buy tickets."</i> <i>"Stowing reference books on other shelves."</i>	10	Social and academic	To assess the frequency of engaging in kiasu behaviours as a measurement of kiasuism.	<ul style="list-style-type: none"> Focus on behavioural aspect of kiasuism. Psychometric properties not reported. Assumes kiasu behaviours to be a representation of kiasuism. Items supposedly reflecting kiasuism may be motivated by non-kiasu reasons (e.g., genuine interest, laziness).
2. Positive and Negative Kiasuism Scale (Hwang et al., 2002) Sample items: Kiasu Positive: <i>"I do research on my coursework."</i> Kiasu Negative: <i>"I try not to let others know the right answers."</i>	6	Academic	To assess the frequency of engaging in kiasu behaviours in the academic context.	<ul style="list-style-type: none"> Focus on behavioural aspect of kiasuism. Items for positive kiasuism are general behaviours that may be motivated by non-kiasu reasons (e.g., intrinsic interest in course materials). Positive kiasuism items do not reflect comparative aspect.

5.0 Purpose of Study

Studies on the barriers to entrepreneurship have largely focused on how institutional barriers influence entrepreneurial entry. Although barriers in general have been relatively neglected as compared to drivers of entrepreneurship, research on psychological barriers to entrepreneurship were less extensive as compared to institutional barriers.

The entrepreneurial process is described as an emotional journey (Baron, 2008); starting a business involves emotional elements such as fear (Schindehutte, Morris, &

Allen, 2006). Fear was found to be involved in different stages of the entrepreneurial process (Cardon, Foo, Shepherd, & Wiklund, 2012; Hayton & Cholakova, 2012).

Although fear plays an important role in the entrepreneurial process, limited attention was given to the role of fear, specifically, FoF and fear of losing out (kiasuism).

Hence, in contrast to the studies that investigated the influence of institutional barriers on entrepreneurship, the current study investigates the roles of FoF and kiasuism in influencing entrepreneurial intention. FoF and kiasuism were chosen as the focus of this research as both represents fear and are highly relevant in the field of entrepreneurship.

Singapore was selected as a context for investigation because the Singapore government has taken many actions that might be expected to increase entrepreneurial intention. Furthermore, the business and economic perspectives cannot provide a complete picture of entrepreneurial intention, as is demonstrated in Singapore, where there are few institutional barriers, and yet the intention to become an entrepreneur is low (Singer et al., 2015).

The present research is motivated by: (i) the call for more in-depth studies on the FoF construct in the entrepreneurial context and to develop a new measure of FoF (Cacciotti & Hayton, 2014; Cacciotti et al., 2016), (ii) the lack of in-depth research on the kiasuism construct in understanding how, why, and where kiasuism manifests itself (Kirby et al., 2010), and (iii) our observation that there is lack of empirical research in examining the role of FoF and kiasuism in influencing entrepreneurship.

6.0 Overview of Theoretical Framework

The SCCT model has been recommended as a theoretical framework for the study of perceived career barriers such as FoF (Swanson, Daniels, & Tokar, 1996). We adopted the SCCT *choice* model (i.e., self-efficacy, outcome expectations, and choice goal) to examine the roles of FoF and kiasuism on undergraduates' entrepreneurial intention (see Figure 5).

Figure 5. Adapted SCCT model as theoretical framework.

Kiasuism is a mental attitude (Wierzbicka, 2003), hence we hypothesize this personal attribute to influence one's level of FoF in the entrepreneurial context (negative outcome expectations), which in turn influence entrepreneurial intention. Individuals with high kiasuism may be sensitive to FoF, which leads them to have low entrepreneurial intention. We also hypothesize that kiasuism may have a direct effect on entrepreneurial intention.

Self-efficacy is a motivational construct that accentuates the belief in one's ability to perform a given task successfully (Bandura, 1977). Individuals with high

self-efficacy are more likely to pursue and persevere in a given task than individuals with low self-efficacy (Bandura, 1997). Self-efficacy is both task and domain specific (Bandura, 1977, 1997) . When applied to the entrepreneurial context, it is defined as “an individual’s confidence in his or her ability to successfully perform entrepreneurial roles and tasks” (Zhao & Seibert, 2005, p. 1265). Several studies have found positive relationship between entrepreneurial self-efficacy and entrepreneurial intention; the higher confidence an individual has in executing entrepreneurial-related tasks successfully, the higher the intention to start a business venture (e.g., Díaz-García & Jiménez-Moreno, 2010; Kristiansen & Indarti, 2004; Shook & Bratianu, 2010). Self-efficacy not only plays a role in influencing entrepreneurial intention, it also influences FoF as people are less likely to expect undesired outcomes when they view themselves to be efficacious (Lent et al., 2000). Self-efficacy was also found to be influenced by contextual influences, specifically, contextual barriers (e.g., discouragement from family members) can diminish self-efficacy while contextual support (e.g., having role models) can increase self-efficacy (Lent et al., 2000; Lent et al., 2001).

6.1 Rationale for using SCCT model

Although both EEM and TPB were well-received for their parsimony in explaining entrepreneurial intention, they were also criticized for being overly simplistic (e.g., Munro, Lewin, Swart, & Volmink, 2007). The core constructs of EEM and TPB are largely person-centred (e.g., evaluation of one’s ability) and are only able to explain 35% to 40% of the variance in entrepreneurial intention (Krueger et al., 2000). This suggests that entrepreneurial intention may also be influenced by other variables such as contextual factors (e.g., support system, presence of role models).

Although the TPB was first developed to explain diverse social behaviours and EEM was developed specifically in the entrepreneurial context, scholars have

highlighted the similarities between EEM and TPB (e.g., Krueger et al., 2000; Schlaegel & Koenig, 2014). According to Krueger et al. (2000), perceived feasibility (in EEM) and perceived behavioural control (in TPB) are comparable as both constructs are associated with self-efficacy. Similarly, both perceived desirability (in EEM) and attitude towards behaviour (in TPB) measures the affective beliefs and values attributed to being an entrepreneur.

The SCCT model was primarily used to predict academic and vocational choices. The SCCT model includes personal attributes, as were the EEM and TPB models, and also went beyond by taking into account of contextual factors. Aside from examining how the core constructs influence academic and vocational choices directly, the SCCT model also considered how the core constructs (e.g., self-efficacy) influence academic and vocational choices through indirect effects (e.g., via outcome expectations). Because the SCCT model has advantages over EEM and TPB, this research adapts the SCCT model as a framework to examine the influence of FoF and kiasuism on entrepreneurial intention.

7.0 Aims of Research

Due to the limitations in the current available measures for FoF and kiasuism, our first aim is to develop and validate two new scales: (i) to measure FoF specific to the entrepreneurial context and (ii) to measure kiasuism more accurately by examining the beliefs and motivations associated with being kiasu. A mixed-method approach was utilized in the development of the two scales as “the use of quantitative and qualitative approaches in combination provides a better understanding of the research problems than either approach alone” (Creswell & Plano Clark, 2007, p. 5) and allows us to achieve depth and breadth (Chen, 1997). To achieve sufficient depth, we utilized qualitative methods to explore the domain of interest to gain insights to participants’

experiences and perception (Creswell, 2003). A qualitative approach is applicable to phenomena that are rare, exploratory in nature, and the focus of the study is inductive (Creswell, 1998). The qualitative findings are used to generate the content for the new scales and quantitative methods are utilized to achieve breadth so as to provide generalizability of our qualitative findings (Creswell & Plano Clark, 2007). Our second aim is to investigate the influence of FoF and kiasuism on entrepreneurial intention together with personal attributes and contextual factors found to be drivers of entrepreneurship. To achieve these aims, we conducted three sets of studies.

Chapter 3 presents the two studies conducted to develop and validate a new scale to assess FoF in the entrepreneurial context. We first conducted a qualitative study to explore the perceived aversive consequences of business failure by Singaporean undergraduates. This is based on the conceptualization that FoF is a hierarchical, multidimensional construct where the lower-order dimensions represent the perceived aversive consequences of failure (Birney et al., 1969; Conroy et al., 2001; Conroy, Willow, & Metzler, 2002). The qualitative findings provided a foundation for the development of a new scale to assess FoF in the entrepreneurial context. The newly constructed scale was subjected to validation analyses.

Chapter 4 presents the two studies conducted to develop and validate a new scale to assess kiasuism. We also utilized qualitative methods to explore the concept of kiasuism for the development of a scale that measures the beliefs and motivations associated with being kiasu instead of focusing on kiasu behaviours. Similarly, psychometric properties of the newly constructed scale were examined.

Chapter 5 presents the study that we conducted to examine the relationships among the FoF, kiasuism, and entrepreneurial intention by adopting the SCCT model as a framework. The newly constructed scales were utilized to measure FoF in the

entrepreneurial context and kiasuism. Considering the importance of contextual factors, we also integrated perceived contextual barrier and support in the SCCT model.

Chapter 6 discusses the theoretical contribution of this study and the practical implications for policy-makers interested in increasing entrepreneurial spirit among undergraduates. Limitations and future directions are also discussed.

CHAPTER THREE: DEVELOPMENT AND VALIDATION OF THE PERCEIVED AVERSIVE CONSEQUENCES OF BUSINESS FAILURE (PACBF) SCALE

This chapter presents how we develop and validate a new scale to assess FoF in the entrepreneurial context. The development and validation of the new scale is guided by the following procedure as shown in Figure 6.

Figure 6. Procedure for development of a new scale to assess FoF in the entrepreneurial context.

The cognitive-motivation-relational theory of emotion (p. 15) serves as a theoretical framework for the development of a new measure to assess FoF in the entrepreneurial context: appraisal of threatening outcomes elicits fear (Lazarus, 1999).

FoF in the entrepreneurial context is measured by the perceived likelihood of having to face the aversive consequences should one's business fails.

1.0 Phase 1: Qualitative Study on the Perceived Aversive Consequences of Business Failure (Study 1a)

In Phase 1, we aim to identify the set of outcomes of business failure that are of greatest concerns to young Singaporeans. In order to achieve these goals, we utilized qualitative interviews to capture the values and beliefs held by Singaporean undergraduates about business failure.

1.1 Method

1.1.1 Pilot interviews

We first conducted five pilot interviews to test and refine the interview guide. Pilot participants were recruited in the same manner as the main study participants. They were asked for feedback on the interview questions regarding their comprehensiveness and appropriateness. The wording of the questions was revised slightly for the full study with 35 participants.

1.1.2 Participants

Thirty-five undergraduates (15 males, 20 females) from a university in Singapore participated in a one-on-one interview approved by the university's Institutional Review Board. Participants were recruited through the university's research pool and received partial course credit for their participation. All participants were Singaporean and their ages ranged from 21 to 26 years old ($M = 22.74$, $SD = 1.42$). Recruitment and interviews of participants were carried out until reaching data saturation and no new responses were encountered (Strauss & Corbin, 1990). Table 3 summarizes the demographics of our participants.

Table 3

Demographics of Study 1a Participants

Participant Code	Gender	Age	Major
P1*	Female	22	Mathematical Sciences (Statistics)
P2*	Male	22	Mechanical Engineering
P3*	Female	21	Mechanical Engineering
P4	Female	22	Sociology
P5	Male	25	Biomedical Science
P6	Female	23	Accountancy
P7	Male	25	Business and Computing
P8^	Female	22	Mechanical Engineering
P9	Female	21	Banking and Finance
P10	Male	23	Accountancy and Business
P11	Male	23	Mathematics and Economics
P12	Female	22	Business Marketing
P13	Male	25	Computer Engineering
P14	Male	23	Mechanical Engineering
P15	Female	21	Mechanical Engineering
P16	Female	22	Economics
P17	Male	26	Chemistry
P18	Female	22	Information Engineering And Media
P19	Female	22	Mathematics and Economics
P20	Male	24	Bioengineering
P21	Male	24	Accountancy and Business
P22	Female	22	Engineering
P23	Male	24	Mathematics and Economics
P24	Male	24	Chemical and Biomolecular Engineering
P25	Female	22	Psychology
P26	Female	22	Chemistry and Biological Chemistry
P27	Female	21	Accountancy
P28	Female	22	Business
P29	Female	22	Accountancy
P30	Female	21	Accountancy
P31	Male	23	Accountancy
P32	Female	23	Mathematical Sciences
P33	Male	23	Psychology
P34	Female	21	Marketing
P35*	Male	26	Visual Communications

Note. * indicates participants who did not take part in Study 1b; ^ indicates participant who mentioned she did not know what kiasuism means and was excluded from Study 1b analyses.

1.1.3 Interview procedure

Interview session for Study 1a took approximately 20 minutes and was conducted in a private meeting room with one participant and one interviewer.

Participants were randomly assigned to either a female or a male interviewer.

Participants were asked to give their informed consent to participate in the study and

were assured confidentiality and anonymity of their responses by highlighting that a code number would only be used to identify them. Interviews were audiotaped with the consent of the participants.

Semi-structured interviews were conducted and the interview guide served as a framework. Participants were informed that there are no right or wrong answers and they could respond in any way they wanted. The main interview questions were: *“What do you think will happen to an entrepreneur who failed in his/her business?”*, *“What do you think are some of the consequences that the entrepreneur may need to face if he/she failed in the business?”*, *“How would the fear of failure influence your decision to be an entrepreneur?”* and *“What are the consequences of business failure that may stop you from being an entrepreneur?”*. These questions served as general prompts for participants to provide spontaneous examples from their own thoughts and experiences; the goal was to ask the same general question in a variety of ways. Occasionally, the participants were prompted to provide more description by either repeating the last few words spoken by the participants or they were asked to clarify what they said. The focus of the interview was on identifying the aversive consequences of business failure that participants would spontaneously come up with on their own; the interviewer did not introduce any examples.

1.1.4 Data analyses

The transcripts were inductively analysed using the three stages of thematic analysis (Smith, 1995). The first stage entailed data management and preliminary analysis. All interviews were transcribed verbatim and a research assistant checked the transcripts against the audio files to ensure accuracy. QSR International’s NVivo 10 software was used to code and organize the analyses. The transcripts were read through several times to acquaint with the material, and interviews were coded into

meaningful units with regard to the perceived consequences of business failure (each unit equated to one statement or example).

In the second stage, open coding was used to allocate the meaningful units into categories; summarized categories of experiences (e.g., bankruptcy, personal debt, emotional distress) were created. Each meaningful unit could be coded into more than one category. A coding scheme (see sample in Appendix B) was developed and comprised of an explanation of each category. Next, to ensure the usefulness and validity of the coding scheme, another research assistant blind to the study's goals was trained on the coding scheme and asked to go through the transcripts line-by-line and code them according to the coding scheme. Cohen's kappa, which we used to assess the inter-rater reliability between the researcher and the assistant, was high ($\kappa = .97$, $SD = 0.02$). The few disagreements on the categories were discussed until consensus was reached.

The third and final coding phase involved grouping the categories into overarching higher-order themes. The allocation of categories into themes was discussed between the research and the assistant until consensus was reached. To ensure validity and reliability of the study, an audit trail (e.g., memos, emails) was maintained to record the development of the analytic process. The audit trail included the earlier versions of the interview questions, the amendments made to the questions based on the pilot interviews, and the iterative process of assigning meaningful units into categories. This audit trail was reviewed and approved by an independent qualitative researcher not involved in the study design or execution.

1.2 Results

A total of 148 meaningful units were obtained from the 35 interviews. Inductive thematic analysis resulted in 12 lower-order categories, which were grouped

into four higher-order themes (financial damages, evaluation from others, threat to self-worth, and career damages) as shown in Table 4. In the following, (unless otherwise indicated) the numerals indicate the number and percentage of participants out of the total sample (35) who provided a response in the particular category. These percentages are not expected to be representative of the undergraduate population in Singapore. They are reported to provide a sense of the relative pervasiveness of each category in our sample. In the following, we present sample quotes for each category; additional quotes related to each category are presented in Appendix C.

1.2.1 Financial damages

The most described potential consequence of business failure was financial impact (32, 91%). Financial costs of failure encompassed: *monetary loss*, *bankruptcy*, *debt*, *difficulty providing financial support for family*, and *financial damages to others*.

Monetary loss, which refers to loss of funds already possessed such as capital invested and personal savings, was emphasized by 19 participants (54%). For example, “You don’t know how you [are] going to survive in Singapore without having that amount of money which was initially with you” (P3).

Ten participants (29%) reported *bankruptcy* as a consequence of business failure. Most expressed that “once you are bankrupt, it is very hard to stand up again” (P24). One participant suggested that the media might fuel this negative perception:

I feel that as children, we are always taught the risk of entrepreneurship or starting your own business. You see all the TV dramas, you always see people who start their own business going bankrupt. That kind of puts a fear in us at a very young age. (P9)

Table 4

Summary of Study 1a Findings

Higher Order Themes	Lower-order Categories
Financial damages 32, 91%	1. Monetary loss 19, 54% 2. Bankruptcy 10, 29% 3. Debt 12, 34% 4. Difficulty financially supporting family 9, 26% 5. Financial damages to others 8, 23%
Evaluation from others 19, 54%	6. Loss of status/face/reputation in the eyes of others 16, 46% 7. Loss of support/confidence/trust 5, 14% 8. Strained relationship with others 3, 9% 9. Disappointing others 3, 9%
Threat to self-worth 18, 51%	10. Negative emotions 13, 37% 11. Negative impact on self-esteem 11, 31%
Career damages 13, 37%	12. Falling behind peers in terms of: Career progress/earning potential/skills/status 13, 37%

Note. $N = 35$. Number and percentage of participants out of N who raised concerns in the category.

Debt was mentioned by 12 participants (34%). For example, one participant emphasized that she would not want to have to borrow from others:

So maybe they will just keep trying, keep trying and then they will go into a lot of debt. So I'm afraid I will be that kind of person having to borrow. (P19)

Participants were not only concerned about personal financial impact; many also had concerns about the potential for financial impact on others. Nine (26%) reported *difficulty providing financial support for family* as a consequence of failure:

Let's say I'm the breadwinner or if I contribute to my family income, I mean if my business fails, then I don't have a steady income, this will definitely affect the people around me that are supported by me. (P5)

Eight participants (23%) highlighted *financial damages to others*, explaining that they would have to rely on their parents to pay their debts should their business fail, which they were not willing to do.

If I fail financially, I would need to find...I would need to fall back on my parents again, I think this is quite unacceptable, so I think this is one of the biggest factors that would discourage me from going [into an entrepreneurial career path]. (P21)

1.2.2 Evaluation from others

Four categories were associated with this theme (19, 54%): *loss of status/face/reputation in the eyes of others*, *loss of support/confidence/trust from others*, *strained relationships*, and *disappointing others*.

Sixteen participants (46%) focused on *loss of status/face/reputation in the eyes of others*, which represents concern over how one is evaluated by others after failure in a business venture. Participants believed people judge a failed entrepreneur negatively in terms of capability, leadership skills, personality, decision-making skills, and choice of career path:

Perhaps because of the competitive nature in Singapore, everything is very results-oriented. Perhaps a failure, like once you have one failure, it may be judged as you have failed something; that is a big barrier, it's a big obstacle that you have in your life, then that might be more long-lasting in people's minds. (P12)

These negative judgments were perceived as likely to influence how people behave towards a failed entrepreneur. For instance, one participant explained how being in

debt might result in “people would start to shun you...they link you towards asking for money” (P33).

Loss of support/confidence/trust from others was raised by five participants (14%), who felt that failing might result in others subsequently being less supportive: “People around me will sort of discourage me to not take up entrepreneurship again” (P5). Likewise, P11 expected that he might lose “the trust you have from your family or colleagues that you had initially for your business.”

Three participants (9%) raised the closely related concern of *strained relationship with others*. Unexpectedly, the focus of concern was more on the reduction in the quality of personal relationships, rather than on harm to professional relationships or business partners. All three were concerned about relationships with family members. For example, “If the entrepreneur is a middle-aged man with a family and everything, then I think his relationships with his family will worsen” (P13). Only one participant (P28) mentioned that she would want to be a sole entrepreneur, as she would not want to have a bad relationship with a business partner if the business failed.

Three participants (9%) mentioned psychological harm to others. They pointed out that if the business fails, they might *disappoint others*: “like the expectations of your family as well because they have been supporting you and if you fail, you will sort of disappoint them” (P34).

1.2.3 Threat to self-worth

The higher-order theme of threat to self-worth (18, 51%) comprised of two lower-order categories: *negative emotions* and *negative impact on self-esteem*. Thirteen participants (37%) mentioned the experience of *negative emotions* as a consequence of business failure. An “emotional setback”, “discouraged”,

“disappointment with oneself”, “embarrassment”, and “shame” were some of the terms applied. For example, P22 described witnessing her uncle feeling “depressed” and “losing all ambition and motivation” after his business failed.

Negative impact on self-esteem, which captures how an entrepreneur may evaluate self-worth less favourably post-failure, was described by 11 participants (31%). Not only would the entrepreneur “lose the confidence that he had initially about his business idea” (P11), he may have doubts about his capability as an entrepreneur, as illustrated by P16: “Maybe I shouldn’t do it, because I’m not cut out for it, so that’s a kind of loss because it could be a successful business, but you just stop trying.” Feeling unworthy after failure was another theme: “I’m a very useless person” (P2), “If I fail, I will be...it would make it seem that all I’m good for is nothing” (P9).

Six participants felt that a business failure would not only affect the entrepreneur at the time, but the entrepreneur might also internalize the failure and “view himself as a failure for the rest of his life” (P1), and “it could even change how he views life and his career later on” (P22).

1.2.4 Career damages

Thirteen participants (37%) described the potential for negative impact on their career prospects, earning potential, and social status should they fail in a business venture. The majority of their examples emphasized the *feeling of falling behind* and *losing out to peers who had taken a corporate career path*: career impact was seen as financial and psychological at the same time.

Participants used their peers as a benchmark for what they would have achieved had they chosen to pursue a conventional career path instead: “If like you start off as an entrepreneur then after that you fail, then you want to go back to the

working world, you will be one step behind everyone cause you start working later” (P13). Participants regarded business failure as “a waste of time and effort” (P9) with a likelihood of “getting nothing out of it” (P18).

Participants felt that failed entrepreneurs might face difficulty in finding a job with reasonable pay because the entrepreneur would be seen as a less favourable employee as compared to others with more professional work experience. They believed failed entrepreneurs have lower earning potential: “they have to join a low-paying job somewhere else, which they normally won’t want to do” (P14). Overall, participants believed that “in Singapore, if you ever fail in your business, it can be hard to get back on track, especially if [there are] years lost and years of experience [lost]” (P7). The following quote illustrates why participants believed keeping up with peers is important:

We are raised in [a] rat race kind of competition... All results must be shown by awards, by achievement. ...Even if you enjoy your job, but you are not earning much, people may not see that as a success. You can’t brag...I mean my mom can’t brag, oh my daughter is a fantastic worker. Nobody would think well of you if you are taking a low-pay job. (P9)

1.3 Discussion

The analysis revealed four key themes associated with the perceived negative impact of entrepreneurial failure that involved both personal and interpersonal consequences: *financial damages*, *evaluation from others*, *threat to self-worth*, and *career damages*. Besides concern about the obvious potential for direct financial losses due to entrepreneurial failure, our participants were concerned about life afterwards, both in terms of how they would feel about themselves and in terms of how they might be perceived by others.

1.3.1 Financial consequences and self/other concern

Nearly all participants (91%) described the potential for negative financial consequences with entrepreneurial failure, including personal impact as well as concerns over financial impact on others. A meta-analysis (Ucbasaran et al., 2013) on the actual consequences of business failure included the former, but not the latter. However, we found both personal impact and impact on others to be potential barriers to entrepreneurship.

Familism refers to prioritizing the family's interest above one's own aspirations (Schwartz et al., 2010). Parents play an influential role in their children's career decisions especially in Chinese families (Ma & Yeh, 2005). We found participants to have greater concern for their families and the impact of their actions on others (Lim, 2009). As collectivists may sacrifice their own self-interest in order to maintain harmony with their in-group members (Yang, Van de Vliert, & Shi, 2007), we found our participants to be concerned about how their own business failure may negatively impact important others and thus prevented them from starting their own business.

Filial obligations may take precedence over relations with other individuals. Filial piety, which stems from Confucianism, is a cultural value that guides how children should treat their parents in terms of material and emotional requirements (Yeh & Bedford, 2003). Participants expressed that it is important not only to be able to sustain themselves when they start working, but also to provide financial support to their families and parents. Besides being financially independent, providing support and protection to their family is particularly important for young adults in Chinese societies as it is perceived to be an important marker for the transition to adulthood (Zhong & Arnett, 2014). Hence, the possibility of being unable to fulfil this filial

obligation, or worse, having to rely on their parents to clear a debt was sufficient to prevent some participants from being interested in starting a business.

1.3.2 Negative evaluation from others and loss of face

Nearly half of the participants (54%) anticipated negative evaluation from others, ranging from loss of face/status/reputation to strained relationships with others due to the business failure. *Loss of face* is defined as “a damaging social event in which one’s action is publicly given notice and negatively judged by others, resulting in a loss of moral or social standing” (Ho, Fu, & Ng, 2004, p. 70). The presence of others can be imagined or explicit (Bedford, 2004). Emphasis on face is important in collectivistic cultures (Hwang & Arbaugh, 2009) and failure can result in the feeling of loss of face (Stevenson & Lee, 1996). In a study that compared four Western countries (Australia, Canada, New Zealand, and the United States) with six East Asia countries (Indonesia, Korea, Philippines, Singapore, Taiwan, and Thailand), the social status of entrepreneurs as a result of business failure were stronger predictors of interest in entrepreneurship in the East Asian than in the Western countries (Begley & Tan, 2001). The authors also highlighted that FoF is more prominent in Chinese societies than Western ones due to the emphasis on the loss of face.

As the perceptions of others may be included in one’s self-construal, people in Chinese societies are more likely to rely on the views of others when making big decisions (Cross, Bacon, & Morris, 2000). For example, a study found that Taiwanese students were more likely to base their career decisions on familial and societal expectations while American students were more likely to make their own career decisions (Ma & Yeh, 2005). Additionally, it was found that Chinese students placed more importance on career prestige, social status, and earning potential than Australian

students when making career decisions (Auyeung & Sands, 1997). The concern over face/status was especially prominent with respect to career consequences.

1.3.3 Psychological and emotional impact on self

Participants described feelings of shame, embarrassment, and disappointment as possible negative consequences from the failed business. These negative emotions, which conveyed momentary emotional states experienced when there is a threat to self-esteem, are referred to as feelings of self-worth (Brown, Dutton, & Cook, 2001). Although many participants recognized the potential for financial harm to others, few (9%) described concerns regarding the potential for a negative emotional impact on others. Instead, participants focused on the likelihood of psychological and emotional impact on themselves (51%). This finding can be considered consistent with Chinese cultural norms, in which emotions lack social significance and expression of emotions is perceived to be disruptive to relationships (Soto, Perez, Kim, Lee, & Minnick, 2011). In Chinese societies, emotional restraint is valued as it can preserve relationships (Liew, Kwok, Chang, Chang, & Yeh, 2014). In a study that examined the difference in behavioural responses to success and failure between Americans and Chinese, Chinese participants were more likely to think that their success would make close others feel proud of them, but were less likely to think that their failure would disappoint close others (Zhang & Cross, 2011). Furthermore, despite the strong cultural emphasis on financial support (Chao & Tseng, 2002), there is no emotional support requirement. Thus, participants anticipated personal psychological impact, but were less concerned about others' emotions.

1.3.4 Career damages and falling behind peers

Over one-third of the participants (37%) raised concerns relating to career consequences. It was found that participants based their considerations to a large

extent on how the business failure would leave them in comparison to their peers. They emphasized “falling behind”, which entails simultaneous financial and face/status concerns over reduced earning power and lower job or social status due to “wasted” time not spent climbing the corporate ladder. This concern seems to highlight three underlying beliefs: (i) that there is a correct professional career trajectory, (ii) that there is risk in trying to find other paths to financial and social success, and (iii) that success is defined in a relative manner by one’s peers (not with an absolute standard defined by the individual).

Collectivistic cultures emphasize on social conformity and collective decisions (Chiu & Kosinski, 1999; Oh, 2013; Yi & Park, 2003). For example, a study found that Taiwanese students were more likely to base their career decision on familial and societal expectations while American students were more likely to make their own career decision (Ma & Yeh, 2005). Additionally, it was found that Chinese students placed more importance on career prestige, social status, and earning potential than Australian students when making a career choice (Auyeung & Sands, 1997). Thus, it may be that any business venture that renders the entrepreneur with less income or status than peers could be regarded as a failure, even if it did not lose money.

Business failure is not necessarily an entirely negative outcome; through failure, entrepreneurs may learn how to improve their strategy or gain useful skills that can be applied to other opportunities. However, only six participants (17%) raised the possibility of mastery outcomes as a silver lining from a business failure. Instead of focusing on the opportunity to gain mastery skills and experience, participants were concerned about opportunity costs and many blamed the Singapore education system for this focus. In Singapore, there is a strong emphasis on grades and academic achievement. The education system implements meritocracy principles to ensure

fairness, however, the emphasis on meritocracy also instils intense competition among students. Comparison with peers is further reinforced by the manner in which the initial salary of civil servants (seen as a stable high-paying job with good status that is highly desirable) is tied to the individual's undergraduate grade-point average. Hence, high concern over keeping up with peers may explain why many graduates prefer conventional careers instead of starting their own business (Tan, 2002).

This study found four major themes (financial damages, evaluation from others, threat to self-worth, and career damages) related to the perceived consequences of business failure. The responses are adapted into the construction of the Perceived Aversive Consequences of Business Failure (PACBF) scale. The psychometric properties of the newly constructed PACBF scale are investigated in Study 2a.

2.0 Phase 2: Psychometric Properties of PACBF Scale (Study 2a)

The purpose of this study is to explore the dimensionality, reliability, and validity of the newly constructed PACBF scale. According to Lazarus (1999), the perceived aversive consequences of failure forms the lower-order dimensions of FoF. Study 1a revealed the four dimensions of the consequences of business failure. The four dimensions identified represent *financial damages*, *threat to self-worth*, *evaluation from others*, and *career damages*.

We expect moderate to strong correlations between our PACBF scale with conceptually relevant constructs. Two conceptually relevant constructs were chosen to demonstrate convergent validity: FoF in academic/sports context and trait anxiety.

As mentioned, the study of FoF is not unique to the entrepreneurship context; research on FoF is especially prominent in the academic and sports domains. A commonly used scale to measure FoF in these domains was the PFAI (Conroy, 2001). Using inductive content analysis, these authors identified a multidimensional model of

the consequences of failure: *fear of experiencing shame and embarrassment* (FSE), *fear of devaluing one's self-estimation* (FDSE), *fear of little importance* (FOLI), *fear of having an uncertain future* (FUF), and *fear of upsetting important others* (FUO). We expect our PACBF scale to be related to PFAI as both scales are measuring the same construct – FoF. Yet, we also expect distinction between PACBF with some aspects of PFAI due to the differences in the perceived consequences of business failure and of those in the academic/sports domains.

Past studies have often examined FoF as a form of anxiety (e.g., Atkinson & Litwin, 1973; Tseng & Carter, 1970) and the State-Trait Anxiety Inventory (STAI) was frequently used as a measurement of dispositional FoF. As it was posited that the specific consequences of failure constitute the lower-order dimensions of FoF (Lazarus, 1999), we hypothesize PACBF to be related to trait anxiety. The trait version of STAI Form Y consists of two subscales: *Anxiety-Absent* and *Anxiety-Present*. *Anxiety-Present* includes negatively worded items that measure the level of anxiety while *Anxiety-Absent* includes positively worded items that measure the level of depression. As our PACBF scale is associated with anxiety rather than depression, we expect moderate to strong correlation between PACBF and the *Anxiety-Present* subscale and weak correlation between PACBF and the *Anxiety-Absent* subscale.

2.1 Method

2.1.1 Participants

Study 2a comprises of 401 Singaporean undergraduates (149 males, 252 females), ages ranged from 18 to 28 years old ($M = 21.72$, $SD = 1.72$). Participants were recruited from a university in Singapore and obtained partial course credit for their participation. Undergraduates who participated in the qualitative study (Study 1a)

were not allowed to take part in this study. Exclusion was carried out by the university's research pool system.

2.1.2 Procedure

2.1.2.1 Items generation

We developed items based on the responses collected in Study 1a; key phrases that are associated with participants' perception of the aversive consequences of business failure were written as items. Sixty-one items were generated and these items represent the aversive consequences of failing a business.

2.1.2.2 Pilot test

Thirty-eight participants (19 males, 19 females), ages ranged from 19 to 26 years old ($M = 21.87$, $SD = 2.10$), participated in the pilot test. At the end of the pilot test, participants were asked for their feedback on the PACBF items regarding the clarity and comprehensibility.

Due to the large initial pool of items, we decided to reduce the number of items for the scale. Preliminary analysis was conducted; corrected item-total correlations were examined and we removed items with poor corrected item-total correlation (below cut-off value of .30) as recommended by Kline (1993). The research team also discussed about the items and decided on whether to delete problematic items or to modify the items. Items with very similar content were removed to prevent redundancy. From the initial pool of 61 items, the scale was reduced to 47 items for the actual study. Table 5 presents the initial pool of 61 PACBF items. Data collected from the pilot test was not included in the actual study analyses.

Table 5

Mean (M) and Standard Deviation (SD) of Initial 61 PACBF Items

No.	Item	<i>M</i>	<i>SD</i>	Decision	Reason for deletion
1.	If my business fails, I will face bankruptcy.	2.80	0.99	Retained	
2.	If my business fails, I will have no income.	3.74	1.04	Retained	
3.	If my business fails, I will lose all my capital.	3.29	0.96	Retained	
4.	If my business fails, I will lose a lot of money.	3.60	0.85	Retained	
5.	If my business fails, I will have to start from nowhere as I have no money.	3.31	1.16	Retained	
6.	If my business fails, I will be in debt.	3.29	0.93	Deleted	Similar to Item 4. Based on item-total correlation, Item 4 is preferred.
7.	If my business fails, I will face great financial burden.	3.83	0.89	Retained	
8.	If my business fails, I will not have difficulty paying the debt. (R)	3.17	0.89	Retained	
9.	If my business fails, I will have difficulty providing financial support for my family.	3.77	0.88	Retained	
10.	If my business fails, it will be financially tough for my family.	3.54	0.86	Retained	
11.	If my business fails, I will have to rely on my parents to help me clear my debt.	2.86	0.97	Deleted	Low corrected item-total correlation.
12.	If my business fails, I will have to borrow money from my parents.	3.00	1.03	Deleted	Low corrected item-total correlation.
13.	If my business fails, those who invest in my business will suffer monetary loss.	4.00	0.59	Deleted	Problematic item: Barnum statement.
14.	If my business fails, I will have to fall back on my parents financially.	3.06	0.84	Deleted	Low corrected item-total correlation.
15.	If my business fails, I will have to borrow money from my friends.	2.91	1.07	Retained	
16.	If my business fails, my parents will have to support me financially.	3.09	0.95	Deleted	Low corrected item-total correlation.
17.	If my business fails, I will lose confidence in myself.	3.89	0.68	Retained	
18.	If my business fails, I will give up being an entrepreneur.	3.14	0.88	Retained	
19.	If my business fails, I will not be afraid to be an entrepreneur again. (R)	2.97	0.82	Retained	
20.	If my business fails, I will doubt my capabilities.	3.74	0.85	Retained	
21.	If my business fails, I will view the failure for the rest of my life.	2.89	0.99	Retained	
22.	If my business fails, I will think that I'm useless.	2.94	0.97	Retained	
23.	If my business fails, I will think that all I'm good for is nothing.	2.69	0.96	Retained	
24.	If my business fails, I will feel as though my whole world has collapsed.	3.00	1.00	Retained	
25.	If my business fails, my reputation will be destroyed.	3.11	0.83	Retained	
26.	If my business fails, my reputation will not be at stake. (R)	3.20	0.93	Retained	
27.	If my business fails, others will have a bad impression of me.	3.23	0.84	Retained	
28.	If my business fails, others will not talk bad about me. (R)	3.34	0.84	Retained	

Table 5 (continued)

No.	Item	<i>M</i>	<i>SD</i>	Decision	Reason for deletion
29.	If my business fails, others will judge me negatively.	3.37	0.88	Retained	
30.	If my business fails, others will look down on me.	3.11	0.83	Retained	
31.	If my business fails, I will not be sad. (R)	3.94	0.94	Retained	
32.	If my business fails, it will be an emotional setback for me.	3.86	0.73	Retained	
33.	If my business fails, I will be disappointed with myself.	4.03	0.62	Retained	
34.	If my business fails, I will feel embarrassed.	3.63	0.81	Retained	
35.	If my business fails, I will feel ashamed.	3.46	0.85	Retained	
36.	If my business fails, I don't have the face to meet anyone.	2.63	1.00	Deleted	Similar to Item 37. Based on item correlation, Item 37 preferred.
37.	If my business fails, I will lose face.	3.63	0.97	Retained	
38.	If my business fails, my family will lose face.	3.00	1.08	Retained	
39.	If my business fails, others will be less supportive.	3.40	0.88	Deleted	Wording of item is vague.
40.	If my business fails, I will lose status.	3.31	0.96	Retained	
41.	If my business fails, I will lose the trust of others.	3.20	0.83	Retained	
42.	If my business fails, others will lose confidence in me.	3.49	0.74	Retained	
43.	If my business fails, there will be a lot of family problems.	3.06	0.97	Retained	
44.	If my business fails, my relationship with important others will be affected.	3.11	1.05	Retained	
45.	If my business fails, others will be disappointed with me.	3.31	0.83	Retained	
46.	If my business fails, people around me will be disappointed, as I did not meet their expectations.	3.11	0.96	Retained	
47.	If my business fails, I will be at a loss of what to do for my career.	3.20	1.13	Retained	
48.	If my business fails, it will be difficult for me to get a job.	2.77	0.91	Retained	
49.	If my business fails, it will be hard for me to pursue a conventional career path.	2.82	0.86	Deleted	Wording of item is vague.
50.	If my business fails, it will take a lot of time to climb the corporate ladder.	3.43	0.98	Retained	
51.	If my business fails, I will not have a good career development.	2.80	0.93	Retained	
52.	If my business fails, I will find it hard to work under others.	2.86	1.09	Deleted	Wording of item is vague.
53.	If my business fails, I will be at a disadvantage as others have more work experience than me.	3.11	0.99	Deleted	Low corrected item-total correlation.
54.	If my business fails, I will lose my standing in the labour market.	3.31	1.02	Deleted	Wording of item is vague. Similar to Item 57. Based on item-total correlation, Item 57 is preferred.

Table 5 (continued)

No.	Item	<i>M</i>	<i>SD</i>	Decision	Reason for deletion
55.	If my business fails, my friends will be ahead of me in terms of work experience.	3.14	1.03	Deleted	Low corrected item-total correlation.
56.	If my business fails, I will not lose out to my peers in work experience. (R)	2.71	0.99	Retained	
57.	If my business fails, I will be one step behind everyone in the working world.	3.14	0.91	Retained	
58.	If my business fails, it will be a waste of time.	2.94	1.16	Retained	
59.	If my business fails, I will feel that I am getting nothing out of the venture.	2.97	1.10	Retained	Low corrected item-total correlation.
60.	If my business fails, I will feel that I could have earned more if I worked as an employee instead.	3.26	1.04	Deleted	
61.	If my business fails, I will feel that I could have used the time to gain work experience instead.	3.29	1.25	Retained	

Note. *N* = 38. R denotes negatively worded items that were reverse-coded.

2.1.2.3 Study 2a

Participants were recruited from the university's research pool system and survey information was posted on the system. Interested students could sign up and access the survey link. The online survey was conducted on Qualtrics.com and participants had to agree to the consent form before participation. Participants were asked to complete a battery of questionnaires (see Materials). The sequence of the questions for each questionnaire was randomized. Participants were assured on the confidentiality and anonymity of their responses. The survey (including Study 2b) took no longer than 30 minutes to complete.

2.1.3 Materials

2.1.3.1 FoF in entrepreneurial context

We measured participants' level of FoF in the entrepreneurial context using the newly constructed PACBF scale. Participants were instructed to: "*Imagine you are an entrepreneur, to what extent do you think the following statements will likely or unlikely happen to you if your business fails*". Participants rated on a scale of 1 (*highly unlikely*) to 5 (*highly likely*) on items such as "*If my business fails, others will have a bad impression of me*" and "*If my business fails, I will not have a good career development*". Negatively worded items were reverse-coded.

2.1.3.2 FoF in performance domain

We measured participants' FoF in their performance domain using the PFAI (Conroy, 2001). The PFAI (see Appendix D) consists of 25 items and measures the extent that an individual believes aversive consequences will occur to them following failure. Participants were instructed to indicate on a scale of -2 (*do not believe at all*) to +2 (*believe 100% of the time*) on how often they believe each consequence will happen to them if they fail in their performance domain. Sample items include: "*When*

I am not succeeding, I am less valuable than when I succeed” (Fear of Shame and Embarrassment; FSE), *“When I am failing, it is often because I am not smart enough to perform successfully”* (Fear of Devaluing one’s Self-Estimation; FDSE), *“When I am not succeeding, people tend to leave me alone”* (Fear of Little Importance; FOLI), *“When I am failing, my future seems uncertain”* (Fear of Uncertain Future; FUF), and *“When I am failing, it upsets important others”* (Fear of Upsetting Others; FUO). One negatively worded item was reverse-coded. Scores for each dimension were calculated by averaging the items and an overall score was computed by averaging the scores for each dimension. A higher score indicated higher level of FoF in the performance domain.

2.1.3.3 Trait anxiety

Form Y of the trait version of STAI (see Appendix E; Spielberger, 1983) was used to measure participants’ level of anxiety as it was found to have better psychometric properties and more replicable as compared to Form X (Oei, Evans, & Crook, 1990). Participants were instructed to indicate from 1 (*almost never*) to 4 (*almost always*) on the frequency of how they feel for each of the 20 statements. Past studies have found two-factor structure for the trait version: *Anxiety-Present* and *Anxiety-Absent*. *Anxiety-Present* items capture anxiety symptoms and include negatively worded items such as *“I feel like a failure”* and *“I lack self-confidence”*. *Anxiety-Absent* items were reported to be more associated with depressive symptoms and include positively worded items such as *“I feel pleasant”* and *“I am calm, cool, and collected”*. Items on *Anxiety-Absent* subscale were reverse-coded to measure level of depression. Subscale scores were computed by averaging the item scores.

2.1.4 Analytic plan

The distribution, skewness, and kurtosis of the PACBF item scores were first examined for normality. Exploratory Factor Analysis (EFA) was conducted to determine the factor structure of PACBF scale. To prevent over-factoring, parallel analysis (Horn, 1965), which was the most strongly recommended techniques for determining the maximum number of factors to retain was conducted (Ledesma & Valero-Mora, 2007). The parallel analysis technique compares the “expected” eigenvalues (e.g., the 99th percentile value from the distribution) generated from random uncorrelated data to the actual data eigenvalues. Only those factors with actual eigenvalue larger than the “expected” eigenvalue are retained.

Chi-square test statistic (χ^2) is a traditional measure of model fit, however, it is sensitive to large sample size. That is, when the sample size is large, “the χ^2 statistic may be significant even though differences between observed and model-implied covariances are slight” (Kline, 1998, p.128), indicating badness-of-fit. Contrary to χ^2 statistic, absolute fit indices such as Root Mean Square Error of Approximation (RMSEA) and Standardized Root Mean Square Residual (SRMR) are less sensitive to sample size (Kline, 1998), hence, we decided to use these absolute fit indices to evaluate goodness-of-fit. Based on the rules of thumb recommended for Maximum Likelihood method, models with RMSEA and SRMR values of less than .08 are considered to have acceptable model fit (Dimitrov, 2014; Hu & Bentler, 1999).

2.2 Results

2.2.1 Preliminary analyses

Mahalanobis distance (D^2) was used to identify multivariate outliers and we removed multivariate outliers with $p < .001$ (Tabachnick & Fidell, 2013); 6 multivariate outliers were removed from the analyses, resulting in 395 cases.

To assume normal distribution, Kline (1998) recommended skewness absolute value to be within ± 3 and kurtosis absolute value to be within ± 10 . Item scores were normally distributed for the PACBF scale; skewness values ranged from -1.25 to 0.38 and kurtosis value ranged from -1.08 to 2.18.

Maximum Likelihood was used to estimate the factor loading as it is considered to be the most appropriate procedure to analyse data that are normally distributed (Fabrigar, Wegener, MacCallum, & Strahan, 1999). As we anticipated the factors to be correlated, oblique rotation (Promax) was used to improve interpretability of the factors. Mplus version 7 (Muthén & Muthén, 1998-2015) was used to analyse the data.

2.2.2 Dimensionality of PACBF scale

Using the comparison between the eigenvalues of random data with the eigenvalues of the actual data, parallel analysis revealed a maximum of eight factors for the PACBF scale. We first compared the goodness-of-fit indices across one to eight-factors solution to examine which factor solution best fits our data (See Appendix F). Next, we considered the meaningfulness and the interpretability of the factors to determine the number of factors to retain. Four factors were retained: *financial damages*, *threat to self-worth*, *evaluation from others*, and *career damages*. These factors were the same dimensions that were found in Study 1a.

Goodness-of-fit of the four-factor solution revealed to be a good fit: $\chi^2(899) = 2024.13$, $p < .001$, RMSEA = .056, SRMR = .041. To examine whether the items are representative of each factor, we used several criteria to determine whether or not to exclude the items. Items were excluded when they have: (i) communalities lower than .20 (Child, 2006), (ii) standardized factor loading of .32 on two or more factors (Tabachnick & Fidell, 2013), or (iii) standardized factor loading lower than .35.

Eleven items were eliminated and 36 items were retained. Table 6 shows the factor loadings of all the 47 items.

Table 6

Factor Loading and Communalities for all 47 PACBF items

Item	Factor loading				Communality
	F1	F2	F3	F4	
F1: Financial Damages					
32. If my business fails, it will be financially tough for my family.	.791				.571
17. If my business fails, I will have difficulty providing financial support for my family.	.694				.465
38. If my business fails, I will face great financial burden.	.694				.611
28. If my business fails, I will lose a lot of money.	.627				.499
19. If my business fails, I will have to borrow money from my friends.	.620				.378
42. If my business fails, I will not have difficulty paying the debt. (R)	.492				.238
34. <i>If my business fails, I will have to start from nowhere as I have no money.</i>	.472			.342	.442
1. If my business fails, I will face bankruptcy.	.440				.298
13. If my business fails, I will have no income.	.438				.291
3. If my business fails, I will lose all my capital.	.426				.298
27. If my business fails, there will be a lot of family problems.	.414				.485
40. If my business fails, my relationship with important others will be affected.	.352				.379
F2: Threat to Self-worth					
46. If my business fails, I will not be sad. (R)		.794			.467
14. If my business fails, I will be disappointed with myself.		.627			.424
22. If my business fails, it will be an emotional setback for me.		.602			.498
25. <i>If my business fails, I will doubt my capabilities.</i>		.513		.388	.631
33. If my business fails, I will feel embarrassed.		.492			.573
2. If my business fails, I will lose confidence in myself.		.490			.424
45. <i>If my business fails, I will not be afraid to be an entrepreneur again. (R)</i>		.407			.194
47. <i>If my business fails, I will not lose out to my peers in terms of work experience. (R)</i>		.251			.079

Table 6 (continued)

Item	Factor loading			Communality	
	F1	F2	F3	F4	
F3: Evaluation from Others					
6. If my business fails, others will have a bad impression of me.			.896		.811
5. If my business fails, others will look down on me.			.862		.776
31. If my business fails, others will judge me negatively.			.603		.543
<i>8. If my business fails, my reputation will be destroyed.</i>			.495	.345	.500
41. If my business fails, others will be disappointed with me.			.456		.543
30. If my business fails, my family will lose face.			.438		.482
<i>24. If my business fails, I will lose face.</i>		.362	.398		.646
36. If my business fails, others will lose confidence in me.			.361		.542
18. If my business fails, I will lose status.			.352		.474
<i>44. If my business fails, others will not talk bad about me. (R)</i>			.332		.239
<i>20. If my business fails, people around me will be disappointed, as I did not meet their expectations.</i>			.326		.325
<i>43. If my business fails, my reputation will not be at stake. (R)</i>			.315		.169
F4: Career Damages					
<i>7. If my business fails, I will think that all I'm good for is nothing.</i>			.329	.697	.634
10. If my business fails, I will not have a good career development.				.688	.437
39. If my business fails, I will think that I'm useless.				.676	.638
23. If my business fails, I will feel that I am getting nothing out of the venture.				.666	.433
12. If my business fails, I will view the failure for the rest of my life.				.640	.415
4. If my business fails, it will be a waste of time.				.627	.323
11. If my business fails, I will be at a loss of what to do for my career.				.538	.477
29. If my business fails, it will be difficult for me to get a job.				.524	.423
15. If my business fails, I will feel that I could have used the time to gain work experience instead.				.509	.312
21. If my business fails, I will feel as though my whole world has collapsed.				.432	.412
35. If my business fails, I will give up being an entrepreneur.				.424	.409
37. If my business fails, I will be one step behind everyone in the working world.				.409	.340
26. If my business fails, I will lose the trust of others.				.393	.391
<i>16. If my business fails, I will feel ashamed.</i>		.383		.384	.574
9. If my business fails, it will take a lot of time to climb the corporate ladder.				.366	.277

Note. $N = 395$. Loadings more than .35 for each variable are bolded. Italicized items were excluded from the final version of PACBF scale. R denotes negatively worded items that were reverse-coded.

The final 36-item scale is named the PACBF scale (see Appendix G). We also examined the internal consistency of the PACBF scale using Cronbach's alpha. Overall, the PACBF scale has an internal consistency of .95 and the Cronbach's alpha values ranged from .79 to .90 for each dimension. Multiple random split-halves were tested and the overall PACBF scale has a split-half reliability ranging from .93 to .97. The reliability coefficients are considered to be "very good" (Kline, 1998). The definition, internal consistency, mean, standard deviation, and correlations of the final PACBF scale are presented in Table 7.

Table 7

Definition, Internal Consistency (α), Mean (M), Standard Deviation (SD), and Correlations of PACBF Subscales

PACBF Subscale	Definition	No. of Items	α	M	SD	FD	TS	EO	CD
Financial Damages (FD)	Measures the extent that one believes he/she will have to deal with financial problems when his/her business fails.	11	.87	3.23	0.60	-			
Threat to Self-Worth (TS)	Measures the extent that one believes the business failure will affect one's self-evaluation and/or experiences negative emotions.	5	.79	3.76	0.63	.51***	-		
Evaluation from Others (EO)	Measures the extent that one believes he/she will be negatively judged by others and/or reduced in social standing when his/her business fails.	7	.90	3.17	0.70	.60***	.61***	-	
Career Damages (CD)	Measures the extent that one believes his/her career advancement will be affected and/or will face difficulties in finding new employment when his/her business fails.	13	.89	2.93	0.64	.66***	.57***	.67***	-

Note. *** $p < .001$. $N = 395$.

2.2.3 Confirmatory Factor Analysis (CFA) on validating scales

CFA was conducted on the two validating scales – PFAI and STAI. Both scales were found to have similar factor structure as past studies. Based on the original study on the development of the PFAI (Conroy, 2001), we fitted a second-order model with five first-order factors and we found good fit for the model: RMSEA = .068, SRMR = .055. Vagg, Spielberger, and O'Hearn (1980) investigated the factor structure of the STAI and found four first-order factors solution: state anxiety-present, state anxiety-absent, trait anxiety-present, and trait anxiety-absent. Similarly, Bieling, Antony, and Swinson (1998) investigated the factor structure of the trait version of STAI and found a second-order model with two first-order factors: depression (anxiety-absent) and anxiety (anxiety-present). As the current study focuses on trait anxiety, we fitted a second-order model with two first-order factors. Goodness-of-fit indices indicated good fit: RMSEA = .056, SRMR = .043. Table 8 summarizes the goodness-of-fit indices for the two validating scales.

Table 8

Mean (M), Standard Deviation (SD), Internal Consistency (α), and Fit Indices for PFAI and STAI

Scale	<i>M</i>	SD	α	Fit Indices			
				χ^2	<i>df</i>	RMSEA	SRMR
Performance Failure Appraisal Inventory (PFAI)	2.86	0.73	.95	677.18	242	.068	.055
Fear of Devaluing Self-Estimate (FDSE)	3.07	0.88	.82				
Fear of Uncertain Future (FUF)	3.03	0.85	.78				
Fear of Upsetting Others (FUO)	2.65	0.86	.86				
Fear of Little Importance (FOLI)	2.58	0.92	.88				
Fear of Shame and Embarrassment (FSE)	2.99	0.90	.89				
State-Trait Anxiety Inventory	2.30	0.43	.90	374.30	169	.056	.043
Anxiety-Present	2.22	0.52	.89				
Anxiety-Absent	2.41	0.48	.85				

Note. *N* = 395.

2.2.4 Validity analyses for PACBF scale

Validity of the newly constructed PACBF scale was examined. Two conceptually relevant constructs were chosen to establish convergent validity: FoF in the performance domain and trait anxiety. Correlations among the PACBF subscales and the validating scales were examined to test convergent validity. As we observed moderately strong correlations among the PACBF subscales (.57 to .67), we also examined the correlations of the overall PACBF score with the validating scales as shown in Table 9.²

² We conducted CFA and tested a second-order model of PACBF in Study 3.

Table 9

Correlations among PACBF, PFAI, and STAI

Scales	PACBF Dimensions				Overall PACBF score
	Financial Damages	Threat to Self-Worth	Evaluation from Others	Career Damages	
Performance-Failure Appraisal Inventory (PFAI)	.41***	.45***	.50***	.47***	.55***
State-Trait Anxiety Inventory (STAI) – Anxiety Present	.36***	.32***	.33***	.44***	.43***
State-Trait Anxiety Inventory (STAI) – Anxiety Absent	.24***	.22***	.19***	.28***	.28***

Note. *** $p < .001$ ** $p < .01$, * $p < .05$. $N = 395$. Overall PACBF score was computed by averaging the four dimensions (financial damages, evaluation from others, threat to self-worth, career damages); PFAI score was computed by averaging the five subscales (FDSE, FUF, FUI, FOL, and FSE).

PFAI was used as a measurement for FoF in the academic/sports domains and STAI was used to measure trait anxiety. We expected moderate to strong correlations between PFAI and our PACBF scale; moderately strong correlations were found between PFAI and the dimensions of PACBF as well as the overall PACBF; correlations ranged from .41 to .55.

We expected moderate to strong correlations between our PACBF scale and the *Anxiety-Present* dimension of STAI while weak correlations between PACBF scale and the *Anxiety-Absent* subscale. Convergent validity was established by the moderately strong correlations observed between *Anxiety-Present* and the dimensions of PACBF as well as the overall PACBF; correlations ranged from .32 to .44. On the contrary, weak correlations were found between *Anxiety-Absent* and the dimensions of PACBF as well as the overall PACBF; correlations ranged from .19 to .28.

2.3 Discussion

Based on the conceptualization that the perceived aversive consequences of failure constitute the lower-order dimensions of FoF, we developed a new scale to assess FoF specific to the entrepreneurial context. The PACBF scale comprises of four dimensions: *financial damages*, *threat to self-worth*, *evaluation from others*, and *career damages*. *Financial damages* dimension reflects concern over financial problems one have to deal with and also financial implications on family members and friends. *Threat to self-worth* dimension reflects the psychological and emotional impact that one may need to endure following a business failure. *Evaluation from other* dimension reflects the apprehension that one may be judged negatively by important others and the business failure may cause the loss of family face. *Career damages* dimension reflects concern about continuing an entrepreneurial career path, finding new employment, and concern about falling behind their peers.

We found that the PACBF scale is related yet distinct from the current available FoF measure, the PFAI that assesses FoF in academic/sports domains. Both PFAI and PACBF scale included dimensions related to the loss of social standing, experience of negative emotions, and attributing the failure to personal abilities. Additionally, our PACBF scale also encompasses dimensions specific to business failure. For instance, *financial damages* dimension (which is not included in the PFAI) is a consequence of failure that is relevant to business ventures.

Similarly, concern over damages to future career progression also emerged as a dimension of PACBF. Although the PFAI included a dimension that measures *fear of uncertain future* as a consequence of failure, the *career damages* dimension in our PACBF scale measures specifically on the difficulty in finding new employment and the comparison of career progression with peers who have taken the conventional

career path. As posited by Morgan and Sisak (2016), a key feature of FoF is having an *internal yardstick* that judges the outcomes not based on absolute standards, but on reference points. As revealed in the *career damages* dimension, participants were concerned about falling behind their peers or those that have taken a conventional career path instead of an absolute standard of their performance or achievement. The *career damages* dimension is a surprising finding; previous research on factors influencing entrepreneurial intention has not identified issues relating to self-other comparison. The similar yet distinct dimensions of PACBF and PFAI supported our argument that there is a need for a new scale to measure FoF in the entrepreneurship context.

The moderately strong correlation observed between PACBF and *Anxiety-Present* subscale of STAI also provided evidence for convergent validity as trait anxiety has been found to be associated to FoF in past studies. The weak correlation observed between PACBF and *Anxiety-Absent* subscale of STAI indicated that our PACBF scale is assessing fear and not related to participants' pessimism in relation to business venture.

Overall, we adopted a mixed-method approach to develop the PACBF scale. A qualitative study was conducted to explore undergraduates' perceived aversive consequences of business failure. Clauses associated with these consequences were used to generate the items for the PACBF scale. The psychometric properties of the PACBF scale were investigated and we demonstrated convergent validity. The development of the PACBF scale not only addresses the limitations of the existing measurements of FoF but also allows future studies to examine the influence of FoF specific to the entrepreneurial context.

CHAPTER FOUR: DEVELOPMENT AND VALIDATION OF KIASU BELIEFS AND MOTIVATIONS (KBM) SCALE

This chapter presents the two studies conducted to develop and validate a new scale to assess kiasu beliefs and motivations. The development and validation of a new scale to assess kiasu beliefs and motivations is guided by the following procedure as shown in Figure 7.

Figure 7. Procedure for development of a new scale to assess kiasu beliefs and motivations.

1.0 Phase 1: Qualitative Study on Behaviours, Motivations, and Emotions Associated with Kiasuism (Study 1b)

Despite the widespread identification of Singaporeans with kiasuism as a national characteristic and the perception of its negative social impact (e.g., bad reputation for Singapore, possible barrier to entrepreneurship), few studies have targeted it as a specific focus of research. We assert that a fresh examination of kiasuism is necessary to address the following basic questions: Is observed behaviour sufficient to identify whether kiasuism is present? Do all forms of kiasuism inherently entail a comparative element? The definition of kiasuism as the fear of losing out also directed us to examine the emotions associated with kiasuism; is fear the only emotion that regulates kiasuism?

To address these questions, we wanted to identify how our participants themselves understand and interpret kiasu behaviour in their daily lives. We applied an interpretative phenomenological paradigm, which entails an interpretive process that emphasizes both how individuals make sense of their own world, and the dynamic, active role of the researcher in making sense of the participants' world (Smith & Osborn, 2007).

1.1 Method

1.1.1 Pilot interviews

As the majority of studies on kiasuism were conducted in academic contexts with undergraduates, we also used undergraduates as our participants to allow us to compare our results with past studies. We conducted three pilot interviews to test and refine the interview guide. The pilot participants were asked for feedback on the interview questions regarding their comprehensiveness and appropriateness. The wording of the questions was revised slightly for the full study with 30 participants. We did not use pilot data in the analysis of results.

1.1.2 Participants

Recruitment was carried out the same way as Study 1a and was conducted until reaching data saturation and no new responses were encountered (Strauss & Corbin, 1990). Thirty-one (13 males, 18 females) final year and penultimate year undergraduates participated in a one-on-one interview approved by the university's Institutional Review Board.³ All participants were Singaporean. Ages ranged from 21 to 26 years old ($M = 22.73$, $SD = 1.34$). One participant's (P8) response was excluded as she mentioned that she was unsure what kiasuism means. Demographics of our participants are presented in Table 3 (p. 35).

1.1.3 Interview procedure

Interview session for this study took approximately 15 minutes. Semi-structured interviews were conducted and the interview guide served as a framework. Participants were asked to (1) describe a typical scenario they had experienced in which someone was kiasu, and then followed up to find out (2) why they thought the person in their scenario was kiasu. We also asked them to (3) describe a time when they themselves had been kiasu, and then followed up to ask about (4) their motivation for their kiasu behaviour, and we asked (5) how they feel about the kiasu incident and what they gain from being kiasu. Participants were not prompted with any specific scenarios or emotions, and they were told they could respond in any way they wanted. After these main questions were addressed, the interviewer then asked the participants (6) whether they would still judge the person in their scenario as kiasu if (i) the person exhibited the same behaviour, but did not have the mentality of losing out to others, and (ii) the person had the mentality of not losing out to others, but did not exhibit the given behaviour. Participants were not prompted with any specific scenarios or

³ After participating in Study 1a, participants were given a short break before Study 1b commenced. Participants were told that the second part of the interview (Study 1b) was unrelated to Study 1a.

emotions, and they were told they could respond in any way they wanted. Throughout the interviews, the interviewer prompted participants to provide more description either by repeating the last few words spoken by the participant, or by asking for clarification or examples of what they had just said.

1.1.4 Data analyses

Two interviewers first transcribed the interviews verbatim, and then a research assistant checked the transcripts against the audio files to ensure accuracy. We used QSR International's NVivo 10 software to organize the interviews. We applied Spradley (1979) developmental research sequence method for analysis. This technique entails grouping the raw data into the domains of interest (examples of kiasu behaviours, reasons for being kiasu, emotions associated with kiasuism, and indicators of kiasuism), and then using semantic analysis to identify the concepts within each domain.

The interview transcripts were first read to identify examples related to the domains of interest. For example, the transcripts were first coded to identify the incidents of kiasuism. Next, categories according to the specific type of behaviour displayed were assigned. For example, incidents involving concern with getting the most out of sales or promotions were categorized together, and incidents involving studying ahead of the syllabus were categorized together. Next, all the categories were examined to identify the higher-order themes reflecting the general themes behind the behaviour. The contents of each theme were then examined to identify the specific reasons for the behaviour or what the actor hoped to achieve through the behaviour were examined. Next, the reported emotions associated with kiasuism were identified. Lastly, we examined whether there were specific elements that participants used to explain why they identified the incidents as kiasu.

Similar to Study 1a, a coding scheme was developed (see Appendix H for sample). Another assistant outside the research team was trained on the coding scheme to go through the transcripts line-by-line and to code them according to the coding scheme. Inter-rater reliability was assessed using Cohen's Kappa and the results showed that there was a high level of agreement between the two raters ($\kappa = .85$, $SD = 0.02$). Disagreements on the coding were discussed until consensus was reached.

To ensure validity and reliability of our study, we maintained an audit trail (e.g., memos, emails) to record the development of the analysis process, including the iterative process of assigning meaningful units into categories. This audit trail was reviewed and approved by an independent qualitative researcher not involved in the study design or execution.

1.2 Results

All participants described typical kiasu scenarios for others and provided personal examples of their own kiasuism. In the following section, we first present the typical kiasu scenarios described by our participants. We then present the underlying motivations for the display of the kiasu behaviours provided by our participants. Next, we present the emotions associated with kiasuism. Lastly, we present the analysis on the indicators that our participants used to label whether the behaviour is kiasu or not. We indicated the percentage of participants who responded in a particular domain to provide a sense of the pervasiveness of the response in our sample. We do not suggest that percentages are representative of the broader population in Singapore. In the following, each category is represented by one quote; additional quotes associated with each category can be found in Appendix I. Table 10 summarizes our findings from the qualitative interviews.

1.2.1 Examples of kiasu behaviours

We first coded the 135 incidents of kiasuism according to the behaviour exhibited, generating a new code each time it was needed. We found seven categories of kiasu behaviour that we grouped into two themes: (i) kiasu behaviours in social context and (ii) kiasu behaviours in academic context. These examples of kiasu behaviours are not exhaustive.

1.2.1.1 *Kiasu behaviours in social context*

Twenty-six participants (87%) spontaneously provided examples of behaviour that we grouped in this theme: *queuing for freebies, concern with sales and promotions, and ensuring one's own access to a public or common good at the expense of others*. In the following, we indicated the percentage of participants out of the 26 who provided examples of these behaviours.

Most participants (21, 81%) provided kiasuism examples that included queuing for something free:

If you look at the exam welfare package, a lot of students are actually queuing up to get this free gift, even though most of the stuff inside are just advertisement, brochures, plastic files, and foolscap paper that can be gotten at quite a relatively cheap price. But, people are still willing to take up their time to queue up to get these free gifts. (P11)

Another variation was queuing for a freebie in order to sell it.

If you are a lover of Hello Kitty right, then I think that it makes sense for you to actually go and get it. But, I see some of the grandma[s] queuing. Then, when I asked them, they say they actually...they want to sell for money, and if you go out to the website[s], then you actually see that a lot of people get it [to] actually sell, or just for money. I think this is kiasu in the negative way. (P26)

Table 10

Summary of Study 1b Findings

Themes	Behaviours	Motivated by	Associated emotions	Behaviour is kiasu if it is performed:
Kiasu behaviours in social context (26, 87%)	1. Queue for freebies (21, 81%) 2. Attend sales or promotions (21, 81%) 3. Ensure access to public or common goods (e.g., seats on public transport or in the library) (10, 38%)	Fear of losing out potential benefits.	<ul style="list-style-type: none"> Satisfaction Happiness Relief Achievement Guilt Embarrassed and disgust 	a. To avoid a feeling of loss/losing out if you don't get the thing you are trying for. b. Despite not caring about the thing you are rushing or queuing for. Examples: <ul style="list-style-type: none"> Knowing it is a waste of your time but still going for a sale/promotion. Knowing the queue for a freebie is not worth the wait, but queuing anyway. Queuing for freebies without knowing what for. Queuing for freebie to sell online. c. At the expense of others or for self-interest. Examples: <ul style="list-style-type: none"> Obtain seats in public places (such as the subway or library) at the expense of those equally or more deserving. Getting freebies that others need or want more than you do.
Kiasu behaviours in academic context (18, 60%)	4. Attend a cram school or get a tutor (10, 56%) 5. Study ahead (9, 50%) 6. Source additional study materials & academic information (6, 33%) 7. Sandbagging (1, 6%)	Desire to not lose out to others or to get ahead of others.	<ul style="list-style-type: none"> Anxiety Relief Achievement 	a. As a result of comparison to avoid falling behind <ul style="list-style-type: none"> Implicit: Get a head start or advantage over other students (imagined comparison). Explicit comparison of grades/accomplishments in order to beat peers or at least not fall behind. b. At the expense of others Examples: <ul style="list-style-type: none"> Sandbagging Withholding critical information

Note. $N = 30$. Number and percentage of participants out of N who provided the responses for each category.

The second behaviour in this theme is excessive concern with promotions and sales, as indicated by 21 participants (81%). For example, one participant described a friend whom she thinks is kiasu: “he will always check for sales, and he will always be at those sales” (P21).

The third type of behaviour identified is rushing to take advantage of a public or common good (10, 38%). Typical statements entailed observations from riding the subway or buses: “rushing for public transport, rushing for seats, shoving and pushing” (P20) and “they grab, they fight for seats” (P30).

1.1.1.2 Kiasu behaviours in academic context

The second major theme we identified encompasses kiasu behaviours specific to the academic context. Nearly two-thirds of participants (18 out of 30, 60%) provided examples in this category. The four behaviours identified were: *attending a cram school or get a tutor, studying ahead, sourcing extra study materials and academic information, and sandbagging (pretending to do worse than you are to fool others)*. The percentages in this section represent the percentage out of the 18 participants who provided examples of behaviours within this theme.

The first behaviour in this theme is attending cram schools or tutoring classes, which mostly happens in the years prior to starting university. A common observation (10, 56%) was that kiasu parents send their children to cram schools so that they will perform better than other students:

Like my cousins, the younger ones—they, right now they have to attend piano lessons, ballet, and then they go for math [classes]. They have two math [classes], because one of them, she is very weak in math, so she has to go for, like, two math [classes]. I think that’s another part of kiasuism of Singaporeans. They want the best for their children. So when you want the best, you go all out of it, all out for it, but you don’t actually think about the consequences, and things like that. (P28)

Nine participants (50%) made statements like: “studying way ahead of the syllabus or anything like that. These are the scenarios that I commonly identify as kiasu” (P21). One participant described her own kiasuism:

I will cover the lecture slides before I go to lectures. I would read up the textbook before the lectures, and fill in all the blanks. So when I go to lecture, I will be prepared for the topic, so that’s kiasu. (P30)

Six participants (33%) described putting effort into getting extra information or study materials. For example, they would get “all the past year’s papers, all the seniors’ notes, all the cheat sheets from seniors” (P14).

As highlighted by one participant, another tactic used by kiasu students is the sandbagging strategy, which involves feigning incompetence to give others a false sense of security, and reduce others’ effort on a task.

My JC (junior college) friend, he is the kind that, he will keep asking you about the status of, maybe, your project, and then maybe when you are doing. Maybe say like, you know, finishing 70% or something, he will say, like, ‘Oh so fast’. Maybe, like, try to pull you down, or maybe try to make themselves look bad so that you will feel more complacent so that he can, you know, overtake you. Then, he tends to be very...try to over-work, try to win others all the time, or, like, don’t like to share like study secrets and all that. (P16)

1.2.2 Reasons for being kiasu

To examine the motivations for these kiasu behaviours, we investigated the underlying reasons for displaying the kiasu behaviours provided by our participants. We found two major motivations of kiasuism: (i) fear of losing out potential benefits and (ii) not to lose out to others and/or to get ahead.

1.2.2.1 Fear of losing out potential benefits

Some participants (12 out of 26, 46%) stated that the main reason for queuing for freebies is because they did not want to lose out the benefits and opportunities that are potentially theirs. This phenomenon reflects the attractiveness of “getting something for nothing” as highlighted by five participants. As two participants put it:

“you get something which you don’t work for just come naturally” (P13) and “trying to grab something out of the crowd...like maybe a form of treasure hunting for them, if you can find something in the sale, something good, something worth it” (P1).

Two participants illustrated how the thought of losing out the benefits is a driving force for kiasuism:

From young till now, so even every time I see a queue, I will be...I will be curious to see what is this queue about. “Is there something that is being offered that I’m not getting?” I have that kind of feeling...I don’t know. Maybe it’s the culture in my whole life...anything or any offer I will be very curious. (P4)

One participant described how she felt if she has missed a potential benefit:

I’ll be like ‘Ah, damn it’, like [I’ll] feel very off for a few minutes then I’ll be like ‘ok, it’s just something free, I can do without it.’ Yeah, then I’ll try to like inside my head... at the back of my head, I’ll be like ‘Will they be giving out this thing later? Should I, would I be around here to get it?’ Then it’s like ‘Oh, actually I can walk here later right?’ Cause if I go from one class to another class, I have to come back the other way round as well, so I’ll be like “Oh I will walk here, I should look out for it again, then I can come [back]” But if I don’t get it’s ok, just that minute of “Oh damn it, I should have walked faster maybe”. (P28)

This belief to not lose out the benefits and opportunities is often due to the perceived scarcity of the desired goal as described by six participants. For instance, one participant described herself as kiasu because she would rush for Starbucks’ “Buy one get one free” offer; the reason for doing so is because it is limited and if there are people in front of her, she might not be able to get it.

1.2.2.2 Not to lose out to others and/or to get ahead

The main motivations for the kiasu behaviours in academic setting were the fear of falling behind or losing out to other students and the desire to excel over other students. The main way participants avoided losing out to, or achieved exceling over other students was through constant comparison, and it occurred in two ways. First, it

occurred implicitly as with the drive to get a head start on peers: “That feeling that you kind of get a head start over your friends, that is kiasu to me” (P20).

Second, it occurred explicitly through direct comparison of grades and accomplishments. The purpose of the comparison was to ensure that one did not lose out to other students, as seven participants (39%) vividly described.

She is kiasu because she don’t want to be the last...she just want to be [in] the top 20%. So, even if she already...she’s already getting an A, she will still go and disturb the lecturer for consultation. But, it’s not [that] she don’t understand, but because she understand already, she wants to go see the lecturer again to confirm she understands, and I find that kiasu. (P8)

Constant comparison and drive to not lose out is often perceived as competitiveness, as 14 participants (78%) indicated: “There are definitely friends who are competitive. They start to compare their internship opportunities since Year 1 [freshman year]; what they have done, and their grades” (P6). Constant comparison was also associated with the desire to “win other students” (beat other students academically). Eleven participants (61%) described to “outwin everyone” and “to be first in everything” as reasons for being kiasu in the academic setting. For instance:

When you get the results, first, you will see your friend, how well he or she do. If she got 90, then you got 91, then you will be happy for some reason. I don’t know why. Parents also, when his or her son don’t do well, then they might make that person go for tuition (tutoring), so to close up the gap, or actually overtake the other person. Or, that other guy is doing homework for two hours, make sure you do three hours, so you can be better than him. (P6)

Six participants (33%) also explained that comparisons motivate them to work harder so as not to lose out to peers: “like doing assignments, not that I would like...just that I mean if, say, my friends are doing 70% then I better buck up” (P16).

1.2.3 Emotions associated with kiasuism

This section summarizes the reported (i) emotions that precede kiasu behaviour, (ii) emotions experienced after being kiasu, and (iii) emotion associated with seeing other people’s kiasu behaviour. Twenty-one (out of 30, 70%) participants

provided responses for the emotions associated with kiasuism. In the following we report the percentage of the 21 participants who responded in a given category.

Anxiety (10, 48%) was associated with driving kiasu behaviour. Six post-kiasu emotions were identified. They include: satisfaction (10, 48%), happiness (8, 38%), relief (5, 24%), achievement (3, 14%), and guilt (2, 10%). The emotions associated with seeing others' kiasu behaviour were embarrassment and disgust (8, 38%),

1.2.3.1 Anxiety

Ten participants (48%) reported feeling of anxiety as a reason for being kiasu: "I would get very anxious to get seats, especially during peak hours" (P21) and "I don't know like...not enough notes, I [feel] scared...like not enough resources, then I want a lot of resources, even if [it] isn't needed" (P24). Four participants (19%) indicated excessive worry over grades, over things beyond their control, or over the adequacy of their resources to excel as drivers of kiasuism: "I would say that many of those people, those kiasu people, probably worry about things that they may not be able to control" (P2).

1.2.3.2 Satisfaction

Ten participants (48%) reported feeling of satisfaction when they are kiasu. For example, "I want it badly, even though there's something I don't need at all. I just want the satisfaction of getting it" (P4), and "I am kiasu because at the very first sight of freebies, I'm going to get it. And if I don't get it, I feel that I have not achieved a level of satisfaction. I think it brings a lot of satisfaction, kiasuism" (P28).

1.2.3.3 Happiness

Eight participants (38%) reported feeling happy when they are being kiasu, especially when it comes to getting freebies. For instance, P25 said that even though

she knows that it will be a waste of time queuing for the freebies, she would still queue for them as she likes the joy of getting the free products.

1.2.3.4 Relief

Five participants (24%) also reported the feeling of relief or reassurance when they are being kiasu. For example, P21 described how she felt when she managed to reserve seats: “When I manage to do that, I felt relief *la*. I don’t care about what people think at that point of time, as long as I get what I wanted.”

1.2.3.5 Achievement

Four participants (19%) indicated a sense of achievement, especially when the kiasu person “can find really good stuff” (P1). This sense of achievement may be an “ego boost” if the person is kiasu “for the sake of comparing to be the best” (P22). Participants felt that a kiasu person usually has an “edge over others” (P13) and might even “gain better opportunities in life...careers, jobs, results” (P14).

1.2.3.6 Guilt

Two participants (10%) reported the feeling of guilt after being kiasu. For example:

I sort of feel bad, because I know I’m essentially wasting time by going down in order to go up [in the lift] because other people might also need the lift when they [are going] down, and they can’t get the space when I go down, and they cannot come in. So I would feel a little bit guilty. (P29)

However, both participants described how they would either rationalize or justify their kiasuism to reduce the guilt they experienced. Their descriptions provide insight to support the kiasu motivations described previously in the analysis. For example, “I’ll try to convince myself that there’s a use for all these things, and if I don’t use them I will just... probably try to, you know, put them one side or give it to people, so that I will not feel that guilty for taking things that I do not need” (P27).

1.2.3.7 Embarrassed and disgusted

Eight participants (38%) reported feeling embarrassment or humiliation when significant others such as family members or friends engaged in kiasuism: “If I were to be with her [aunt], like queuing up for free gifts...I think I would be a bit humiliated” (P23). “If it’s like my mom, then I’d be quite embarrassed sometimes, yeah. But if it’s other people then you would think, like, a bit irritating” (P19).

These statements imply a distinction between emotions felt when someone close is kiasu as compared to a stranger. Embarrassment occurs when a close other is kiasu, but the emotion is closer to disgust when witnessing a stranger’s kiasuism.

1.2.4 Indicators of kiasuism

Past research on kiasuism has focused largely on kiasu behaviours. To investigate whether the display of behaviours believed to be kiasu is sufficient in judging kiasuism, we reviewed participants’ responses to question six to discover the real or perceived underlying indicators that caused participants to label the behaviour as kiasu. In all cases, the behaviour in and of itself was insufficient for identifying kiasuism. Instead, the perception of an underlying motivation to avoid a feeling of losing out as compared to other people was the key. Twenty-one participants (out of 30, 70%) felt that the display of kiasu behaviour does not provide sufficient evidence to judge whether a person is kiasu.

We found two indicators of kiasuism: (i) the actor is putting effort into obtaining something that he or she does not really want or care about, but that others are getting, (ii) the actor’s behaviour is at the expense of others, often the focus is on self-interest. In either case, the actor’s underlying motivation was perceived to be an effort to avoid a feeling of losing out as compared to other people.

Participants saw the opportunity for a benefit or a common good (promotions, freebies, seats) as something that is theirs. If they did not take action, participants felt that they had missed out on or lost something. Even when participants did not really want or need the benefit or common good, they felt a loss if they failed to get it. This is different from an orientation in which individuals take action to gain something they desire, but do not have. This loss mentality emphasizes comparison with a generalized other—others have the good, so you should have it, too. The desire to avoid losing out could provoke strong feelings: “They don’t want to get left behind, and they want, like, the most out of everything” (P20). For example, “when there is, like, a sale, they will go all out for it; that means they will, like, just fight for their right. They will get into a quarrel to get it” (P25). Participants indicated that people queued up for freebies because “they fear losing to others, so they want to find out what is going on [in order] to be on par with others” (P5). Some participants defended their reasons for hogging seats on public transport this way: “I need the seat because I want to sit. Why should I let someone take the seat? Cause I’m paying the same money” (P16). They saw the seat as theirs, and did not want to lose it to others, even if it was marked as reserved for less-abled people, such as the elderly or pregnant women. In fact, it was clear that some participants were quite willing to take resources at the expense of others who were more deserving.

However, six participants (20%) recognized that by using resources or getting freebies that they did not need, they were depriving others with greater need or desire. As described by the participants, a kiasu person is “when you want the best, you go all out for it but you don’t actually think about the consequences” (P28). One participant described the selfish behaviour of a kiasu person: “someone who is kiasu, they don’t want to share. Like for some schoolmates, they don’t want to share [academic

information], or tell you what they are doing. Maybe they don't want you to win” (P16).

Five participants (17%) stated that the selfish nature of kiasuism can harm relationships or brings harm to others. For example, one participant pointed out that the constant comparison could take a toll on relationships. They also described how kiasuism could result in cold behaviour. Kiasu classmates “are not really friendly towards those people whom they see no value to them, like those people whom they deemed that they won't be able to help them, so, like, they don't treat them very well” (P17).

Putting effort into obtaining something that you don't personally really want or care about is a marker of kiasuism. Four participants (13%) also talked about joining a queue without knowing what it is for; knowing that the queue is not worth the wait, but doing it anyway; and, queuing for free things in order to sell them.

I feel that it is kiasu when I don't need it (freebies), but I don't want to lose out to people. I just want to be there and get it. I win you all, and I'll get it, and I'll be happy even if I don't need it. (P4)

However, 13 participants (43%) pointed out that if there is a genuine interest or a need for the items, and no concern about missing out, the person who queues for the freebies should not be judged as kiasu:

I think there are some of them that are not really...they don't really earn a lot at home. They support themselves. I also have some friends, who work part-time to pay for their own school fees, so I don't think...if those are queuing up for those free stuff, then I think it's ok. They can save a lot. (P24)

One participant also highlighted that studying ahead of others may not necessarily mean that a person is kiasu. When the purpose of studying ahead of others is solely to gain knowledge or to achieve one's goal instead of being better than others, the behaviour is not considered kiasu.

I would say if somebody studies hard, if he walks out of the exam hall, and he doesn't ask his friends how are they doing. If he knows that, 'Ok, I did my best, and it doesn't matter what the results are, I feel that I've done my best'. I think it is not kiasu. Sometimes like studying is not just about trying to outdo others, but also, like, the purpose of studying is just to gain knowledge and see things from a new perspective. (P2)

The implication is that the behaviour itself does not necessarily provide sufficient evidence to judge whether a person is kiasu. The purpose behind the behaviour is the criterion to judge whether the person is kiasu. Additionally, not behaving in a kiasu manner does not mean a person is not kiasu. For instance, a kiasu person might choose not to display the kiasu behaviour due to concerns about others' negative judgment:

Some have a kiasu mind-set, but they're scared people [will] judge them, so they won't... they will ask their friends...help me, *eh*. That's also kiasu what, '*eh* help me, *eh* help me go queue, *eh*.' They don't want to queue because they [are] scared of how people look [at them]. (P24)

Therefore, whether or not the same behaviour is perceived as kiasu depends largely on the underlying motivations for the behaviour and we found that behaviour is not sufficient in identifying kiasuism.

1.3 Discussion

The analyses provided a better understanding of what constitutes kiasuism as perceived by Singaporean undergraduates. This study attempts to investigate how, why, and where kiasuism manifest itself (Kirby et al., 2010). Consistent with Wierzbicka (2003)'s definition of kiasuism, we defined kiasuism as an attitude that can be activated by presence of others or imagined others. It is driven by the (i) fear of losing potential benefits, (ii) fear of losing to others, and/or (iii) desire to get ahead of others. These motivations elicit kiasu behaviours (in both social and academic context) that are perceived to be instrumental to achieve desired goal(s). The experience of

positive emotions and the ability to achieve desired goal(s) through kiasu behaviours further reinforce kiasuism.

Three key findings stand out from this study. First, we identified two main themes that categorized the kiasu behaviours: kiasu behaviours in social context and in the academic context. The kiasu examples provided by our participants replicated past studies on kiasu behaviours (Ho et al., 1998; Hwang et al., 2002). The important indicator of kiasu behaviour is that it always entails comparison with others, which is necessary to avoid falling behind or losing out to others. Kiasuism indicators include putting effort into obtaining something one does not really want or care about, but that others are getting and behaviour at the expense of others. Because the same behaviour can be performed for different reasons, underlying motivations must be included in any valid measure of kiasuism. The implication is that a new measure of kiasuism is needed because all past studies used items that focused solely on behaviours (e.g., Ho et al., 1998; Hwang et al., 2002).

Second, we did not find evidence to distinguish positive and negative forms of kiasuism. Although past researchers (i.e., Hwang et al., 2002; Hwang & Arbaugh, 2006) acknowledged that both forms of kiasuism entail comparison, their operationalization of positive kiasuism focused on process-oriented competitiveness, where the focus is on the process of achieving success, and does not encompass comparison with others. We found no examples of positive kiasuism. Instead, we found that all our examples of kiasuism sounded conceptually more similar to interpersonal competitiveness, which is the desire to win others (Griffin-Pierson, 1990). Based on our findings, positive and negative kiasuism may not necessarily be a useful distinction. Thus, we posit kiasuism to be a continuum, which the outcomes can range from negative to positive. Kiasuism is negative when the outcome does not

justify the effort expended. It is negative when it harms the self or others. And, it is negative when it threatens social harmony. On the other end of the spectrum, kiasuism can be positive when it drives an individual to achieve goals.

Third, we identified the emotions surrounding kiasuism. Participants reported feelings of anxiety prior to their kiasu behaviour. This result is consistent with Wierzbicka's (2003) claim that kiasuism is driven by opportunities and apprehension. Our findings suggest that kiasuism may be a form of coping mechanism, specifically, a form of active coping (e.g., studying ahead, getting more academic information) to reduce negative emotions. Attainment of the desired goal provides not only extrinsic gains, but also positive emotional outcomes, such as a sense of achievement or relief. The positive emotional consequences experienced by the kiasu person could further reinforce their kiasuism; being kiasu is a way to achieve their desired outcomes. This finding is consistent with the instrumentality theory of behaviour in which the motivation to display a behaviour is a function of both the instrumentality of the behaviour and the valence attributed to the outcome (Mitchell & Knudsen, 1973). Hence, positive feelings such as a sense of achievement and satisfaction may explain why kiasuism has sustained in Singapore over the years.

To summarize, our analysis provided some empirical support for Wierzbicka's (2003) theoretical claim that kiasuism is a mental attitude that leads to a way of behaving. That is, when individuals are motivated by a kiasu mind-set, they engage in behaviours (such as studying ahead of their peers) that are perceived as instrumental for achieving their desired outcome (i.e., not falling behind). The responses related to the motivations and emotions associated with kiasuism are adapted into the construction of the Kiasu Beliefs and Motivations (KBM) scale. The psychometric properties of the newly constructed KBM scale are investigated in Study 2b.

2.0 Phase 2: Psychometric Properties of KBM Scale (Study 2b)

The purpose of this study is to explore the dimensionality, reliability, and validity of the newly constructed Kiasu Beliefs and Motivations (KBM) scale. Our investigation on the motivations and emotions associated with kiasuism in Study 1b provided the basis for the construction of the KBM scale. We expect our KBM scale to be multidimensional given that the same behaviour can be motivated by different reasons: not to lose out potential benefits, not to lose out to others, and/or to get ahead of others.

This study also aims to validate the newly constructed KBM scale. Two constructs were chosen to demonstrate convergent validity: *sense of entitlement* and *interpersonal competitiveness*. The findings in Study 1b suggested a relationship between kiasuism and sense of entitlement. Sense of entitlement refers to the expectation of a reward as a result of social contract (Campbell, Bonacci, Shelton, Exline, & Bushman, 2004). One study found that individuals with high entitlement were motivated by acquisitive desire rather than self-protection and were found to be more selfish and competitive (Campbell et al., 2004). Entitled individuals would also respond negatively when they are not given what they perceived to be theirs. Similarly, our participants reported a sense of loss and frustration when they are unable to acquire potential benefits or freebies. A person with a sense of entitlement is driven by acquisitive desire (Campbell et al., 2004), this is similar to a kiasu person who is driven to acquire all potential benefits or common good. Hence, we expect moderate to strong correlation between the newly constructed KBM scale and sense of entitlement.

Competitiveness is defined as the desire to win in interpersonal situations (Helmreich & Spence, 1978). Griffin-Pierson (1990) further proposed two forms of

competitiveness: the desire to win over others (interpersonal competitiveness) and striving for a goal (goal competitiveness). While interpersonal competitiveness is similar to Helmreich and Spence (1978)'s definition of competitiveness as the desire to be better than others, goal competitiveness emphasizes on striving towards the goal. We expect kiasuism to be related to *interpersonal competitiveness* due to the emphasis on not losing out to others and getting ahead of others. Hence, we hypothesize the newly constructed KBM scale to have moderate to strong correlation with interpersonal competitiveness.

This study also aims to demonstrate criterion validity for the KBM scale through relationships with kiasu behaviours. We expect the newly constructed KBM scale to be related to kiasu behaviours, as measured by the Kiasu Tendency scale, which captures hypothetical kiasu situations (Ho et al., 1998). Second, we expect our KBM scale to be related to the negative kiasu behaviours as measured by Hwang et al. (2002)'s negative kiasuism scale. In Study 1b, we posited that positive kiasuism, as suggested by Hwang et al. (2002), has no comparative aspects. Additionally, as highlighted in Chapter 2 (see p. 24), the items measuring positive kiasu attitude were general behaviours that may be motivated by non-kiasu reasons. Hence, we hypothesize that there is weak correlation between our KBM scale and Hwang et al. (2002)'s positive kiasuism scale (positive kiasu behaviours).

2.1 Method

2.1.1 Participants

Four hundred and one Singaporean undergraduates (149 males, 252 females), ages ranged from 18 to 28 years old ($M = 21.72$, $SD = 1.72$), participated in this study.⁴ Participants were recruited from a university in Singapore and obtained partial

⁴ Participants took part in Study 2a and Study 2b in a single session. Questionnaires for Study 2a and Study 2b were randomized.

course credit for their participation. Undergraduates who participated in the qualitative study (Study 1b) were not allowed to take part in this study. Exclusion was carried out by the university's research pool system.

2.1.2 Procedure

2.1.2.1 Items generation

The key phrases associated with the motivations and emotions of kiasuism found in Study 1b provided the basis for items generation; 43 items were generated. We did not include any behavioural aspect of kiasuism in our scale, as the objective of the scale is to assess the beliefs and motivations associated with kiasuism and not to assess the frequency of engaging in kiasu behaviours.

2.1.2.2 Pilot test

Thirty-eight participants (19 males, 19 females), ages ranged from 19 to 26 years old ($M = 21.87$, $SD = 2.10$), participated in the pilot test.⁵ At the end of the pilot test, participants were asked for their feedback on the items for KBM scale regarding the clarity and comprehensibility.

Due to the large initial pool of items, we decided to reduce the number of items. Preliminary analysis was conducted; we removed items with poor corrected item-total correlation (below cut-off value of .30) as recommended by Kline (1993). After discussion within the research team, we decided to remove items with very similar content to prevent redundancy. Wording issues were amended for the actual study (e.g., “*I want the best for myself*” to “*I want the best all to myself*”). We removed 15 items resulting in a 28-item KBM scale used in the actual study. Table 11 presents the initial pool of 43 KBM items. Data collected from the pilot test was not included in the actual study analyses.

⁵ The pilot test for KBM scale was conducted together with the pilot test for PACBF scale.

2.1.2.3 Study 2b

Participants were recruited from the university's research pool system and survey information was posted on the system. Interested students could sign up and access the survey link. The online survey was conducted on Qualtrics.com and participants had to agree to the consent form before participation. Participants were asked to complete a battery of questionnaires (see Materials). The sequence of the questions for each questionnaire was randomized. Participants were assured on the confidentiality and anonymity of their responses. The survey took no longer than 30 minutes to complete.

2.1.3 Materials

2.1.3.1 Kiasuism

We measured participants' kiasuism using the newly constructed KBM scale. Participants were instructed to indicate on a scale of 1 (*strongly disagree*) to 5 (*strongly agree*) the extent they agree or disagree with items such as “*Even if I perform to my expectation, it is important to know whether I am performing better than others*” and “*I want to get the most out of everything*”. Negatively worded items were reverse-coded.

2.1.3.2 Sense of entitlement

Participants' sense of entitlement was measured using the 9-item Psychological Entitlement Scale. This scale measures the unrealistic belief that one is entitled to benefit due to social contracts (Appendix J; Campbell et al., 2004). Participants were asked to indicate on a scale of 1 (*strong disagree*) to 7 (*strongly agree*) on items such as “*Things should go my way*” and “*I feel entitled to more of everything*”. Negatively worded items were reverse-coded and a composite score was computed by averaging all items. A higher score indicated higher sense of entitlement.

Table 11

Mean (M), Standard Deviation (SD) of Initial 43 KBM Items

No.	Item	<i>M</i>	<i>SD</i>	Decision	Reason for deletion
1.	I want to be first in everything.	3.21	0.96	Retained	
2.	Even if it hurts the relationship with others, I will go all out to achieve my goals.	2.52	0.91	Deleted	Low corrected item-total correlation.
3.	I will feel a sense of loss if others are able to get some benefits and I am unable to.	3.67	0.74	Deleted	Low corrected item-total correlation.
4.	It is important to get what I want at all cost.	2.61	0.97	Retained	
5.	I want to get the most out of everything.	3.94	0.66	Retained	
6.	It is important that I am not losing out to others.	3.48	0.94	Deleted	Similar to Item 35. Based on item-total correlation, item 35 is preferred.
7.	It is important to maximize the value of my dollar.	3.85	0.83	Retained	
8.	It is important that I am on par with others.	3.67	0.69	Deleted	Low corrected item-total correlation.
9.	I feel a sense of achievement when I know that I am ahead of others.	4.00	0.66	Retained	
10.	It is important that my peers do not know my competency so that I can be ahead of them.	2.70	1.10	Retained	
11.	I will do what I can to prevent myself from losing out.	3.30	0.95	Retained	
12.	When I do better than others, I feel an immense sense of accomplishment.	4.03	0.64	Retained	
13.	I want the best for myself.	4.18	0.81	Modified	Changed to: "I want the best all to myself" to further emphasize selfish nature of kiasuism.
14.	I will improve myself continually to be better than others.	3.91	0.58	Deleted	Low corrected item-total correlation.
15.	It is important to secure all potential benefits.	3.73	0.63	Retained	
16.	I get excited when I can get something for nothing.	4.00	0.66	Retained	
17.	Losing is the last thing I want.	3.52	0.83	Retained	
18.	It is important that I am not short-changed from any benefits.	3.67	0.78	Retained	
19.	It is important to maximize the value of my time.	4.03	0.64	Deleted	Low corrected item-total correlation.
20.	I feel proud when I have something others don't have.	3.67	0.82	Retained	
21.	I feel compelled to be ahead of others.	3.45	0.87	Retained	
22.	Knowing that I'm performing better than my peers helps to reduce my anxiety.	3.67	0.85	Retained	
23.	It doesn't matter how others think of me as long as I can have the best for myself.	2.88	0.99	Deleted	Low corrected item-total correlation.
24.	I work hard to be better than others.	3.61	0.70	Deleted	Low corrected item-total correlation.
25.	It doesn't matter if I excel at the expense of others.	2.06	0.93	Retained	

Table 11 (continued)

No.	Item	<i>M</i>	<i>SD</i>	Decision	Reason for deletion
26.	When it comes to getting freebies, thinking about whether I need them is secondary.	3.24	1.17	Retained	
27.	I will go all out to secure opportunities given to me.	3.55	0.56	Deleted	Low corrected item-total correlation.
28.	I feel a sense of satisfaction when I managed to get freebies out of the crowd.	3.27	0.84	Deleted	Low corrected item-total correlation.
29.	Performing better than others is more important than performing well.	2.73	1.04	Retained	
30.	Even if I perform to my expectation, it is important to know whether I am performing better than others.	3.33	0.99	Retained	
31.	I will do anything to achieve my goals.	3.03	0.88	Deleted	Low corrected item-total correlation.
32.	I will do what I can to get the best for myself.	3.73	0.63	Deleted	Low corrected item-total correlation.
33.	I do not want to miss out any freebies I am entitled to.	3.18	0.88	Deleted	Low corrected item-total correlation.
34.	I feel good receiving praises for doing better than others.	4.09	0.58	Deleted	Problematic item: Barnum statement.
35.	It is important that I don't lose out.	3.30	0.88	Retained	
36.	I cannot afford to be worse than others.	3.30	0.85	Retained	
37.	I will do anything to be ahead of my peers.	2.85	0.83	Retained	
38.	I use my peers' achievements as a reference to what I should achieve.	3.73	0.80	Deleted	Low corrected item-total correlation.
39.	It is important to hide my capabilities from others so that they will not strive to be better than me.	2.55	1.03	Retained	
40.	I am always worried that I do not perform well as compared to my peers.	3.70	0.88	Modified	Changed to: "I always worry about not performing well as compared to my peers" for clarity.
41.	I don't have to be the best. (R)	2.39	1.09	Retained	
42.	It is not important to achieve better outcomes than others. (R)	2.85	0.83	Retained	
43.	It is not important to be ahead of my peers. (R)	3.00	0.87	Retained	

Note. *N* = 38. R denotes negatively worded items that were reverse-coded.

2.1.3.3 Interpersonal competitiveness

The inter-competitiveness scale (Griffin-Pierson, 1990) was utilized to measure participants' level of interpersonal competitiveness. The scale (see Appendix K) consists of 8 items and participants were instructed to indicate on a scale of 1 (*strongly disagree*) to 5 (*strongly agree*) on items such as "*I perform better when I am competing against someone rather than when I am the only one striving for a goal*" and "*I have always wanted to be better than others*". Negatively worded items were reverse-coded and a composite score was computed by averaging all items. A higher score indicated higher interpersonal competitiveness.

2.1.3.4 Kiasu behaviours

Participants' tendency to behave in kiasu manner was measured using the kiasu tendency scale (see Appendix L; Ho et al., 1998). The scale consists of ten scenarios generated from the authors' qualitative study on typical examples of kiasu behaviours observed in Singapore. Participants were instructed to indicate on a scale of 1 (*never*) to 5 (*very often*) on how often they engage in behaviours such as "*Rushing for train/bus seats*" and "*Queuing way ahead of time to buy tickets*". An overall score was computed by averaging all items; a higher score indicated higher tendency to display kiasuism.

2.1.3.5 Positive and negative kiasu behaviours in academic context

Participants' tendency to display positive and negative kiasu behaviours in the academic context was measured by the 6-item Positive and Negative Kiasuism Scale (see Appendix M; Hwang et al., 2002). Participants were instructed to indicate on a scale of 1 (*not at all*) to 7 (*all the time*) on how often they engage in the academic kiasu behaviours such as "*I supplement my knowledge with non-required course materials*" (positive kiasuism) and "*I try not to let others know the right answers*"

(negative kiasuism). A composite score for each subscale was computed by averaging all items for positive kiasuism and negative kiasuism respectively. A higher score on positive kiasuism indicated higher tendency to display positive kiasu behaviours in academic context. Similarly, a higher score on negative kiasuism indicated higher tendency to display negative kiasu behaviours in academic context.

2.1.4 Analytic plan

Distribution, skewness, and kurtosis of item scores were first examined for normality. Exploratory Factor Analysis (EFA) was conducted to determine the factor structure of the KBM scale. Similar to Study 2a, parallel analysis was conducted to determine the maximum number of factors to retain (Ledesma & Valero-Mora, 2007). We also used the same cut-off values as Study 2a to determine acceptable fit: RMSEA and SRMR values of less than .08 (Dimitrov, 2014; Hu & Bentler, 1999).

2.2 Results

2.2.1 Preliminary analyses

Mahalanobis distance (D^2) was used to identify multivariate outliers and we removed multivariate outliers with $p < .001$ (Tabachnick & Fidell, 2013); 6 multivariate outliers were removed from the analyses, resulting in 395 cases.

To assume normal distribution, Kline (1998) recommended skewness absolute value to be within ± 3 and kurtosis absolute value to be within ± 10 . Item scores were normally distributed for the KBM scale; skewness values ranged from -0.94 to 0.65 and kurtosis value ranged from -0.95 to 1.54.

Maximum Likelihood method was used to estimate the factor loading as it is considered to be the most appropriate procedure to analyse data that are normally distributed (Fabrigar et al., 1999). As we anticipated the factors to be correlated, oblique rotation (Promax) was used to improve interpretability of the factors. Mplus version 7 (Muthén & Muthén, 1998-2015) was used to analyse the data.

2.2.2 Dimensionality of KBM scale

Using the comparison between the eigenvalues of random data with the eigenvalues of the actual data, parallel analysis revealed a maximum of seven factors for the KBM scale. We first compared the goodness-of-fit indices across the seven factors (see Appendix N) to examine which factor solution best fits our data. Next, we considered the meaningfulness and the interpretability of the factors to determine the number of factors to retain. Three factors emerged: *getting ahead*, *pursuit of self-interest*, and *not to lose out*.

Goodness-of-fit of the three-factor solution was satisfactory: $\chi^2(297) = 950.36$, $p < .001$, RMSEA = .075, and SRMR = .052. The factor loading of all 28 KBM items are presented in Table 12. Eight items were removed based on the criteria as mentioned earlier (see p. 57); 20 items were retained.

Table 12

Factor loading for all 28 KBM items

Item description	F1	F2	F3	Communalities
F1: Getting ahead				
28. It is not important to be ahead of my peers. (R)	.673			.519
27. It is not important to achieve better outcomes than others. (R)	.518			.325
5. <i>I feel a sense of achievement when I know that I am ahead of others.</i>	.478		.382	.482
3. I feel compelled to be ahead of others.	.477			.453
1. <i>Performing better than others is more important than performing well.</i>	.461	.349		.405
25. Even if I perform to my expectation, it is important to know whether I am performing better than others.	.417			.358
F2: Pursuit of self-interest				
13. It is important to hide my capabilities from others so that they will not strive to be better than me.		.772		.619
23. It doesn't matter if I excel at the expense of others.		.732		.490
4. <i>It is important that my peers are not aware of my competency so that I can be ahead of them.</i>	.428	.685		.614
16. I will do anything to be ahead of my peers.		.611		.508
2. It is important to get what I want at all cost.		.449		.362
15. <i>I want the best all to myself.</i>		.420	.322	.364
22. <i>When it comes to getting freebies, thinking about whether I need them is secondary.</i>		.383		.180
20. I want to be first in everything.		.375		.355
26. <i>I do not have to be the best. (R)</i>		.256		.092
F3: Not to lose out				
14. I want to get the most out of everything.			.648	.343
8. It is important to secure all potential benefits.			.620	.339
10. I will do what I can to prevent myself from losing out.			.554	.397
12. It is important to maximize the value of my dollar.			.532	.231
21. It is important that I am not short-changed from any benefits.			.503	.343
6. I feel proud when I have something that others do not have.			.498	.374
9. Knowing that I'm performing better than my peers helps to reduce my anxiety.			.460	.310
11. When I do better than others, I feel an immense sense of accomplishment.			.456	.409
7. It is important that I don't lose out.			.432	.441
19. I cannot afford to be worse than others.			.431	.367
17. I always worry about not performing well as compared to my peers.			.395	.313
24. <i>Losing is the last thing I want.</i>			.347	.283
18. <i>I get excited when I can get something for nothing.</i>			.293	.146

Note. $N = 395$. Loadings more than .35 for each variable are bolded. Italicized items were removed from final version of KBM scale. R denotes negatively worded items that were reverse-coded.

The final 20-item scale is named the KBM scale (Appendix O). We also examined the internal consistency of the KBM scale using Cronbach's alpha. Overall the KBM scale has an internal consistency of .88 and the Cronbach's alpha values ranged from .72 to .85 for each dimension. Multiple random split-halves were tested and the overall KBM scale has a split-half reliability ranging from .86 to .92. The reliability coefficients are considered to be "adequate" (Kline, 1998). The definition, internal consistency, mean, standard deviation, and correlations of the final KBM scale are presented in Table 13.

Table 13

Definition, Internal Consistency (α), Mean (M), Standard Deviation (SD), and Correlations of KBM Subscales

KBM Subscale	Definition	No. of Items	α	M	SD	GA	SI	NL
Getting ahead (GA)	Measures the extent that one believes he/she needs to perform better than others or strive to achieve better outcomes than others.	4	.72	3.22	0.68	-		
Pursuit of self-interest (SI)	Measures the extent that one believes in the importance of achieving one's goal of being the best or gaining advantage for oneself even at the expenses of others.	5	.78	2.47	0.67	.36***	-	
Not to lose out (NL)	Measures the extent that one believes that it is important not to be worse than others or not to lose out any potential benefits or opportunities.	11	.85	3.55	0.51	.58***	.45***	-

Note. *** $p < .001$. $N = 395$. KBM = Kiasu Beliefs and Motivations.

2.2.3 CFA on validating scales

CFA was conducted to examine the factor structure of the scales used to establish convergent and criterion validity for the newly constructed KBM scale. All the validating scales in the current study have similar factor structure as past studies. Items measuring psychological entitlement were demonstrated to load on one-factor (Campbell et al., 2004). Similarly, a one-factor model was replicated for psychological entitlement in the current study (RMSEA = .176, SRMR = .068). Griffin-Pierson (1990) developed the competitiveness questionnaire to measure two forms of competitiveness: goal competitiveness and inter-personal competitiveness. A two first-order factors model representing the two forms of competitiveness was reported. As the items measuring goal competitiveness demonstrated low internal consistency in the past study, we only used the items measuring inter-personal competitiveness. Hence, we expected and found a one-factor solution for inter-personal competitiveness (RMSEA = .119, SRMR = .053). Ho et al. (1998) developed a 10-item measure to assess level of kiasuism based on the frequency of displaying behaviours that are considered to be kiasu. As the authors did not provide the psychometric properties and factor structure for the items, we first conducted EFA to examine how the items fit into the factors. We found two factors to represent the kiasu tendency items: *kiasu hogging behaviours* and *kiasu rushing behaviours*. Next, we conducted CFA and we found good fit for the two first-order factors model (RMSEA = .059, SRMR = .031). Finally, a two first-order factors model measuring positive kiasuism and negative kiasuism was posited and demonstrated by Hwang et al. (2002). We replicated and found support for the two first-order factors model (RMSEA = .056, SRMR = .033). The goodness-of-fit of the validating scales are presented in Table 14.

Table 14

Mean (M), Standard Deviation (SD), Internal Consistency (α), and Fit Indices for KBM Validating Scales

Scale	<i>M</i>	SD	α	Fit Indices			
				χ^2	<i>df</i>	RMSEA	SRMR
Psychological Entitlement	3.68	1.00	.88	261.28	20	.176	.068
Inter-competitiveness	3.05	0.68	.73	59.19	9	.119	.053
Kiasu Tendency Scale	2.34	0.72		18.91	8	.059	.031
Kiasu Hogging Behaviours	2.65	0.85	.64				
Kiasu Rushing Behaviours	2.03	0.80	.71				
Kiasu Positive & Negative Scale	2.56	0.88		17.87	8	.056	.033
Kiasu Positive	3.22	1.23	.81				
Kiasu Negative	1.90	0.92	.85				

2.2.4 Validity analyses for KBM scale

Table 15 summarizes the correlations between the validating scales and the newly constructed KBM scale. We expected moderate to strong correlations between KBM scale and *psychological entitlement* as well as *inter-competitiveness*. As expected, moderately strong correlations were found between *psychological entitlement* and the dimensions of KBM scale as well as the overall KBM; correlations ranged from .28 to .52. Moderately strong correlations were also found between *inter-competitiveness* and KBM scale; correlations ranged from .40 to .53.

Table 15

Correlations between KBM scale, Psychological Entitlement, Inter-Competitiveness, and Kiasu Behaviours

Scales	KBM Dimensions			Overall KBM score
	Getting ahead	Pursuit of self-interest	Not to lose out	
Psychological Entitlement	.28***	.52***	.39***	.49***
Inter-Competitiveness	.44***	.40***	.44***	.53***
Kiasu Hogging Behaviours	.19***	.23***	.26***	.28***
Kiasu Rushing Behaviours	.10*	.29***	.18***	.24***
Kiasu Negative Behaviours	.17**	.38***	.16**	.30***
Kiasu Positive Behaviours	.12*	.15**	.13*	.16**

Note. *** $p < .001$, ** $p < .01$, * $p < .05$. $N = 395$. Overall KBM score is computed by averaging the three subscales (getting ahead, pursuit of self-interest, not to lose out).

To evaluate criterion validity, we examined the correlations between our KBM scale and kiasu behaviours. CFA results for kiasu tendency scale revealed two dimensions: *Kiasu Hogging Behaviours* and *Kiasu Rushing Behaviours*. The correlations ranged from .19 to .28 for *Kiasu Hogging Behaviours* and .10 to .29 for *Kiasu Rushing Behaviours*. As expected, we found moderate correlations between *negative kiasu behaviours* and our overall KBM scale, $r(393) = .30, p < .001$. Specifically, moderate correlation was observed between *pursuit of self-interest* with *negative kiasu behaviours*, $r(393) = .38, p < .001$. As expected, weaker correlations were found between our KBM scale and positive kiasu behaviours, correlations ranged from .12 to .16.

2.3 Discussion

We found three dimensions of kiasuism: *getting ahead*, *pursuit of self-interest*, and *not to lose out*. Our findings revealed that not being worse than others and getting

ahead are related but are not exactly the same; a kiasu person may be motivated to not lose out to others but this may not mean that he/she aims to perform better than others. *Getting ahead* and *pursuit of self-interest* focus on outperforming others and demonstration of one's ability while *not to lose out* is concerned with not being judged as inferior. The difference between *getting ahead* and *pursuit of self-interest* is that *pursuit of self-interest* involves elements of selfishness, related to self-serving kiasu behaviours (e.g., not sharing additional academic information with peers).

The positive correlations between psychological entitlement and kiasuism supported our argument that kiasuism is related to sense of entitlement as kiasu people have strong acquisitive desires to obtain potential benefits. Similarly, the positive correlations observed between kiasuism and inter-competitiveness suggest that kiasuism is related to interpersonal competitiveness, where the focus is on winning over others or not to lose out to others. This supports our argument that kiasuism entails a comparative aspect.

We used kiasu behaviours to demonstrate criterion validity. While we expected moderate to strong correlations between our KBM scale and these kiasu behaviours, the correlations we found in our study were not considered to be high. One possible explanation is that the items in these scales may only be measuring general social behaviours and may not have captured the kiasu behaviour. It could also be that these behaviours were not perceived to be associated with kiasuism by our participants. We also noticed the kiasu behaviours assessed by the kiasu tendency scale and negative kiasuism scale were motivated by selfishness and greed, which explained the stronger correlations observed between these behaviours and the *pursuit of self-interest* dimension.

Overall, we conducted qualitative interviews to understand the experience and perception of kiasuism by Singaporean undergraduates to clarify the kiasuism construct. We asserted that behaviours may not be representative of kiasuism as engagement in the behaviours may be motivated by non-kiasu reasons. We utilized the responses associated with the beliefs and motivations for being kiasu as a foundation for the construction of the KBM scale. The psychometric properties of the newly constructed KBM scale were examined. We also demonstrated convergent and criterion validity of the new KBM scale.

CHAPTER FIVE: RELATIONSHIPS AMONG FOF, KIASUISM, AND ENTREPRENEURIAL INTENTION (STUDY 3)

As highlighted in Chapter 2, we adopted the SCCT *choice* model (i.e., self-efficacy, outcome expectations, and choice goal) to examine the roles of FoF and kiasuism on undergraduates' entrepreneurial intention.

In a study that investigated the role of personal attributes (e.g., personality traits, age, gender) in the SCCT choice model, it was found that personality traits influence both self-efficacy and outcome expectations. Additionally, personal attributes have a direct influence on choice goal (Rogers, Creed, & Glendon, 2008). The SCCT model holds that perceived contextual barrier and support affect choice goal indirectly through self-efficacy and it was tested that there were no direct effects of perceived contextual barrier and support on choice goal. In this study, we adapted the integrated SCCT choice model (Figure 8) to examine the influence of personal attributes and contextual factors on entrepreneurial intention.

Figure 8. Integrated SCCT choice model. Solid paths were based on original SCCT model and dotted paths were based on Rogers et al. (2008) proposed additional paths.

1.0 Hypotheses Development

1.1 Predictors of Choice Goal

The SCCT choice model posits that the more efficacious an individual is, the higher the intention to engage in the career goal. Hence, we expect entrepreneurial

self-efficacy to be positively related to entrepreneurial intention; undergraduates with higher confidence in their ability to carry out entrepreneurial tasks will have significantly higher intention to start their own business (Hypothesis 1).

Another core construct in the SCCT choice model is outcome expectations. Past research adopting the SCCT model has focused largely on positive outcome expectations. The model suggests that when desired outcomes are associated with the goal behaviour, the more likely one will engage in the behaviour. While it is important to examine whether positive outcome expectations contribute to choice goal, the examination of the effect of negative outcome expectations is also paramount. As noted by Lent et al. (2000), “not all outcome expectations are positive. People may expect that pursuit of a given course of action will produce either neutral or negative outcomes, making them less likely to choose such activities” (p. 44). Based on the cognitive-motivational-relational theory of emotion (Lazarus, 1991), we conceptualized FoF as the perceived aversive consequences of business failure. As FoF was previously hypothesized as an internal career barrier (O’Leary, 1974), FoF in the entrepreneurial context can be fitted into the SCCT model as a form of negative outcome expectations (Lent et al., 2000; Swanson et al., 1996; Swanson & Woitke, 1997). We hypothesize that there is a significant negative relationship between FoF in the entrepreneurial context and entrepreneurial intention (Hypothesis 2); individuals who perceive more negative outcomes happening to them (if their business fails), will be less likely to pursue an entrepreneurial career.

According to the Entrepreneurial Orientation (EO) theory (Lumpkin & Dess, 1996), competitive aggressiveness is one of the characteristics that is important for the survival of new business ventures. We would assume kiasuism to relate positively with entrepreneurial intention as kiasuism was suggested to be a “highly competitive

spirit” (Hwang et al., 2002, p. 75). However, a qualitative study conducted with entrepreneurs from United States found that the entrepreneurs are competitive, but the competitive attitude possessed by a majority of the entrepreneurs were grounded in personal development instead of wanting to be better than others (Andre, 2013). In Study 2b, we found the dimensions of kiasuism (*getting ahead, pursuit of self-interest, not to lose out*) to be associated with interpersonal competitiveness. Hence, we expect significant negative relationships between the dimensions of kiasuism and entrepreneurial intention (Hypothesis 3).

1.2 Predictors of Entrepreneurial Self-Efficacy

Perceived contextual barrier and support are related to, but distinct from outcome expectations. Unlike outcome expectations that focus on distal payoffs or aversive consequences, perceived contextual barrier and support are “support and barrier that people envision encountering while in the process of pursuing a particular course of action” (Lent et al., 2000, p. 44). Hence, these contextual barrier and support are known as “process expectations”. Based on the hypothesized SCCT model, we expect significant negative relationship between perceived contextual barrier and entrepreneurial self-efficacy (Hypothesis 4a). We also expect positive relationship between perceived contextual support and entrepreneurial self-efficacy (Hypothesis 4b).

Being an entrepreneur is perceived to be a “masculine” career (Baron, Markman, & Hirsa, 2001; Gupta, Turban, Wasti, & Sikdar, 2009). Many studies have investigated the influence of gender on entrepreneurial self-efficacy. Some studies found that women perceived lower entrepreneurial self-efficacy than men (Díaz-García & Jiménez-Moreno, 2010; Scherer, Brodzinski, & Wiebe, 1990; Wilson et al., 2007). It was suggested that the lack of role models and experiential opportunities for

women, which are important sources of self-efficacy (Bandura, 1997), contributed to gender differences in entrepreneurial self-efficacy (Dyer, 1994). On the contrary, Zhao and Seibert (2005) did not find any gender effect on entrepreneurial self-efficacy. To address these contentious debates, Mueller and Dato-On (2008) investigated the role of stereotypical masculine/feminine orientation on entrepreneurial self-efficacy. They found no gender differences in entrepreneurial self-efficacy. However, participants with stereotypical masculine orientation (competitiveness, assertiveness, independence, and aggressiveness) had significantly higher entrepreneurial self-efficacy than those with stereotypical feminine orientation (submissiveness, dependence, deference, cooperation, caring, and nurturing). As we found kiasuism to be related to interpersonal competitiveness in Study 2b, we hypothesize the dimensions of kiasuism to have positive relationships with entrepreneurial self-efficacy (Hypothesis 5).

1.3 Predictors of FoF in the Entrepreneurial Context

People are more likely to envision positive payoffs when they have more confidence in performing the tasks successfully; hence, the SCCT model posits positive relationship between self-efficacy and positive outcome expectations. On the contrary, we expect negative relationship between entrepreneurial self-efficacy and negative outcome expectations; individuals with confidence in engaging entrepreneurial activities, will be less likely to perceive negative outcomes associated with business failure; lower FoF in the entrepreneurial context (Hypothesis 6).

In the 2012 GEM global report, economies from Asia Pacific and South Asia, especially innovation-driven economies (e.g., Singapore, Japan), scored the highest in FoF as compared to economies from Latin America and the European Union (Xavier, Kelley, Kew, Herrington, & Vorderwulbecke, 2012). The heightened sense of FoF in

Singapore may not be surprising as it is believed that FoF is more prominent in the Chinese culture than the Western culture due to the emphasis on loss of face (Begley & Tan, 2001). In another study entrepreneurial intention of university students were compared across five nations (United States, China, India, Spain, and Belgium), the researchers found that Chinese students were more interested in the professional careers (such as public administration) as compared to students of other four nations (Giacomin et al., 2011). The authors also found that there were no significant differences in entrepreneurial motivation of the students; instead, they differ in their sensitivity to motivators and/or barriers of entrepreneurship. Together, these studies illustrated the role of culture in heightening the sensitivity to barriers such as FoF. As discussed in Chapter 4, we observed the dimensions of KBM to be motivated by different reasons. *Not to lose out* is largely motivated by anxiety and concerned with not being judged as inferior. However, *getting ahead* and *pursuit of self-interest* focus on outperforming others and demonstration of one's ability. Hence, we expect no significant relationship between *getting ahead* and FoF (Hypothesis 7a) and no significant relationship between *pursuit of self-interest* and FoF (Hypothesis 7b). On the contrary, we expect positive relationship between *not to lose out* and FoF (Hypothesis 7c). Figure 9 presents the adapted SCCT choice model in examining the roles of FoF and kiasuism in influencing entrepreneurial intention.

Figure 9. Adapted SCCT choice model.

2.0 Method

2.1 Participants

Three hundred and sixty-four (122 males, 242 females) Singaporean undergraduates, ages ranged from 18 to 27 years old ($M = 21.38$, $SD = 1.44$), participated in this study. Participants were recruited from the university's research pool as they were enrolled in various psychology courses and obtained partial course credit for their participation. Students who took part in Study 1 and Study 2 were not allowed to take part in this study; screening was done by the research pool system. A majority of the participants ($n = 338$) had either full-time or part-time work experiences. None of the participants had experiences in starting a business. Only 16% of the participants have attended entrepreneurship courses.

2.2 Procedure

Survey information was posted on the research pool system. Interested students could sign up and access the survey link. The online survey was conducted on

Qualtrics.com and participants had to agree to the consent form before participation. Participants were asked to complete a battery of questionnaires (see Materials). The sequence of the questions for each questionnaire was randomized. Participants were assured on the confidentiality and anonymity of their responses. The survey took no longer than 30 minutes to complete.

2.3 Materials

2.3.1 Personal attributes - kiasuism

We utilized the 20-item KBM scale to measure participants' kiasuism level. Participants were instructed to indicate on a scale of 1 (*strongly disagree*) to 5 (*strongly agree*) the extent they agree or disagree with items such as “*I feel compelled to be ahead of others*” (getting ahead), “*It is important to hide my capabilities from others so that they will not strive to be better than me*” (pursuit of self-interest) and “*I want to get the most out of everything*” (not to lose out). Negatively worded items were reverse-coded and subscale scores were obtained by averaging the items associated with each dimension. A higher subscale score indicated stronger kiasu beliefs and motivations in the respective dimension.

2.3.2 Perceived contextual barrier and support

As there were no existing scales to measure specific entrepreneurial barrier and support, we made slight modification to the Perceived Barrier and Support scale (Lent et al., 2001) based on Lent and Brown (2006)'s recommendation. Based on the recommendation, we instructed participants to assume that they wanted to be an entrepreneur and rate how likely they would experience the specific barrier and support on a scale of 1 (*strongly disagree*) to 5 (*strongly agree*). Participants were presented with the item stem, “*If I were to be an entrepreneur, I would...*”, followed by the randomized order for 18 barrier statements (e.g., “*Feel a lack of support from*

my professors or advisors”) and 15 support statements (e.g., “*Have enough money saved up to be able to pursue my entrepreneurial career*”).

The 18-item perceived contextual barrier statements (see Appendix P) represent four dimensions: *social barrier*, *financial barrier*, *personal barrier*, and *gender/ethnicity discrimination*. Subscale scores were computed by averaging all the items within each dimension. An overall score was computed by averaging the subscale scores. A higher score indicated higher perceived contextual barrier.

The 15-item perceived contextual support statements (see Appendix Q) represent four dimensions: *social support*, *financial support*, *instrumental support*, and *role model support*. Subscale scores were computed by averaging all the items within each dimension. An overall score was computed by averaging the subscale scores. A higher score indicated higher perceived contextual support.

2.3.3 Entrepreneurial self-efficacy

Participants’ entrepreneurial self-efficacy was measured using a 7-item Entrepreneurial Self-Efficacy scale (see Appendix R) extracted from Chan et al. (2012)’s study. Participants were instructed to indicate on a scale of 1 (*not at all confident*) to 5 (*extremely confident*) how confident they were in performing the various tasks related to starting a business such as “*Start a firm and keep it growing*” and “*Identify opportunities to start-up viable businesses*”. An overall score was computed by averaging all items. A higher score indicated higher confidence in performing entrepreneurship-related tasks.

2.3.4 Outcome expectations - FoF in the entrepreneurial context

As mentioned in the earlier section, FoF reflects negative outcome expectations. The 36-item PACBF scale developed in Study 2a was used to measure FoF in the entrepreneurial context. Participants were instructed to indicate the

likelihood of encountering the consequences of business failure if they were entrepreneur. Participants rated on a scale of 1 (*highly unlikely*) to 5 (*highly likely*) on items such as “*If my business fails, others will have a bad impression of me*” and “*If my business fails, I will not have a good career development*”. Negatively worded items were reverse-coded and subscale scores were obtained by averaging the items associated with each dimension. An overall PACBF score was obtained by averaging the subscale scores. A higher score indicated higher level of FoF in the entrepreneurial context.

2.3.5 Choice goal – entrepreneurial intention

We measured entrepreneurial intention using the 6-item scale (see Appendix S) extracted from Chan et al. (2012)’s Career Aspiration Scale. Participants were asked to indicate on a scale of 1 (*strongly disagree*) to 5 (*strongly agree*) on their agreement with the statements associated with the intention to start a business venture either right after graduation or in the future. Sample items include: “*I am definitely going to be an entrepreneur after my studies and am prepared to do anything to achieve that goal*” and “*I will start my business in the next 5 years*”. One negatively worded item was reverse-coded and a composite score was computed by averaging all items. A higher score indicated higher intention to be an entrepreneur.

3.0 Results

3.1 Preliminary Analyses

Four multivariate outliers were removed from the analyses based on Mahalanobis distance (D^2), resulting in 360 cases. Item scores were normally distributed for all the scales. Mplus version 7 (Muthén & Muthén, 1998-2015) was used to conduct confirmatory factor analysis (CFA) and structural equation modeling.

We used several criteria to assess model fit. Models with RMSEA and SRMR values of less than .08 are considered to have acceptable model fit (Dimitrov, 2014; Hu & Bentler, 1999). Akaike information criterion (AIC; Akaike, 1974) and Comparative Fit Index (CFI; Bentler, 1990) were used for model comparison and selection; model with lower AIC values is more preferred and models with CFI values closer to 1 indicate better fit (Kline, 1998).

3.2 Confirmatory Factor Analysis for PACBF Scale

We conducted CFA for the PACBF scale to provide further support for the four-factor solution identified by EFA in Study 2a: financial damages, threat to self-worth, evaluation from others, and career damages.

Harman's single-factor test was conducted to check whether common method bias is a concern for our data (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). We first fitted all the 36 PACBF items to a single common-factor. All the fit indices indicated unacceptable fit: $\chi^2(594) = 2439.48, p < .001$, CFI = .736, RMSEA = .093, SRMR = .071. Hence, common method bias is not a threat in this study. Next, we fitted a four-factor model based on the EFA results in Study 2a and we found all fit indices to indicate acceptable fit: $\chi^2(588) = 1812.24, p < .001$, CFI = .825, RMSEA = .076, SRMR = .065. CFI value improved for four-factor model as compared to a single common-factor model. All standardized factor loadings were significant, $p < .01$.

As moderately strong correlations were observed among the factors in the calibration study (Study 2a) and in the current data (.55 to .78) and it was posited that FoF is a hierarchical, multidimensional construct (Birney et al., 1969; Conroy et al., 2001; Conroy et al., 2002), we fitted a second-order model comprising of the four first-order factors. The fit indices for the second-order model were comparable with the four first-order factors model. Standardized factor loadings were all significant, $p <$

.01. The second-order model is preferred as AIC value is lower (indicating better fit) and it has fewer parameters than the four first-order factors model. Table 16 summarizes the fit indices for the PACBF scale. Figure 10 presents the second-order model for the PACBF scale.

Table 16

Goodness-of-fit Summary for PACBF Scale

Model	No. of items	χ^2	df	χ^2/df	CFI	RMSEA	SRMR	AIC
Single common-factor model	36	2439.48	594	4.11	.736	.093	.071	30592.61
Four first-order factors model*	36	1812.24	588	3.08	.825	.076	.065	29977.37
Second-order model with four first-order factors	36	1812.70	590	3.07	.825	.076	.065	29973.83

Note. $N = 360$. * denotes four first-order factors model comprises of the lower-order dimensions of PACBF: financial damages, threat to self-worth, evaluation from others, and career damages.

Figure 10. Second-order model for PACBF scale. FD = Financial damages; TS = Threat to self-worth; EO = Evaluation from others; CD = Career damages; FoF = Fear of failure in entrepreneurial context. All error terms are not shown for clarity.

3.3 Confirmatory Factor Analysis for KBM Scale

We also conducted CFA on the newly constructed KBM scale to provide further support for the three-factor solution identified by EFA in Study 2b: getting ahead, pursuit for self-interest, and not losing out.

Similar to the PACBF scale, we fitted the 20 KBM items to a single common-factor model and results revealed unsatisfactory fit: $\chi^2(170) = 844.62, p < .001$, CFI = .729, RMSEA = .105, SRMR = .081. Next, we fitted the three first-order factors model based on the EFA results in Study 2b and SRMR indicated good fit (SRMR = .073). All loadings were significant, $p < .001$. Table 17 summarizes the fit indices for the KBM scale. Figure 11 presents the three first-order factors model for KBM scale.

Table 17

Goodness-of-fit Summary for KBM scale

Model	No. of items	χ^2	df	χ^2/df	CFI	RMSEA	SRMR	AIC
Single common-factor model	20	844.62	170	4.97	.729	.105	.081	17056.08
Three first-order factors model*	20	650.30	167	3.89	.806	.090	.073	16867.76

Note. $N = 360$. * denotes three first-order factors model comprises of the lower-order dimensions of KBM: getting ahead, pursuit of self-interest, and not losing out.

Figure 11. Three first-order factors model for KBM scale. GA = Getting ahead; SI = Pursuit of self-interest; NL = Not to lose out. All error terms are not shown for clarity.

3.4 Confirmatory Factor Analysis for Other Scales

CFA was conducted on all scales (i.e., perceived contextual barrier and support scale, entrepreneurial self-efficacy scale, entrepreneurial intention scale) to examine their factor structure in this study; all scales have factor structure that were similar to those reported in past studies. Psychometric properties for Perceived Contextual Barrier and Support scale were not reported and aggregated scores for support and barrier were used in past studies (e.g., Lent et al., 2001; Lent et al., 2003). These studies also noted that the use of aggregated scores might mask the differential effects these specific types of contextual support and barrier have on self-efficacy. We conducted CFA based on Lent et al. (2001) conceptualization of perceived contextual barrier and support. We fitted a four first-order factors model for perceived contextual barrier (social barrier, financial barrier, instrumental barrier, gender/ethnicity discrimination) and found good fit for the model (SRMR = .074). We also fitted a four first-order factors model for perceived contextual support (social support, financial support, instrumental support, role model support) and found good fit for the model (RMSEA = .078, SRMR = .068). Entrepreneurial self-efficacy and entrepreneurial intention were extracted from Chan et al. (2012) study and it was reported both constructs are represented by one-factor model. We replicated the factor structure and found good fit for entrepreneurial self-efficacy (SRMR = .067) and entrepreneurial intention (SRMR = .036). Table 18 summarizes the descriptive statistics and fit indices of all the scales utilized in this study.

Table 18

Mean (M), Standard Deviation (SD), Internal Consistency (α), and Fit Indices (Study 3)

Variable	<i>M</i>	<i>SD</i>	α	Fit Indices				
				χ^2	<i>df</i>	χ^2/df	RMSEA	SRMR
Perceived Consequences of Business Failure (PACBF)	3.32	0.60	.95	1812.70	590	3.07	.076	.065
Financial Damages	3.33	0.65	.87					
Threat to Self-worth	3.71	0.71	.84					
Evaluation from Others	3.06	0.72	.90					
Career Damages	3.19	0.67	.90					
Kiasu Beliefs and Motivations (KBM)				650.30	167	3.89	.090	.073
Getting ahead	3.14	0.74	.76					
Pursuit of self-interest	2.42	0.66	.76					
Not to lose out	3.53	0.54	.85					
Perceived Contextual Barrier				452.41	129	3.50	.084	.074
Perceived Social Barrier	2.88	0.61	.70					
Perceived Financial Barrier	3.68	0.68	.66					
Perceived Personal Barrier	3.46	0.58	.63					
Gender/Ethnicity Discrimination	2.19	0.70	.77					
Perceived Contextual Support				268.51	84	3.20	.078	.068
Perceived Social Support	3.68	0.45	.64					
Perceived Financial Support	2.90	0.72	.68					
Perceived Instrumental Support	3.52	0.59	.53					
Perceived Role Model Support	3.06	0.81	.74					
Entrepreneurial Self-Efficacy	2.72	0.83	.90	224.49	14	16.0	.204	.067
Entrepreneurial Intention	2.51	0.74	.87	72.86	9	8.10	.140	.036

Note. *N* = 360.

As mentioned earlier, it may not be feasible to use aggregated scores for contextual barrier and support as it may obscure the differential effects the specific barrier and support have on self-efficacy. To reduce complexity of our structural model, we examined the correlations among the specific types of contextual barrier and support with self-efficacy. We found *perceived personal barrier* and *perceived social support* to have the strongest correlations with entrepreneurial self-efficacy. Table 19 presents the correlations for specific types of barrier and support with entrepreneurial self-efficacy.

Table 19

Correlations among Perceived Contextual Support, Perceived Contextual Barrier, and Entrepreneurial Self-efficacy

Variable	1	2	3	4	5	6	7	8	9
1. Perceived social support	-								
2. Perceived financial support	.42***	-							
3. Perceived instrumental support	.47***	.44***	-						
4. Perceived role model support	.29***	.44***	.58***	-					
5. Perceived social barrier	-.40***	-.25***	-.31***	-.16**	-				
6. Perceived financial barrier	-.18**	-.50***	-.22***	-.23***	.47***	-			
7. Perceived personal barrier	-.15**	-.22***	-.14**	-.19***	.39***	.45***	-		
8. Perceived gender/ethnicity discrimination	-.17**	.020	-.09	.031	.37***	.07	.27***	-	
9. Entrepreneurial self-efficacy	.31***	.27***	.29***	.26***	-.18**	-.17**	-.28***	-.12*	-

Note. *** $p < .001$, ** $p < .01$, * $p < .05$. $N = 360$.

We further conducted regression to examine which dimensions of perceived barrier and support were related to entrepreneurial self-efficacy. We found that only *perceived social support* ($\beta = .18, p = .003$) and *perceived personal barrier* ($\beta = -.23, p < .001$) were significant predictors of entrepreneurial self-efficacy. Hence, only these two dimensions were included in our hypothesized model. Table 20 presents the regression analysis.

Table 20

Regression of Entrepreneurial Self-efficacy on Perceived Contextual Support and Barrier

	Standardized Coefficients
Perceived social support	.18**
Perceived financial support	.09
Perceived instrumental support	.12
Perceived role model support	.07
Perceived social barrier	.05
Perceived financial barrier	.04
Perceived personal barrier	-.23***
Perceived gender/ethnicity discrimination	.03
R^2	.19 **

Note. *** $p < .001$, ** $p < .01$, * $p < .05$. $N = 360$. Dependent variable = entrepreneurial self-efficacy.

3.5 Model Fit

Due to the large number of variables involved, we decided to create parcels for each construct to meet the rules of thumb that sample size has to be at least 10 observations per parameter (Bentler & Chou, 1987). That is, instead of using composite score to represent each construct, parcels were created as indicators to reduce measurement error (Kline, 1998). The item-to-construct balance approach was adopted in creating the parcels (Little, Cunningham, Shahar, & Widaman, 2002). The CFA factor loadings served as a guide to create the parcels; item scores of the highest

loaded item and lowest loaded item were averaged for parcels with two items. For parcels with three items, item scores for highest loaded item, moderately loaded items, and lowest loaded items were averaged. The aim is to achieve equally balanced among the parcels.

We constructed a model where all the item parcels loaded on a single common-factor. This model generated poor fit ($CFI = .524$, $RMSEA = .142$, $SRMR = .141$); hence, common method bias is not a threat in this study. Next, we constructed a measurement model where the individual parcels loaded on to their respective latent constructs. The purpose of examining the measurement model is to investigate the factor structure of the latent constructs. The measurement model containing seven first-order latent factors and one second-order factor was a good fit to our data ($CFI = .952$, $RMSEA = .047$, $SRMR = .043$).

After establishing good fit for the measurement model, we examined the structural model. Table 21 shows the correlations among the latent constructs included in the hypothesized structural model. The structural model was a good fit to our data ($CFI = .944$, $RMSEA = .050$, $SRMR = .059$). Table 22 summarizes the goodness-of-fit. Figure 12 presents the path coefficients of the structural model.

Table 21

Correlations among Hypothesized Structural Model Variables (Study 3)

Variable	1	2	3	4	5	6	7	8
1. Getting ahead	-							
2. Pursuit of self-interest	.42***	-						
3. Not to lose out	.65***	.49***	-					
4. Perceived Social Support	-.03	-.05	.09	-				
5. Perceived Personal Barrier	.14**	.05	.28***	-.15**	-			
6. Entrepreneurial Self-Efficacy	-.01	.16**	.05	.31***	-.28***	-		
7. FoF in the Entrepreneurial Context	.34***	.22***	.38***	-.17**	.51***	-.26***	-	
8. Entrepreneurial Intention	-.08	.25***	.00	.17**	-.28***	.48***	-.29***	-

Note. *** $p < .001$, ** $p < .01$, * $p < .05$. $N = 360$.

Table 22

Goodness-of-fit Summary

Model	χ^2	df	χ^2/df	CFI	RMSEA	SRMR	AIC
<i>Measurement model</i>							
32 indicators, 1 common-factor model	3839.43	464	8.27	.524	.142	.141	22043.16
Measurement model: 32 indicators, 7 first-order latent factors, 1 second-order factor	773.72	432	1.79	.952	.047	.043	19041.45
<i>Structural model</i>							
Hypothesized structural model	834.49	436	1.91	.944	.050	.059	19094.22

Note. $N = 360$.

Figure 12. Path coefficients of hypothesized structural model. Solid lines represent significant paths while dotted lines represent non-significant paths. *** $p < .001$, ** $p < .01$, * $p < .05$.

3.6 Hypothesis Test

3.6.1 Predictors of choice goal

We found support for Hypothesis 1; entrepreneurial self-efficacy was significantly positively related to entrepreneurial intention ($\beta = .38, p < .001$). Hypothesis 2 was also supported; FoF in the entrepreneurial context was significantly negatively related to entrepreneurial intention ($\beta = -.23, p < .001$). We found partial support for Hypothesis 3. The dimensions of KBM have differential effects on entrepreneurial intention. *Getting ahead* was significantly negatively associated with entrepreneurial intention ($\beta = -.23, p = .036$). *Pursuit of self-interest* was found to be significantly positively associated with entrepreneurial intention ($\beta = .43, p < .001$). *Not to lose out* was not associated with entrepreneurial intention ($\beta = -.02, p = .851$).

3.6.2 Predictors of entrepreneurial self-efficacy

Hypothesis 4a and 4b were supported; perceived social support was significantly positively associated with entrepreneurial self-efficacy ($\beta = .28, p < .001$) while perceived personal barrier was negatively associated with entrepreneurial self-efficacy ($\beta = -.40, p < .001$). We found partial support for Hypothesis 5; *pursuit of self-interest* was significantly positively associated with entrepreneurial self-efficacy ($\beta = .22, p = .023$) while *getting ahead* ($\beta = -.28, p = .101$) and *not to lose out* ($\beta = .30, p = .195$) were not associated with entrepreneurial self-efficacy.

3.6.3 Predictors of FoF in the entrepreneurial context

Hypothesis 6 was supported; entrepreneurial self-efficacy is significantly negatively associated with FoF ($\beta = -.33, p < .001$). As expected, *not to lose out* was found to be significantly positively associated with FoF ($\beta = .58, p < .001$) while *getting ahead* ($\beta = -.16, p = .253$) and *pursuit of self-interest* ($\beta = .08, p = .303$) were not associated with FoF. Table 23 summarizes the path analyses.

Table 23

Summary of Standardized Path Analyses

Hypothesis		Path	Parameter estimates
H1	Entrepreneurial Self-Efficacy	→ Entrepreneurial Intention	.38***
H2	Fear of Failure	→ Entrepreneurial Intention	-.23***
H3-a	Getting ahead	→ Entrepreneurial Intention	-.23*
H3-b	Pursuit of self-interest	→ Entrepreneurial Intention	.43***
H3-c	Not to lose out	→ Entrepreneurial Intention	-.02
H4a	Perceived Personal Barrier	→ Entrepreneurial Self-Efficacy	-.40***
H4b	Perceived Social Support	→ Entrepreneurial Self-Efficacy	.28**
H5-a	Getting ahead	→ Entrepreneurial Self-Efficacy	-.28
H5-b	Pursuit of self-interest	→ Entrepreneurial Self-Efficacy	.22*
H5-c	Not to lose out	→ Entrepreneurial Self-Efficacy	.30
H6	Entrepreneurial Self-Efficacy	→ Fear of Failure	-.33***
H7-a	Getting ahead	→ Fear of Failure	-.16
H7-b	Pursuit of self-interest	→ Fear of Failure	.08
H7-c	Not to lose out	→ Fear of Failure	.58***

Note. *** $p < .001$, ** $p < .01$, * $p < .05$.

4.0 Discussion

4.1 Summary of Main Findings

In this study, we utilized the newly constructed PACBF scale as a measurement of FoF in the entrepreneurial context and KBM scale as a measurement of kiasuism to examine its influence on entrepreneurial intention.

This study has three implications. First, our findings provided support for Lent et al. (2000)'s assertion that examining negative outcome expectations is as important as examining positive outcome expectations. While one may have higher entrepreneurial intention when envisioning desirable outcomes associated with started a business, it is also possible for one's entrepreneurial intention to decrease when envisioning undesirable consequences of business failure. Second, we found FoF in the entrepreneurial context to be negatively associated with entrepreneurial intention; this implies that higher FoF in the entrepreneurial context, as measured by the

perceived likelihood of facing the aversive consequences of business failure, is associated with lower entrepreneurial intention. We will discuss more about the influence of FoF on entrepreneurial intention in the next section. Third, there is a need to revisit the assumption that kiasuism is a barrier to entrepreneurship. While *not to lose out* and *getting ahead* may be a barrier to entrepreneurial entry, we found *pursuit of self-interest* to be positively related to entrepreneurial intention.

Our results indicated that undergraduates' confidence in performing entrepreneurial tasks successfully was positively associated with entrepreneurial intention and negatively associated with FoF. One possible explanation is that efficacious people respond more positively to negative setbacks (Bandura & Locke, 2003) and expend more effort to overcome challenges (Avey, Wernsing, & Luthans, 2008). Therefore, business failure may not be perceived as aversive to self-efficacious people (Avey, Patera, & West, 2006). This finding suggests that increasing entrepreneurial self-efficacy is a possible way to address FoF in the entrepreneurial context.

Among the dimensions of perceived contextual barrier and support, perceived social support and perceived personal barrier were found to contribute significantly to entrepreneurial self-efficacy. This finding indicates that family and friends' support in having an entrepreneurial career could help to build one's confidence. On the contrary, perceived personal barrier can influence entrepreneurial self-efficacy negatively; when undergraduates perceived the entrepreneurial career to take up their personal time and/or possibilities of facing competition from rivals, they perceived lower self-efficacy in accomplishing the entrepreneurial tasks. This finding suggests that undergraduates' judgement of their entrepreneurial ability can be affected by their

evaluation of the time commitment in the business as well as whether there will face competition from other entrepreneurs.

4.2 FoF: A Barrier to Entrepreneurship

Overall, we found the PACBF scale to be negatively related to entrepreneurial intention; this implies that undergraduates with high FoF in the entrepreneurial context were less likely to have the intent to start their own business venture. Our findings supported the articulation that FoF is better viewed as a loss aversion than a risk aversion (Morgan & Sisak, 2016). Clearly, the consequences of business failure were perceived to be aversive and the negative relationship observed between FoF in the entrepreneurial context and entrepreneurial intention implies that one would not want to start a business in order to avoid the chances of business failure and experiencing undesirable outcomes. These findings have implications for policy-makers; first, instead of focusing on the drivers of entrepreneurial intention, there is a need to examine the psychological barriers of entrepreneurial intention as well. Second, the four dimensions of the perceived consequences of business failure highlighted the major concerns related to business failure and addressing these concerns may help to reduce FoF in the entrepreneurial context.

4.3 Kiasuism: A Barrier and a Facilitator of Entrepreneurship

Kiasuism was believed to be a bane to entrepreneurship (Low, 2006; Tan, 2003). However, we found the dimensions of kiasuism to have differential effects on entrepreneurial intention. *Not to lose out* was found to have indirect negative effect on entrepreneurial intention through FoF. This finding is not surprising as *not to lose out* is largely motivated by anxiety. *Getting ahead* was found to be negatively associated with entrepreneurial intention; undergraduates who were motivated by the desire to perform better than others were less likely to have the intention to start their own

business. One plausible explanation is that individuals motivated by *getting ahead* may prefer a conventional career such as a managerial job as it is less risky, hence, higher chances of success and achieving better outcomes as compared to having an entrepreneurial career path, which is associated with higher level of risks (Busenitz, 1999) and possibility of failure. As highlighted in earlier chapter, Ho et al. (1998) found that kiasuism is related to *kiasi-ism*, that is, being risk-averse. We postulate that *getting ahead* may be closely related to *kiasi-ism*, which explains the negative relationship with entrepreneurial intention.

Our findings revealed that kiasuism may not necessary be a barrier to entrepreneurship. Surprisingly, *pursuit of self-interest* has a direct positive relationship with entrepreneurial intention. Individuals motivated by the *pursuit of self-interest* are those that focus on “me first” and achieving their desired goals even “at the expense of others” or “at all costs”. Hence, these individuals may not be averse to loss and may have high risk-taking propensity, thus explaining the positive relationship with entrepreneurial intention. Another possible explanation is that *pursuit of self-interest* reflects Schwartz theory of basic values: power and achievement values (Schwartz, 1992). Individuals pursuing these self-enhancement values are motivated to achieve personal success by demonstrating their competency and also to attain social status and prestige even if it is to harm or exploit others (Schwartz, 2012); these characteristics are similar to *pursuit of self-interest* dimension of kiasuism. Additionally, it was found that the self-enhancement values predicted entrepreneurial intention (Jaén, Moriano, & Liñán, 2010).

To summarize, the purpose of this study is to utilize the SCCT model to examine the factors influencing Singaporean undergraduates’ entrepreneurial intention. FoF in the entrepreneurial context was found to have a negative influence on

entrepreneurial intention. While it was believed that kiasuism plays a wholly negative influence on entrepreneurial intention, we found differential effects of kiasuism. Our results indicated that a person with high kiasuism may not necessary avoid being an entrepreneur and it depends on the kiasu motivations.

CHAPTER SIX: GENERAL DISCUSSIONS

Although barriers in general have been relatively neglected as compared to predictors of entrepreneurial intention, psychological barriers in particular have been neglected as compared to the institutional barriers. One of the reasons for this neglect could be that studies of the barriers to entry have largely been conducted from business and economic perspectives. The business and economic perspectives cannot provide a complete picture of entrepreneurial intention, as is demonstrated in Singapore, where there are few institutional barriers to entrepreneurial activity, and yet the intention to become an entrepreneur is low among its young adults (Singer et al., 2015). This research focuses on psychological barriers believed to play a role in the low entrepreneurial spirit among Singaporeans: FoF and kiasuism. While local officials have highlighted the need for Singaporeans not to be afraid of failure (Lim, 2014; Yong, 2011) and to eliminate kiasuism to drive entrepreneurship (Ong, 2016), there is a lack of empirical support to such claims. Hence, this research aims to examine the role of FoF and kiasuism in influencing entrepreneurial intention among university students. Due to the limitations in the current available measures for the two constructs, we also developed and validated new measures of FoF and kiasuism. In the following section, we summarized the three sets of studies conducted.

1.0 Summary Of The Three Sets of Studies

A mixed-method approach (Creswell & Plano Clark, 2007) was utilized in the development of the PACBF scale and KBM scale. We used the SCCT model as a framework to examine the relationships among FoF, kiasuism, and entrepreneurial intention.

The cognitive-motivation-relational theory of emotion serves as a theoretical framework for the development of a new measure to assess FoF in the entrepreneurial

context: appraisal of threatening outcomes elicits fear (Lazarus, 1999). We found four themes (*financial damages, threat to self-worth, evaluation from others, career damages*) associated with the perceived aversive consequences of business failure in Study 1a. The findings from Study 1a provided a foundation for the construction of a new scale to assess FoF in the entrepreneurial context. An internally consistent, multidimensional 36-item PACBF scale was developed and CFA conducted in Study 3 supported a second-order factor. Convergent validity was demonstrated in Study 2a and the relationship between FoF and entrepreneurial intention also demonstrated criterion validity for the PACBF scale.

The strict focus on behaviours in past studies on kiasuism led us to assert the need for a fresh examination of kiasuism. Domain analysis was utilized to uncover the themes for various kiasu behaviours, underlying reasons for kiasuism, emotions associated with kiasuism, and the indicators of kiasuism in Study 1b. We found evidence that the kiasu motivations (i.e., fear of losing out potential benefits, desire to not lose out to others, to get ahead of others) are indicators of kiasuism. Behaviours may not be perceived as kiasu when there is absence of such motivations. Hence, we contended that the underlying beliefs and motivations should be included in any valid measure of kiasuism. The responses associated with the reasons and emotions of being kiasu were utilized in the construction of the items for the KBM scale. EFA conducted in Study 2b revealed a three first-order factors model of kiasuism: *getting ahead, pursuit of self-interest*, and *not to lose out*. CFA conducted in Study 3 replicated the factor structure. We also demonstrated convergent and criterion validity for the multidimensional, 20-item KBM scale.

Utilizing the PACBF scale and KBM scale, Study 3 adopted the SCCT model to examine the influence of FoF and kiasuism on entrepreneurial intention. We found

FoF to have an overall negative influence on entrepreneurial intention. The dimensions of kiasuism have differential effects on entrepreneurial intention; *getting ahead* and *not to lose out* had negative (direct and indirect) influence on entrepreneurial intention while *pursuit for self-interest* was positively associated with entrepreneurial intention. Table 24 summarizes the three sets of studies conducted.

Table 24

Summary of Studies Conducted

Study	Purpose	Methodology/Analyses	Sample	Key findings
Development of measure for FoF in entrepreneurial context				
Study 1a	<ul style="list-style-type: none"> To investigate the perceived aversive consequences associated with business failure. 	<ul style="list-style-type: none"> Semi-structured qualitative interviews Thematic analysis 	<ul style="list-style-type: none"> $N = 35$ 15 males, 20 females $M_{\text{age}} = 22.74$, $SD_{\text{age}} = 1.42$ 	<ul style="list-style-type: none"> 12 lower-order categories grouped into four higher-order themes: financial damages (91%), evaluation from others (54%), threat to self-worth (51%), career damages (37%). 61 items were generated based on the findings.
Pilot Study for Study 2a	<ul style="list-style-type: none"> To examine the clarity and comprehensibility of the initial 61 PACBF items. Preliminary analysis for item reduction. 	<ul style="list-style-type: none"> 61-item PACBF scale was administered. 	<ul style="list-style-type: none"> $N = 38$ 19 males, 19 females $M_{\text{age}} = 21.87$, $SD_{\text{age}} = 2.10$ 	<ul style="list-style-type: none"> Removal of 14 items with similar content or corrected item-total correlation with value less than .30 (Kline, 1993). 47-item PACBF scale for Study 2a.
Study 2a	<ul style="list-style-type: none"> To examine the factor structure of the 47-item PACBF scale. To demonstrate convergent validity. 	<ul style="list-style-type: none"> 47-item PACBF scale was administered. Parallel analysis conducted to prevent over-factoring EFA (ML with Promax) conducted to investigate factor structure. PFAI and STAI were used to establish convergent validity. 	<ul style="list-style-type: none"> $N = 401$ 149 males, 252 females $M_{\text{age}} = 21.72$, $SD_{\text{age}} = 1.72$ 	<ul style="list-style-type: none"> Parallel analysis revealed a maximum of 8 factors. Four factors retained: financial damages, threat to self-worth, evaluation from others, career damages. 11 items eliminated, resulting in a final 36-item PACBF scale. Cronbach's alpha = .95. Correlational analysis supported convergent validity.

Table 24 (continued)

Study	Purpose	Methodology/Analyses	Sample	Key findings
Development of measure for kiasuism				
Study 1b	<ul style="list-style-type: none"> To investigate (i) examples of kiasu behaviours, (ii) reasons for being kiasu, (iii) emotions associated with kiasuism, (iv) indicators of kiasuism. 	<ul style="list-style-type: none"> Semi-structured qualitative interviews Spradley (1979) domain analysis 	<ul style="list-style-type: none"> $N = 31$ 13 males, 18 females $M_{\text{age}} = 22.73$, $SD_{\text{age}} = 1.34$ 	<ul style="list-style-type: none"> Seven categories of kiasu behaviours grouped into two themes: (i) kiasu behaviours in social context (87%), (ii) kiasu behaviours in academic context (60%). Reasons for being kiasu: (i) fear of losing out potential benefits, (ii) desire to not lose out to others or to get ahead of others. Emotions: anxiety (48%), satisfaction (49%), happiness (38%), relief (24%), achievement (14%), guilt (10%), embarrassment and disgust (38%). 43 items were generated.
Pilot Study for Study 2b	<ul style="list-style-type: none"> To examine the clarity and comprehensibility of the initial 43 KBM items. Preliminary analysis for item reduction. 	<ul style="list-style-type: none"> 43-item KBM scale was administered. 	<ul style="list-style-type: none"> $N = 38$ 19 males, 19 females $M_{\text{age}} = 21.87$, $SD_{\text{age}} = 2.10$ 	<ul style="list-style-type: none"> Removal of 15 items with similar content or corrected item-total correlation with value less than .30 (Kline, 1993). 28-item KBM scale for Study 2b.
Study 2b	<ul style="list-style-type: none"> To examine the factor structure of the 28-item KBM scale. To demonstrate convergent validity and criterion validity. 	<ul style="list-style-type: none"> 28-item KBM scale was administered. Parallel analysis conducted to prevent over-factoring. EFA (ML with Promax) conducted to investigate factor structure. Psychological entitlement and Inter-competitiveness scale were used to establish convergent validity. Kiasu behaviour scales were used to establish criterion validity. 	<ul style="list-style-type: none"> $N = 401$ 149 males, 252 females $M_{\text{age}} = 21.72$, $SD_{\text{age}} = 1.72$ 	<ul style="list-style-type: none"> Parallel analysis revealed a maximum of 7 factors. Three factors retained: getting ahead, pursuit of self-interest, not to lose out. 8 items eliminated, resulting in a final 20-item KBM scale. Cronbach's alpha = .88. Correlational analysis supported convergent validity and criterion validity.

Table 24 (continued)

Study	Purpose	Methodology/Analyses	Sample	Key findings
Examine roles of FoF and kiasuism in influencing entrepreneurial intention				
Study 3	<ul style="list-style-type: none"> To replicate factor structure for PACBF scale and KBM scale. To examine the influence of FoF and kiasuism on entrepreneurial intention. 	<ul style="list-style-type: none"> CFA conducted on 36-item PACBF scale, 20-item KBM scale. SEM to examine model fit for adapted SCCT model. 	<ul style="list-style-type: none"> $N = 364$ 122 males, 242 females $M_{\text{age}} = 21.38$, $SD_{\text{age}} = 1.44$ 	<ul style="list-style-type: none"> PACBF scale: Four first-order factors replicated; CFA supported second-order factor structure. KBM scale: Three first-order factors replicated; CFA supported three first-order factors. Overall adapted SCCT model had good model fit. FoF in the entrepreneurial context negatively associated with entrepreneurial intention. Kiasuism has differential effects on entrepreneurial intention; <i>getting ahead</i> (direct effect) and <i>not to lose out</i> (indirect effect via FoF) negatively associated with entrepreneurial intention. <i>Pursuit of self-interest</i> positively associated with entrepreneurial intention.

Note. The qualitative studies (Study 1a and Study 1b) were conducted as a single study. Scale calibration studies (Study 2a and Study 2b) were conducted as a single study.

2.0 Theoretical Implications

2.1 FoF in the Entrepreneurial Context

Our research contributes to the literature in several ways. First, in contrast to the current single-item measure of FoF used in most current entrepreneurship research, our findings support the contention that entrepreneurial FoF is a multidimensional construct: *financial damages, threat to self-worth, evaluation from others, and career damages*. The perceived aversive consequences of business failure comprises of concerns about immediate outcomes (e.g., loss of capital) and enduring outcomes (e.g., not having good career development).

Second, by investigating the perceived aversive consequences of business failure, our study makes a theoretical contribution to the literature by clarifying the multidimensionality of the FoF construct and establishing its relevance as a barrier to entrepreneurial intention. We highlighted some aspects that may vary across cultures, such as familial involvement and filial norms, and an aspect that may be constant across cultures—face-related concerns. Third, our findings provided evidence that the only existing multidimensional measure of FoF (the PFAI developed with athletes and performers; Conroy, 2001) does not adequately capture the consequences of failure in an entrepreneurial context. Our newly constructed 36-item PACBF scale encompassed the PFAI dimensions; but, they also went beyond it with the identification of several categories of a financial dimension and aspects of a career-related theme that are not addressed by the PFAI.

Next, we found negative influence of FoF on entrepreneurial intention. While existing literature has established the negative relationship between FoF and entrepreneurial intention, past studies measured FoF based on the single-item that assumed a wholly avoidant outcome of FoF or the PFAI that was developed from the

sports and academic domains. The use of PACBF scale may be a more accurate measurement to examine the relationship between FoF and entrepreneurial intention.

2.2 Kiasu Beliefs and Motivations

The examination of the kiasuism construct also contributed to the existing literature. Existing literature on kiasuism focus on the behavioural aspect and more specifically, on academic kiasu behaviours. Our research provided a clearer understanding of kiasuism by examining both motivations and emotions associated with being kiasu. The results of our analysis suggest that (i) kiasuism is a multidimensional construct consisting of *getting ahead*, *not to lose out*, and *pursuit of self-interest*, (ii) the motivation for a behaviour is key to determining whether it is kiasu, and (iii) performing kiasu behaviours may be surrounded by some predictable negative and positive emotions. Given these findings, our research provided ample reason to doubt the validity of prior measures of kiasuism. We highlighted the necessity of developing a new measure of kiasuism with content and construct validity. We developed and validated a 20-item kiasuism scale that taps on the beliefs and motivations associated with kiasuism. Our KBM scale also demonstrated better psychometric properties than existing measures of kiasuism. The newly constructed 20-item KBM scale allow for a more detailed exploration of the role of kiasuism in the social problems such as academic behaviours, success of innovative pedagogy, and well-being.

This is the first study that examines the role of kiasuism on entrepreneurship. We refuted the claim that kiasuism has a sole negative influence on entrepreneurship. Past studies have described kiasuism as “negative complement of competitiveness” (Kagda, 1993) and is related to conformity (Ang et al., 1996). Contrary to the existing beliefs about kiasuism, we found *pursuit of self-interest* to be positively associated

with entrepreneurial intention. Hence, our research provided preliminary evidence that kiasuism may not necessary be a barrier to entrepreneurship.

3.0 Practical Implications

Our research provided evidence of some of the assumptions and misperceptions that Singaporean undergraduates have regarding entrepreneurship that may be useful for policy-makers and educators to consider in developing programs to address Singapore's dearth of young entrepreneurs. Despite Singapore's strong institutional support for entrepreneurs, the financial consequences of business failure were still the top concern among our participants. One reason for such a perception could be due to the unrealistic ideas about debt and bankruptcy as this topic may be considered taboo (Yago & Trimbath, 2003). As mentioned by one participant in Study 1a, the media portrayal of failed business ending up in bankruptcy may have affected her perception of business failure in Singapore. In addition, parents may play a bigger role in the financial aspects of the decision to become an entrepreneur in Singapore than in a Western context because of the cultural emphasis on filial obligations and because of a preference for family members as business partners. The implication for policy-makers is the need to not only target students for entrepreneurship education programs but also to encourage the participation of parents. For instance, Babson College offers programs targeting parents and their child to foster entrepreneurial mind-set in the parent-child dyad. In this program, parents and their children form a team to work on an entrepreneurial idea and through the process, understand the values and skills needed for business success (Babson College, 2016). Similarly, grants could be offered to parent-child partnership for new start-up initiatives.

Self-efficacy stands out as an important construct in increasing entrepreneurial intention. We found entrepreneurial self-efficacy to be negatively associated with FoF.

This finding indicates promising ways to reduce FoF. One of the ways to reduce FoF via fostering self-efficacy beliefs is through engaging undergraduates in experiential entrepreneurship learning. For instance, start-up firms can provide internship opportunities to allow undergraduates to gain experience in tasks related to start-up processes. Additionally, established entrepreneurs can provide training and coaching for undergraduates.

In the SCCT model, we also found perceived social support to be positively associated with entrepreneurial self-efficacy. Alternatively, policy-makers can work towards reducing the perceived personal barrier. One way is to provide networking sessions with entrepreneurs so that entrepreneurs can share how they cope with time pressure and also to share about the execution process for their start-up business.

The government could also consider lowering the emphasis on grades and academic achievement, and raising the emphasis on practical experience and skills in civil service hires. This is exceptionally important given that in Study 1a, we found undergraduates to perceive those who failed in the business to be less favourable in employment. Similarly, kiasuism has been highlighted as a cause of problems in Singapore's education system. For example, as Ho (1998) noted, the 1989 Report of the Advisory Council on Youths found that Singaporean students are exam-oriented and lack curiosity. Our results provided some support for the contention that 27 years later, Singaporean undergraduates are still exam-oriented. Participants also described being motivated in their studies by comparisons with other students. Few mentioned learning for personal interest, or for personal career goals. It seems that Singaporean undergraduates emphasize performance learning not mastery learning. The focus on what one may lose, instead of on personal development or the potential for gain, may explain the added reluctance to try entrepreneurship despite Singapore's favourable

business environment. We suspect that the strong emphasis on performance may have contributed to lower intention to pursue an entrepreneurial career path as government employment is highly sought after due to their job security, high pay, and status.

Giving preference to those who have taken the initiative to start their own business would help students to reduce focus on peer comparison and allow room for the perception that the experience of starting a business is valuable regardless of whether the business ultimately succeeds or not. If people who attempt entrepreneurial endeavours are given priority in hiring for government positions even if their business venture does not succeed, they may be able to reframe entrepreneurship as another type of valuable experience, instead of as a risk to their career path.

Although the Singapore government assists start-up companies in their venturing process by offering grants, there is also a need to provide safety nets for entrepreneurs who may fail during their start-up attempts. For instance, providing a second chance for failing companies may lessen the negative influence of fear on business venture. For example, in Silicon Valley, entrepreneurs who failed are given the opportunity to revert to the previous job they were in before they embark their entrepreneurship process (Venkataraman, 2004). To cultivate the Silicon Valley mindset to “fail fast, learn quickly” as suggested by Singapore Prime Minister, Lee Hsien Loong (Prime Minister's Office, 2014), this form of second chancing is important such that stigma attached to business failure can be reduced for entrepreneurs who have failed. The emphasis on the gain of human capital during the venture despite failing will help to develop a culture that views failure as part of a learning process instead of viewing failure as a detrimental outcome. In addition to showcasing the processes of successful entrepreneurs, it may be important in Singapore to host conferences like

FailCon (with the motto “Embrace your mistakes”), which invites start-up founders to gather and learn from their own and others’ failures and prepare for a second attempt.

4.0 Limitations

4.1 Generalizability of Findings

Our study is not without limitations. First, we utilized undergraduates in our studies that may limit the generalizability of our findings. For instance, the perception of business failure may be different for working adults as well as entrepreneurs. However, we do expect a degree of similarity in the perception of business failure across different samples, as the perceived consequences of business failure generated from our study did not differ from existing literature that investigated the experience of actual business failure. For example, a meta-analysis conducted to investigate the consequences of business failure revealed entrepreneurs to experience financial costs (e.g., debts), social costs (e.g., social stigma, negative impact on personal relationships), and psychological costs (e.g., negative emotions of shame, humiliation) as aftermath of business failure (Ucbasaran et al., 2013). Similarly, another study that investigated entrepreneurs’ experience of stigma associated with business failure (Singh et al., 2015), reported failed entrepreneurs to experience stigma related to *threat to self-worth* (e.g., self-stigmatization that involves criticizing and blaming self) and *evaluation from others* (e.g., ostracized by friends and family). Additionally, examining undergraduates’ FoF also allow future studies to compare our results with entrepreneurs.

Cacciotti et al. (2016) interviewed entrepreneurs to examine the sources or causes of FoF in entrepreneurship. Entrepreneurs’ internal cognitive evaluations (i.e., ability to execute entrepreneurial tasks, accountability to stakeholders, potential of idea, opportunity costs) and external situated social cues (i.e., concern over loss of

livelihood and wealth, ability to finance the venture, capacity of the venture) were found to be the major sources of FoF in entrepreneurship. We found parallels among the dimensions of PACBF and entrepreneurs' perceived sources of FoF. However, the PACBF scale only captures the aversive consequences of business failure and not concerns related to the nature of business venturing (i.e., potential of idea, ability to finance the venture, capacity of the venture). Hence, the PACBF scale may not be able to measure the fear of *failing* during the entrepreneurial process.

The interviews generated rich information about kiasuism with varied responses, and our sample was appropriate for understanding kiasuism relevant to the particular social issues we raised. However, we acknowledge the limitations of our sample of undergraduates and the possibility of generational differences in kiasuism and in the social issues related to it. A future study should expand the sample to people of different age groups, social status, and educational levels to explore potential differences and to triangulate results. On the positive side, as the previous measures of kiasuism were both developed with undergraduate samples and included items relevant to students' experiences, the KBM scale developed from the qualitative interviews could be directly compared to the previous measures.

4.2 Focus on Entrepreneurial Intention

Another limitation is the focus on entrepreneurial intention as a criterion. Although entrepreneurial intention is a good proxy for entrepreneurial activity, it is not a measurement of actual entrepreneurial behaviour. Longitudinal studies can be conducted to examine whether entrepreneurial intention does translate to actual entrepreneurial activity and how FoF evolves during the entrepreneurial process. Future studies could also examine the influence of FoF on implementation intention, which refers to the where, when, and how of behaviour that translates goal intention to

specific actions (Gollwitzer, 1999).⁶ Although FoF is a barrier to entrepreneurial intention, it could promote implementation intention and motivate entrepreneurs to strive to avoid failure. Similarly, future studies could extend the SCCT model to examine how career goals influence career actions and performance outcomes.

5.0 Future Directions

Despite these limitations, our research provides a platform for future theoretical and practical investigation on a number of fronts.

5.1 Further Validation of PACBF Scale and KBM Scale

This thesis has examined the internal reliability, convergent validity, and criterion validity of both PACBF scale and KBM scale. Future studies can also examine the test-retest reliability, divergent validity, and predictive validity to further establish the psychometric properties of the newly constructed scales.⁷

Both scales can also be validated with other samples. For instance, we proposed that FoF acts as a barrier to entrepreneurship; however, we do not mean that entrepreneurs do not have this fear. According to Cacciotti et al. (2016), FoF is experienced during the entrepreneurial process. PACBF scale was developed and validated using undergraduate samples. While we provided evidence that the perception of business failure may be similar across different samples, we hope the

⁶ We thank the anonymous examiner who suggested the implication of FoF on implementation intention.

⁷ Chan et al. (2012) found negative relationship between entrepreneurial intention and professional intention; individuals who have the intention to be an expert or to pursue a professional career have lower intention to be an entrepreneur. Participants' intention to be a professional was also examined in Study 3. We conducted regression analysis and found that PACBF was negatively associated with entrepreneurial intention but not associated with professional intention. Similarly, *getting ahead* dimension of kiasuism was negatively associated with entrepreneurial intention but not associated with professional intention. *Pursuit of self-interest* was positively associated with entrepreneurial intention but negatively associated with professional intention. *Not to lose out* was not significantly associated with entrepreneurial intention but was positively associated with professional intention. The investigation on professional intention was not included in this thesis as the focus was on entrepreneurial intention. However, we noted that it is important to present the findings to establish predictive validity of the newly constructed scales.

PACBF scale can be validated with entrepreneur samples. Future studies can explore the differences in perception between undergraduates and entrepreneurs and examine the sources that contribute to the differences in the perceived aversive consequences associated with business failure.⁸

The PACBF can also be validated with entrepreneurs by examining the influence on entrepreneurial processes such as entrepreneurs' investment in potential new opportunity, evaluation of investment opportunity, and innovative behaviours during the entrepreneurial journey. Drawing from Mitchell and Shepherd (2011) research, future studies can examine whether all the dimensions of FoF influence entrepreneurship processes in the same way or whether the effects vary. We posit that when one gains sufficient self-efficacy in entrepreneurial tasks, FoF will act as a motivation to not fail in the business. Future studies can be conducted with entrepreneurs to examine whether there is an existence of such threshold that delineates FoF as a barrier and as a motivation.

The current study can also be extended to working adults to examine whether FoF plays a role in influencing entrepreneurial intention just as it does for the undergraduate samples. Factors such as financial status and number of years of working experience can also be taken into consideration to examine whether these factors play a role in attenuating the negative effect of FoF on entrepreneurial intention.

⁸ We have previously collected a small entrepreneur sample as a pilot study. Ninety-three Singaporean entrepreneurs (59 males, 34 females), ages ranged from 19 to 60 ($M = 29.14$, $SD = 7.83$), were recruited in our pilot study and the PACBF scale was administered. Most of the entrepreneurs were e-commerce retailers and resellers; years of entrepreneurial experience ranged from 1 year to 19 years. Based on the pilot entrepreneur dataset, we found that as compared to student samples, entrepreneurs had significantly lower PACBF scores.

5.2 Establish Nomological Network for PACBF Scale

As FoF in this thesis is based on the cognitive-motivation-relational theory of emotion (Lazarus, 1991), it is also important to consider the role of coping. Primary appraisal will activate beliefs associated with aversive consequences of failing and elicit fear. Secondary appraisal, the process of evaluating one's resources and options for coping (Lazarus, 1991), plays a significant role as it determines whether the perceived threat will be more or less threatening.

According to Lazarus and Folkman (1984), coping refers to “the thoughts and behaviors used to manage the internal and external demands of situations that are appraised as stressful” (Folkman & Moskowitz, 2004, p. 745). The current study focuses on entrepreneurial self-efficacy, it would be interesting to examine the role of coping efficacy, which refers to the belief in one's ability to cope with environmental demands of the stressful situation; this belief is also part of the secondary appraisal.

Personality traits found to differentiate between entrepreneurs and non-entrepreneurs include Big-Five personality, risk-taking propensity, innovativeness, and proactive personality. Future studies can also examine how these personality traits are related to PACBF scale to establish nomological network of PACBF scale.

5.3 Establish Nomological Network for KBM Scale

Similarly, nomological network can be established for KBM scale in future studies. In light of the theme of competitiveness that has permeated in the past literature on kiasuism and in our study, further research on the relation between competitiveness and kiasuism is warranted. For example, we noted that our data bring to mind the concept of hypercompetitiveness, which is defined as an indiscriminate need to compete and beat others at all costs so as to maintain or enhance feelings of self-worth; winning is an end in itself (Horney, 1937). In hypercompetitiveness, the

inability to separate self-worth from performance leads to extreme competitive behaviours to get ahead of others. However, instead of emphasizing personal self-worth, people in Chinese societies tend to emphasize face (Hwang, 1992; Kam, 2008), which is self-worth based on social recognition. Kirby and Ross (2007, p. 109) postulated that kiasuism and hypercompetitiveness are distinct by defining hypercompetitiveness as “a maladaptive behaviour” and kiasuism as “a tactic”, but no empirical investigation has been conducted to examine their relationship. A deeper consideration of the psychological mechanisms and processes will be possible with the use of the newly constructed KBM scale.

Another possibility is to examine kiasuism from the perspective of achievement motivation. Yu and Yang (1994) posited two forms of achievement motivation in Chinese societies: individual-oriented achievement motivation (IOAM, focus on individual success) and social-oriented achievement motivation (SOAM, focus on achievement of performance goals related to social recognition and self-other comparison). Competitiveness predicts SOAM (Chang, Wong, & Teo, 2000). Future studies could explore kiasuism as a form of SOAM predicted by competitiveness. Applying this perspective allows for inclusion of local values into the understanding of kiasuism.

We also hope researchers will examine the antecedents and consequences associated with kiasuism. For instance, investigating the personality traits related to the dimensions of kiasuism may explain the differential effects of kiasuism on entrepreneurial intention. As highlighted in Chapter 5, one possible explanation for the positive relationship between *pursuit of self-interest* and entrepreneurial intention could be due to risk-taking propensity. So future studies could examine whether the three dimensions differ in their risk-taking propensity level.

Concern over the negative implications of kiasuism has evolved beyond the fear that kiasu behaviour may give Singapore a bad reputation. In recent years, there has been a growing consensus that kiasuism has a negative influence on the way children in Singapore are educated (Ellis, 2014; Tan, 2014). For example, Singaporean families spend close to S\$1.1 billion (US\$780 million) annually on cram schools for their children to ensure they are at the top of their class (Department of Statistics Singapore, 2014). Even pre-schoolers are sent to preparatory enrichment classes to get a head start over others (Ng, 2012; Toh, 2008). Future studies can investigate how the three dimensions of kiasuism influence academic behaviours as well as well-being.

5.4 Investigation of Cultural Differences in FoF

GEM studies included a measurement of FoF to examine whether there are national differences in FoF level. Similarly, future studies could examine whether the perceived consequences of business failure differ by countries or by cultures either by comparing the subscale scores or have participants rate how threatening or relevant each consequence is to them.

While we would expect people from any country to have financial concerns in an entrepreneurial context, there may be aspects that vary with the cultural context, such as the emphasis on family financial obligations, concern with financial impact on close others, the expectation of family joint investment, and even comfort level with debt. For instance, we noted that one item “*my relationship with important others will be affected*” was part of the *financial damages* dimension in the PACBF scale; this finding may be unique to the Chinese culture. Based on the qualitative interviews, when participants were describing about the financial consequences they might have to face, many were concerned about financial impact on others. As mentioned in Chapter 3 (see Page 43), participants were concerned about providing financial support to their

families and parents. Being financially independent and providing support to their family is particularly important for young adults in Chinese societies (Zhong & Arnett, 2014). Hence, participants might have perceived the relationship strain to be a result of their perceived inability to provide financial support to important others. The PACBF scale can be administered to other cultures to examine whether the factor structures can be replicated.

In addition, Chinese societies emphasize being thrifty, conservative, and debt-free (Yao, Sharpe, & Gorham, 2011). For instance, compared to participants from the United States, Chinese participants had less tolerance towards debt and held more conservative attitude towards credit (Norvilitis & Mao, 2013) and Asians are more credit card adverse than Caucasians (Naseri & Elliott, 2007). Also, young adults from low-income families might even feel a stronger need to provide financial support to their family upon completion of their education and obtaining employment, as observed in a study where it was found that level of family income was negatively associated with a sense of duty to support, assist, and respect their families (Fuligni & Pedersen, 2002). Hence, it would be interesting to examine whether attitude towards debts or the need to provide financial support to their family increases FoF and deters individuals from starting their own business.

Our results also highlighted what may be a universal response to failure: concern over loss of face. Although the Western participants in Conroy's (2001) PFAI study did not use the term *face* as ours did, the two of the five dimensions of PFAI (*fear of experiencing shame and embarrassment* and *fear of devaluing one's self-estimation*) are outcomes of face loss. The current study identified the cognitive concern of face loss, along with identical concerns with the outcomes of face loss. The

implication is that face may also be a useful umbrella concept for future studies exploring FoF in a Western context.

5.5 Examination of Kiasuism in Other Cultures

Past studies have found prevalence of kiasuism in Chinese Malaysian communities (Goh, 2006; Lee, 2007) and beliefs similar to kiasuism were also found in Hong Kong (Wu & Dai, 2001). Hence, kiasuism may play a role in entrepreneurship not only in Singapore context but also in Chinese societies. Future studies can be conducted to examine the prevalence of kiasuism in Chinese societies and also its influence in entrepreneurship.

Cross-cultural comparison may be another important avenue for research. Studies have provided evidence of kiasu behaviours in Australia and in US (Ho et al., 1998; Kirby et al., 2010; Kirby & Ross, 2007). As kiasuism was measured using the kiasu tendency scale (Ho et al., 1998), it is unclear whether the participants were displaying kiasuism, or something different that results in kiasu-like behaviours. This is a question for future research. We suspect it is unlikely that kiasuism operates in exactly the same way in Western cultures if it is in fact rooted in deeper Confucian values relating to face, identity, and morality that inform obligations to succeed for the sake of other people (Bedford & Hwang, 2003). However, investigation of kiasuism in relation to phenomenon indigenous to other cultures may bring some unexpected findings. For example, FoMO (fear of missing out) entails a desire to stay connected to what others are doing and has been explained with self-determination theory (Przybylski, Murayama, DeHaan, & Gladwell, 2013). Like kiasuism, it encompasses constant concern with other people. Cross-cultural comparison of related indigenous concepts may lead to provocative insights in both societies.

6.0 Conclusion

This thesis presents the studies undertaken to examine the psychological barriers believed to play a role in the low entrepreneurial spirit among Singaporeans: FoF and kiasuism. We developed and validated two scales: PACBF scale and KBM scale to measure FoF in the entrepreneurial context and kiasuism respectively. We found that FoF acts as a barrier to entrepreneurship; undergraduates with high FoF are less likely to have the intention to start their own business. On the other hand, the dimensions of kiasuism have differential influences on entrepreneurial intention. The results of our research offered insights to policy-makers and educators on the concerns Singaporean youths have about starting a business and we provided recommendations on how to increase entrepreneurial spirit in Singapore.

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Appendix A

Summary of Predictors of Entrepreneurial Intention

Authors	Model	Predictors	Country	Findings
Abebe (2012)	TPB	Perceived social norm Perceived social support Perceived institutional support Control variables: Proactive personality, Entrepreneurial education, Work experience, Role model	US+	Beyond the control variables, perceived social support and perceived social status have significant positive relationship with EI.
Altinay et al. (2012)	-	Risk-taking propensity as a mediator for personality traits & family background. Personality traits: Internal locus of control, Innovativeness, Tolerance of ambiguity, Propensity to take risk, Need for achievement Family background: Entrepreneurial family tradition	UK+	Innovativeness, entrepreneurial family tradition positively related with EI. Tolerance of ambiguity and innovativeness positively related to risk-taking propensity. No significant direct relationships found between internal locus of control, tolerance for ambiguity, innovativeness, and need for achievement with EI. No relationships found between need for achievement, internal locus of control, family background with propensity to take risk.
Ang and Hong (2000)	-	Comparisons of predictors of EI from two cultures: Hong Kong and Singapore Personality traits: Risk-taking propensity, tolerance for ambiguity, persistence and hard work, achievement orientation, internal locus of control, innovativeness, independence. Entrepreneurial motivation: Love for money, desire to gain security, desire to gain social status. Consequences of Entrepreneurship: Philanthropic and expenditure on self.	Hong Kong Singapore+	Risk-taking propensity and persistence (negative) were significant predictors of EI in Hong Kong while risk-taking propensity, internal locus of control, love for money were significant predictors of EI in Singapore. EI positively associated with beliefs in ethical acts and excess material expenditure on oneself but not believe in philanthropic behaviours.

Authors	Model	Predictors	Country	Findings
Autio, Keeley, Klofsten, Parker, and Hay (2010)	TPB	Personal attitude Subjective norm PBC	Finland US Sweden UK+	Cross-cultural support for TPB. PBC was found to be a strong determinant of EI.
Bektaş (2011)	TPB	Personal attitude Subjective norm PBC Additional variables: Expected Utilities Perceived feasibility	Turkey+	Subjective norm was not a good predictor of EI. Perceived feasibility and attitude toward behaviour were stronger predictors of EI.
Byabashaija & Katono (2011)	EEM & TPB	Perceived desirability Perceived feasibility Perceived self-efficacy Subjective norms Employability and Perceived future commitment (situational factors)	Uganda+	E education positively related to perceived desirability and feasibility. E education positively related to self-efficacy. Subjective norms significantly positively related to perceived desirability and feasibility. No significant relationship between subjective norms and self-efficacy. Perceptions of desirability, feasibility and self-efficacy have a significant positive relationship with EI. Perceptions of desirability, feasibility mediated the relationship between societal subjective norms and EI but not and self-efficacy.
Carr & Sequeira (2007)	TPB (addition of Prior Family Business Exposure as a distal predictor)	Prior Family Business Exposure Personal Attitude Subjective norm PBC	US^	Prior family business exposure has direct and indirect influence on entrepreneurial intention. Attitudes towards business, perceived family support, PBC acted as mediator for the indirect effect.

Authors	Model	Predictors	Country	Findings
Chlosta, Patzelt, Klein, and Dormann (2010)	Influence of role models and openness on EI	Entrepreneurial Role Models Openness Control: Age, gender, marital status, goal achievement, extraversion, agreeableness, conscientiousness, neuroticism.	US+	Openness was positively related to EI. Presence of role models (especially Paternal) was a significant predictor of EI. Openness moderated the influence of paternal role models of EI (the more open, the stronger the effect).
Crant (1996)	TPB	Proactive personality Control: Age, gender, work experience, entrepreneurial parents	US+	Males have higher EI than females. MBA have higher EI than undergraduates. Participants with entrepreneurial parents have higher EI than those without. Proactive personality explained addition of 17% of the variance in EI.
de Pillis and DeWitt (2008)	-	Personality traits: Achievement motivation, tolerance for ambiguity, and personal efficacy. Having entrepreneurial parents, perceived effectiveness of entrepreneurship.	US+	Perceived effectiveness and achievement motivation were significant predictors of EI for women. Perceived effectiveness, ambiguity tolerance, and personal control were significant predictors of EI for men.
Devonish et al. (2010)	EEM	Perceived feasibility Perceived desirability Entrepreneurial experience	Barbados+	Results supported Shapero-Krueger model. Entrepreneurial experience had a stronger effect on perceived feasibility, and perceived feasibility had a stronger effect on entrepreneurial intentions, compared with perceived desirability.
Diaz-Garcia & Jimenez-Moreno (2010)	TPB (addition of gender, entrepreneurial family as antecedents to subjective norms, self-efficacy, attitude)	Attitude towards behaviour Subjective norms Self-efficacy	Spain+	Attitude, social norm, and self-efficacy positively associated with EI. Gender moderates the relationship between social norms and EI (stronger for women).

Authors	Models	Predictors	Country	Findings
do Paço, Ferreira, Raposo, Rodrigues, and Dinis (2011)	TPB	Personal attitude Subjective norm PBC	Portugal*	Personal attitude, PBC, and subjective norm positively associated with EI. Subjective norm positively associated with personal attitude and PBC. Personal attitude positively associated with PBC.
Drost and McGuire (2011)	ESE is a mediator between three antecedents	Entrepreneurial Education Entrepreneurial Experience Proactive personality ESE	Finland+	Mediating effect of ESE was found between E education and EI was found. Mediating effect of ESE was found between proactive personality and EI. No relationship between E experience and EI.
Engle et al. (2010)	TPB	Attitude towards behaviour Personal wealth Personal Autonomy Subjective norms Perceived Self-efficacy	Various+	Predictors in the TPB framework were found to be associated with EI in many countries.
Ferreira et al. (2012)	TPB (addition of person factors to model)	Person inputs: Locus of control, propensity to risk, self-confidence, innovativeness, need for achievement, tolerance of ambiguity. Attitude towards behaviour Self-confidence Subjective norms	Portugal*	Need for achievement, self-confidence, and personal attitude predicted entrepreneurial intention. Subjective norms and personal attitude affect perceived behavioural control.

Authors	Model	Predictors	Country	Findings
Fitzsimmons & Douglas (2011)	EEM (Interaction between perceived feasibility and perceived desirability)	Perceived desirability (attitude to ownership) Perceived feasibility (ESE)	Australia China Thailand India+	Perceived feasibility positively associated with EI. Perceived desirability positively associated with EI. Perceived feasibility moderates the positive relationships between perceived desirability and EI (stronger for high perceived feasibility).
Gird and Bagraim (2008)	TPB (added personality traits, situational factors, prior exposure, demographics)	Attitude towards behaviour Subjective norms PBC Personality traits: Need for achievement, locus of control, tolerance for ambiguity. Situational measures: Instrumental readiness (access to resources), social support Exposure to entrepreneurship	South Africa+	Attitudes, PBC, Subjective norms significantly predicted EI. Controlling for the variables from TPB, instrumental readiness predicted EI. Controlling for the variables from TPB, self-employment experience predicted EI. Controlling for the variables from TPB, personality traits did not predict EI.
Griffiths, Kickul, and Carsrud (2009)	Cultural cognitive approach	Examine cultural practices and attitudes toward entrepreneurship (includes capability beliefs, taking responsibility, E traits, seeking opportunities, E motivation, fears about being E), GDP, ease of doing business, corruption on EI.	Various+	Seeking opportunities, valuing E traits, capability beliefs, E fears, E motivation significantly predicted EI. Controlling for the cultural practices and attitudes towards entrepreneurship, increased in GDP and corruption had negative relationship with EI. Controlling for the above, ease of doing business was positively related to EI.
Gurel et al. (2010)	-	Personality traits: innovativeness, propensity to take risks. Cultural values: Individualism Entrepreneurial family, Education	Turkey UK+	Students with a higher risk-taking propensity and higher innovativeness are more entrepreneurially inclined. No relationship among locus of control, tolerance of ambiguity and intention to start a business. Positive relationship between entrepreneurial family and EI.

Authors	Model	Predictors	Country	Findings
Hmieleski and Corbett (2006)	-	Proclivity for improvisation Personality traits as control: Big 5 Motivation: Locus of control, self-efficacy, need for autonomy, risk-taking, tolerance for ambiguity Cognitive style: Innovativeness, Learning Orientation Social environment: presence of entrepreneurial role models.	US+	Proclivity for improvisation explained EI beyond personality traits, motivation, cognitive style, and social environment.
Ismail et al. (2009)	-	Big Five Perceived barriers Perceived support, close support and entrepreneurial intention. Control variables: Gender, E course, E parents.	Malaysia+	Entrepreneurial course, Close support, Extraversion, Openness were significant predictors of EI.
Kolvereid (1996)	TPB	Attitudes on employment or self-employment: security, work load, social environment, avoiding responsibility, economic opportunity, challenge, autonomy, authority, self-realization, participation in the whole process. Subjective norm PBC	Norway+	Variables in TPB predicted EI significantly.
Kolvereid and Isaksen (2006)	TPB (addition of salient beliefs to attitudes)	Salient beliefs: Autonomy, authority, self-realization, economic opportunity Attitude towards behaviour Subjective norms PBC	Norway^	All 4 salient beliefs were significantly related to intentions. Attitude and subjective norm were significantly associated with intentions. Only one of the four self-efficacy measures, opportunity recognition, was marginally significantly related to intentions in the expected direction.

Authors	Model	Predictors	Country	Findings
Kristiansen and Indarti (2004)	-	Demographics: gender, age, educational background, Work experience Personality and attitudes: Need for achievement, locus of control, self-efficacy Contextual elements (instrumental readiness): Capital access, Information access, Social networks.	Norway Indonesia+	In both countries, only self-efficacy and instrumental readiness were significant predictors of EI.
(Krueger, 1993)	EEM (with E experience influencing both feasibility and desirability)	Perceived desirability Perceived feasibility Breadth of E experience Positiveness of E experience Propensity to act	US+	Feasibility, desirability, and propensity to act significantly predicted EI. Breadth and positiveness of E experience predicted both feasibility and desirability but not EI.
Liñán & Chen (2009)	TPB (addition of human capital and demographic variables that influence attitude, PBC, and SN)	Developed the Entrepreneurial Intention Questionnaire that measures PBC, SN, and attitudes Attitude towards behaviour Subjective norms PBC	Taiwan Spain+	Gender significantly related to attitude and PBC. Presence of role model significantly related to attitudes. Self-employment experience positively related to subjective norms. Work experience significantly related to PBC. Only attitudes and PBC related to EI but not subjective norms.
Liñán and Santos (2007)	EEM (Addition of bonding social capital & bridging social capital as antecedents of perceived desirability and perceived feasibility)	Perceived feasibility Perceived desirability Contact with E environment Close approval of start-up Close valuation Family entrepreneur Non-family entrepreneur	Spain+	Bonding social capital had positive relationships with perceived desirability. Only two indicators of bonding social capital (close approval of start-up and non-family entrepreneur) had positive relationship with perceived feasibility. Bridging social capital only had positive relationship with perceived feasibility and not perceived desirability as hypothesized. Both perceived desirability and perceived feasibility had positive relationship with EI.

Authors	Model	Predictors	Country	Findings
Liñán et al. (2010)	EEM/TPB	Knowledge of the entrepreneurial institutional framework (entrepreneurial knowledge), personal attitude, social norms, self-efficacy and intention	Spain+	Personal attitude and PBC were found to be the most significant predictors of EI.
Miller, Bell, Palmer, and Gonzalez (2009)	TPB	E Education Perception of support factors Favorable attitudes entrepreneurship Perception of barriers Awareness of E challenges Knowing an Entrepreneur Control variables: Business Knowledge	US+	Gender and business knowledge were significant predictors of EI. Those in E program had higher EI than those who are not. Entrepreneurial challenge significantly predicted EI.
Prieto (2011)	-	Influence of proactive personality on Social EI, moderated by hope.	US+	Positive relationship between proactive personality and social EI. Hope did not moderate the relationship.
Pruett, Shinnar, Toney, Llopis, and Fox (2009)	TPB	National culture, Exposure to Entrepreneurial role models, Family support, Entrepreneurial dispositions (motivation, creativity, ability), Perception of motives and barriers.	US, Spain, China+	Culture was a significant predictor of EI. Presence of E in immediate family was a significant predictor of EI. Expectation of family support was a significant predictor of EI. Independence and creativity were significant predictor of EI. Three barrier factors (lack of personal experience), operating risk, and start-up risks were significantly related to intentions.
Qureshi, Ahmed, and Khan (2011)	-	Influence of family exposure, support, barriers on EI.	Punjab+	Males and with family entrepreneurial exposure were more likely to start their own business than females. Environmental factors did not significantly affect the EI.

Authors	Model	Predictors	Country	Findings
Shook & Bratianu (2010)	TPB (addition of specific desirabilities, perceived desirability, perceived feasibility to model)	Specific Desirabilities Perceived desirability Self-efficacy Perceived feasibility Subjective norm	Romania*	Specific desirabilities positively associated with perceived desirability. Specific desirabilities positively associated with EI. Perceived desirability positively associated with EI. Subjective norms negatively associated with E.I Self-efficacy positively associated with EI. Self-efficacy positively associated with perceived feasibility. Perceived feasibility positively associated with EI.
Singh and DeNoble (2003)	Influence of personality traits on EI	Big 5, presence of close self-employed relative	US+	Extraversion and neuroticism were negatively related to EI.
Tung, Yin, and Mui (2011)	TPB	Perceived University Encouragement, Perceived educational support, Academic Major, Attitudes (attitude towards entrepreneurship, towards change, towards money, towards competition), entrepreneurial role model.	Malaysia+	Perceived university exposure was a significant predictor of EI. Perceived educational support was a significant predictor of EI. Academic major was a significant but weak predictor of EI. Attitude towards entrepreneurship and towards competition were significant predictors of EI. Presence of family role model was a significant predictor of EI.
Turker and Selcuk (2009)	ESM/TPB	Impacts of self-confidence, perceived level of education, and perceived opportunities on entrepreneurial propensity. Control variables: Gender, year of education, type of education, type of university, work experience, entrepreneurial history	Turkey+	Educational and structural support factors related to the entrepreneurial intention of students. Support from family (perceived relational support) did not predict EI.
Van Auken et al. (2006)	-	Influence of role model on intention.	US Mexico+	Role models influenced career intentions for both US and Mexican respondents.

Authors	Model	Predictors	Country	Findings
van Gelderen et al. (2008)	TPB	Attitude: measures importance of autonomy, importance of wealth, challenge, financial security, work load avoidance. Subjective norms: whether they have self-employed friends and family members PBC: measures perseverance, creativity, entrepreneurial alertness, self-efficacy.	The Netherlands +	A preference for financial security was a consistent predictor. Attitude towards autonomy was a poor predictor of EI. Having entrepreneurial role models positively related to EI. Entrepreneurial alertness positively associated with EI. Perseverance did not predict EI.
Wilson, Marlino, and Kickul (2004)	-	Motivations: Autonomy, Social, Relational, Financial	US*	Girls were more motivated by social and relational factors than boys who were more motivated by autonomy. Financial gain was a huge motivator for EI.
Wu and L. (2008)	TPB (addition of educational background as distal predictors)	Education background: educational level, academic majors, academic achievement, entrepreneurial education	China+	Based on the TPB, attitudes and PBC were found to predict EI significantly but not subjective norms. Educational level, academic majors, academic achievement predicted EI through personal attitude. Academic majors also predicted EI through PBC. E education was not significantly related to any other constructs.
Zarafshani and Rajabi (2011)	-	MBTI Form G	Iran+	High EI students are more extraverted and sensing than low EI students.

Note. + = University students; * = Students; ^ = Non-students; TPB = Theory of Planned Behaviour; PBC = Perceived Behaviour Control; ESE = Entrepreneurial Self-efficacy; EEM = Entrepreneurial Events Model; ESM = Entrepreneurial Social Model; EI = Entrepreneurial Intention; E = Entrepreneurial.

Appendix B

Sample Coding Scheme for Consequences of Business Failure

Category	Description
Bankruptcy	Participant perceived himself/herself or the entrepreneur to be declared bankrupt if the business fails.
Negative views from others	Participant perceived others having negative views of him/her or the entrepreneur or being judged negatively by others if the business fails.
Social status affected	Participant perceived himself/herself or the entrepreneur to suffer from loss of social status if the business fails.
Getting nothing in return from the business venture	Participant perceived getting nothing out of the entrepreneurial experience or having no achievement if the business fails.
Negative impact on job	Participant perceived that if himself/herself or the entrepreneur has a full-time job, the business failure will have a negative effect on the job.
Faces difficulty in career track	Participant perceived himself/herself or the entrepreneur to face difficulties in pursuing another career, job; may be due to perception of being less favorable as compared to their peers or younger generation who had better work experience than the entrepreneur if the business fails.

Appendix C

Additional Quotes Associated with Categories in Study 1a

Category	Quotes
Monetary loss	<p>“I would think it also mainly a lack of capital so let’s say for example, if let’s say you make a loss right...I mean I was thinking like say how are you going to cover your losses if you don't have your capital”. (P2)</p> <p>“First thing I think they will lose a lot of money”. (P20)</p>
Bankruptcy	<p>“If it just fail, you can just start again but if you are declared bankrupt you most probably have to find a job and pay back your money everything before you can start anew”. (P1)</p> <p>“Some of the examples I’ve read in news reports perhaps bankruptcy”. (P12)</p>
Debt	<p>“I said your personal savings would all be invested in that thing, in that business. If it fails, you don’t have any personal savings, in order for you to survive you still need that money.. yah.. and you know with all those loans and everything.. and if you don’t have the money, you have to borrow”. (P3)</p> <p>“If they really fail right, I think they will need to fork out a lot of money to pay off their debts”. (P24)</p>
Difficulty financially supporting family	<p>“My family has no active income so if I were to start anything so the capital injection if I lose it then I guess it will be very tough for the family”. (P1)</p> <p>“If you failed in the business, you are unable to support your family and sustain your living”. (P12)</p>
Financial damage to others	<p>“Another thing would be having to become a burden for my parents because they may be...they may have to help me to pay out my debts”. (P11)</p> <p>“His dad is my aunt’s husband and he still owe my dad money then my family is not very well-off and my dad was like because he’s a very traditional kind of person so he will say like... “we are one family so don’t”...he...he feels very embarrassed to ask for money and the problem is that we are not that well-off already and the sum is not small sum. It's like S\$10K, S\$20K. I think it helps in elevating my financial problems then my father is still not going back and ask for money”. (P33)</p>
Loss of status/face/reputation in the eyes of others	<p>“If you fail, I would if I fail in my business, I don’t have face to meet anyone else”. (P4)</p> <p>“I think it’s more like you know the face problem. You...there’s this you wouldn’t want people to judge you...ya...and cause you are afraid of failing so and as I say I feel entrepreneur is high risk and of course I mean it’s in sync is it...ya...so, it will deter a person from trying to be an entrepreneur”. (P33)</p>
Loss of support/confidence/trust	<p>“Let’s say if I need help but it’s very hard for me to find help for my entrepreneurship”. (P25)</p> <p>“Then from other people looking at you, it will be like the family members... they won't...they may like lose confidence in you or something”. (P24)</p>

Strained relationship with others	“You can result in your family having a lot of problems”. (P14)
Disappointing others	<p>“If you fail the business right, you may like let down a lot of other people rather than just ourselves and like you have to answer for all these as well”. (P17)</p> <p>“Perhaps they disappoint their family, friends”. (P32)</p>
Negative emotions	<p>“I feel that emotional effect will also be kind of great because I know of friend’s friend whose business online business.. not much capital to talk about. Failed and he’s quite devastating...it’s very saddening to see this kind of thing happen”. (P4)</p> <p>“I think it will be quite embarrassing especially people around you know a lot of thing and you like trying to sell to them as well but then ya think that’s all I find the initial losses”. (P18)</p>
Negative impact on self-esteem	<p>“I think this will this may make him less...more risk adverse in the future I don’t think he will have that guts to like start a new business again”. (P13)</p> <p>“You could become more like, you know, “maybe I shouldn’t do it, because I’m not cut out for it”. So that’s the kind of loss, yeah, because it could be a successful business but you just stop trying to venture”. (P16)</p>
Falling behind peers in terms of: Career progress/ earning potential/skills/ status	<p>“Consequences I think because if you are an entrepreneur, you have to start everything from scratch, you have to go back to the old route then I need to spend more time you know climbing back going to the route and getting all the experience again so I think that may be affect me as I want to be on path with people that graduate with me. For example, if I start the entrepreneur route first, if I fail, I will be lagging behind them. Compared with if you go hand in hand, then I graduate, 10 years down I have the same experience then I can venture into entrepreneurship then I can get advantage then if I fail the effect won’t be that great”. (P5)</p> <p>“Let’s say I want to pursue a business, outside of that’s mean I have to quit my job and pursue...then I think its very hard to go back again”. (P8)</p>

Appendix D

Performance Failure Appraisal Inventory (PFAI; Conroy, 2001)

Instructions: Read each statement below and think of *how often you believe each is true* in your performance domain. Using the scale below, indicate how much you believe each statement applies to you.

Scale:

-2	-1	0	+1	+2
Do not believe at all	Believe 25% of the time	Believe 50% of the time	Believe 75% of the time	Believe 100% of the time

1. When I am failing, it is often because I am not smart enough to perform successfully. 2. When I am failing, my future seems uncertain. 3. When I am failing, it upsets important others. 4. When I am failing, I blame my lack of talent. 5. When I am failing, I believe that my future plans will change. 6. When I am failing, I expect to be criticized by important others. 7. When I am failing, I am afraid that I might not have enough talent. 8. When I am failing, it upsets my “plan” for the future. 9. When I am failing, I lose the trust of people who are important to me. 10. When I am not succeeding, I am less valuable than when I succeed. 11. When I am not succeeding, people are less interested in me. 12. When I am failing, I am <i>not</i> worried about it affecting my future plans. 13. When I am not succeeding, people seem to want to help me less. 14. When I am failing, important others are not happy. 15. When I am not succeeding, I get down on myself easily. 16. When I am failing, I hate the fact that I am not in control of the outcome. 17. When I am not succeeding, people tend to leave me alone. 18. When I am failing, it is embarrassing if others are there to see it. 19. When I am failing, important others are disappointed. 20. When I am failing, I believe that everybody knows I am failing. 21. When I am not succeeding, some people are not interested in me anymore. 22. When I am failing, I believe that my doubters feel that they were right about me. 23. When I am not succeeding, my value decreases for some people. 24. When I am failing, I worry about what others think about me. 25. If I fail, I will worry that others may think that I am not trying.	<table border="0" style="margin: auto;"> <tr> <td>-2</td><td>-1</td><td>0</td><td>+1</td><td>+2</td></tr> </table>	-2	-1	0	+1	+2
-2	-1	0	+1	+2		

Appendix E

State-Trait Anxiety Inventory Form Y (STAI; Spielberger, 1983)

Instructions: A number of statements which people have used to describe themselves are given below. Read each statement and then indicate your response to the right of the statement to indicate how you *generally* feel. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer that seems to describe how you generally feel.

Scale:

1	2	3	4
Almost never	Sometimes	Often	Almost Always

1. I feel pleasant.	1	2	3	4
2. I feel nervous and restless.	1	2	3	4
3. I feel satisfied with myself.	1	2	3	4
4. I wish I could be as happy as others seem to be.	1	2	3	4
5. I feel like a failure.	1	2	3	4
6. I feel rested.	1	2	3	4
7. I am "calm, cool, and collected".	1	2	3	4
8. I feel that difficulties are piling up so that I cannot overcome them.	1	2	3	4
9. I worry too much over something that really doesn't matter.	1	2	3	4
10. I am happy.	1	2	3	4
11. I have disturbing thoughts.	1	2	3	4
12. I lack self-confidence.	1	2	3	4
13. I feel secure.	1	2	3	4
14. I make decisions easily.	1	2	3	4
15. I feel inadequate.	1	2	3	4
16. I am content.	1	2	3	4
17. Some unimportant thought runs through my mind and bothers me.	1	2	3	4
18. I take disappointments so keenly that I can't put them out of my mind.	1	2	3	4
19. I am a steady person.	1	2	3	4
20. I get in a state of tension or turmoil as I think over my recent concerns and interests.	1	2	3	4

Appendix F

EFA Results for One to Eight-factor Solutions (PACBF scale)

Scale Items:	F1
24. If my business fails, I will lose face.	0.772
39. If my business fails, I will think that I'm useless.	0.747
25. If my business fails, I will doubt my capabilities.	0.736
16. If my business fails, I will feel ashamed.	0.723
5. If my business fails, others will look down on me.	0.710
6. If my business fails, others will have a bad impression of me.	0.708
36. If my business fails, others will lose confidence in me.	0.704
7. If my business fails, I will think that all I'm good for is nothing.	0.695
33. If my business fails, I will feel embarrassed.	0.694
18. If my business fails, I will lose status.	0.689
41. If my business fails, others will be disappointed with me.	0.682
30. If my business fails, my family will lose face.	0.678
31. If my business fails, others will judge me negatively.	0.672
8. If my business fails, my reputation will be destroyed.	0.648
38. If my business fails, I will face great financial burden.	0.637
11. If my business fails, I will be at a loss of what to do for my career.	0.635
21. If my business fails, I will feel as though my whole world has collapsed.	0.627
27. If my business fails, there will be a lot of family problems.	0.627
26. If my business fails, I will lose the trust of others.	0.620
35. If my business fails, I will give up being an entrepreneur.	0.608
22. If my business fails, it will be an emotional setback for me.	0.591
40. If my business fails, my relationship with important others will be affected.	0.588
2. If my business fails, I will lose confidence in myself.	0.58
28. If my business fails, I will lose a lot of money.	0.571
29. If my business fails, it will be difficult for me to get a job.	0.571
12. If my business fails, I will view the failure for the rest of my life.	0.558
20. If my business fails, people around me will be disappointed, as I did not meet their expectations.	0.545
10. If my business fails, I will not have a good career development.	0.540
34. If my business fails, I will have to start from nowhere as I have no money.	0.540
23. If my business fails, I will feel that I am getting nothing out of the venture.	0.537
37. If my business fails, I will be one step behind everyone in the working world.	0.533
32. If my business fails, it will be financially tough for my family.	0.530
14. If my business fails, I will be disappointed with myself.	0.513
15. If my business fails, I will feel that I could have used the time to gain work experience instead.	0.494
17. If my business fails, I will have difficulty providing financial support for my family.	0.490
8. If my business fails, it will take a lot of time to climb the corporate ladder.	0.483

Scale Items:	F1
3. If my business fails, I will lose all my capital.	0.468
1. If my business fails, I will face bankruptcy.	0.457
4. If my business fails, it will be a waste of time.	0.440
13. If my business fails, I will have no income.	0.440
19. If my business fails, I will have to borrow money from my friends.	0.388
44. If my business fails, others will not talk bad about me.	0.380
45. If my business fails, I will not be afraid to be an entrepreneur again.	0.345
46. If my business fails, I will not be sad.	0.326
43. If my business fails, my reputation will not be at stake.	0.319
42. If my business fails, I will not have difficulty paying the debt.	0.305
47. If my business fails, I will not lose out to my peers in terms of work experience.	0.232
<i>Note.</i> EFA results for one-factor solution. $\chi^2(1034) = 3824.32, p < .001$, RMSEA = .083, SRMR = .073.	

Scale Items:	F1	F2
34. If my business fails, I will have to start from nowhere as I have no money.	0.767	
38. If my business fails, I will face great financial burden.	0.753	
17. If my business fails, I will have difficulty providing financial support for my family.	0.692	
19. If my business fails, I will have to borrow money from my friends.	0.618	
13. If my business fails, I will have no income.	0.598	
29. If my business fails, it will be difficult for me to get a job.	0.585	
28. If my business fails, I will lose a lot of money.	0.573	
11. If my business fails, I will be at a loss of what to do for my career.	0.571	
32. If my business fails, it will be financially tough for my family.	0.568	
3. If my business fails, I will lose all my capital.	0.544	
23. If my business fails, I will feel that I am getting nothing out of the venture.	0.543	
37. If my business fails, I will be one step behind everyone in the working world.	0.540	
10. If my business fails, I will not have a good career development.	0.536	
27. If my business fails, there will be a lot of family problems.	0.509	
9. If my business fails, it will take a lot of time to climb the corporate ladder.	0.506	
1. If my business fails, I will face bankruptcy.	0.494	
40. If my business fails, my relationship with important others will be affected.	0.464	
39. If my business fails, I will think that I'm useless.	0.460	0.351
12. If my business fails, I will view the failure for the rest of my life.	0.440	
42. If my business fails, I will not have difficulty paying the debt.	0.436	
4. If my business fails, it will be a waste of time.	0.407	
21. If my business fails, I will feel as though my whole world has collapsed.	0.407	
25. If my business fails, I will doubt my capabilities.	0.388	0.409
35. If my business fails, I will give up being an entrepreneur.	0.386	
15. If my business fails, I will feel that I could have used the time to gain work experience instead.	0.359	
22. If my business fails, it will be an emotional setback for me.	0.339	
6. If my business fails, others will have a bad impression of me.		0.954
5. If my business fails, others will look down on me.		0.905
31. If my business fails, others will judge me negatively.		0.709
41. If my business fails, others will be disappointed with me.		0.684
24. If my business fails, I will lose face.		0.678
33. If my business fails, I will feel embarrassed.		0.619
30. If my business fails, my family will lose face.		0.592
36. If my business fails, others will lose confidence in me.		0.589
16. If my business fails, I will feel ashamed.		0.561
9. If my business fails, my reputation will be destroyed.		0.543

Scale Items:	F1	F2
18. If my business fails, I will lose status.		0.542
20. If my business fails, people around me will be disappointed, as I did not meet their expectations.		0.538
7. If my business fails, I will think that all I'm good for is nothing.		0.485
44. If my business fails, others will not talk bad about me.		0.425
26. If my business fails, I will lose the trust of others.		0.411
43. If my business fails, my reputation will not be at stake.		0.359
2. If my business fails, I will lose confidence in myself.		0.351
14. If my business fails, I will be disappointed with myself.		0.337
45. If my business fails, I will not be afraid to be an entrepreneur again.		0.244
46. If my business fails, I will not be sad.		0.240
47. If my business fails, I will not lose out to my peers in terms of work experience.		0.133

Note. EFA results for two-factor solution. $\chi^2(988) = 3111.83$, $p < .001$, RMSEA = .074, SRMR = .062.

Scale Items:	F1	F2	F3
17. If my business fails, I will have difficulty providing financial support for my family.	0.723		
38. If my business fails, I will face great financial burden.	0.715		
32. If my business fails, it will be financially tough for my family.	0.711		
28. If my business fails, I will lose a lot of money.	0.655		
42. If my business fails, I will not have difficulty paying the debt.	0.568		
34. If my business fails, I will have to start from nowhere as I have no money.	0.521		0.329
19. If my business fails, I will have to borrow money from my friends.	0.498		
13. If my business fails, I will have no income.	0.483		
3. If my business fails, I will lose all my capital.	0.417		
1. If my business fails, I will face bankruptcy.	0.380		
22. If my business fails, it will be an emotional setback for me.	0.341	0.359	
40. If my business fails, my relationship with important others will be affected.	0.308		
6. If my business fails, others will have a bad impression of me.		0.811	
5. If my business fails, others will look down on me.		0.784	
41. If my business fails, others will be disappointed with me.		0.686	
24. If my business fails, I will lose face.		0.653	
33. If my business fails, I will feel embarrassed.		0.620	
31. If my business fails, others will judge me negatively.		0.617	
36. If my business fails, others will lose confidence in me.		0.597	
20. If my business fails, people around me will be disappointed, as I did not meet their expectations.		0.529	
30. If my business fails, my family will lose face.		0.519	
16. If my business fails, I will feel ashamed.		0.502	0.339
18. If my business fails, I will lose status.		0.499	
44. If my business fails, others will not talk bad about me.		0.461	
8. If my business fails, my reputation will be destroyed.		0.424	0.401
25. If my business fails, I will doubt my capabilities.		0.387	
14. If my business fails, I will be disappointed with myself.		0.386	
43. If my business fails, my reputation will not be at stake.		0.374	
46. If my business fails, I will not be sad.		0.360	
2. If my business fails, I will lose confidence in myself.		0.340	
26. If my business fails, I will lose the trust of others.		0.337	0.384
7. If my business fails, I will think that all I'm good for is nothing.		0.321	0.709
45. If my business fails, I will not be afraid to be an entrepreneur again.		0.245	
47. If my business fails, I will not lose out to my peers in terms of work experience.		0.140	
10. If my business fails, I will not have a good career development.			0.662

Scale Items:	F1	F2	F3
23. If my business fails, I will feel that I am getting nothing out of the venture.			0.652
39. If my business fails, I will think that I'm useless.			0.637
4. If my business fails, it will be a waste of time.			0.621
12. If my business fails, I will view the failure for the rest of my life.			0.614
29. If my business fails, it will be difficult for me to get a job.			0.521
11. If my business fails, I will be at a loss of what to do for my career.			0.493
15. If my business fails, I will feel that I could have used the time to gain work experience instead.			0.473
21. If my business fails, I will feel as though my whole world has collapsed.			0.429
35. If my business fails, I will give up being an entrepreneur.			0.383
37. If my business fails, I will be one step behind everyone in the working world.			0.378
9. If my business fails, it will take a lot of time to climb the corporate ladder.			0.356
27. If my business fails, there will be a lot of family problems.			0.339

Note. EFA results for three-factor solution. $\chi^2(943) = 2539.08, p < .001$, RMSEA = .065, SRMR = .050.

Scale items:	F1	F2	F3	F4
32. If my business fails, it will be financially tough for my family.	0.791			
17. If my business fails, I will have difficulty providing financial support for my family.	0.694			
38. If my business fails, I will face great financial burden.	0.694			
28. If my business fails, I will lose a lot of money.	0.627			
19. If my business fails, I will have to borrow money from my friends.	0.620			
42. If my business fails, I will not have difficulty paying the debt.	0.492			
34. If my business fails, I will have to start from nowhere as I have no money.	0.472			0.342
1. If my business fails, I will face bankruptcy.	0.440			
13. If my business fails, I will have no income.	0.438			
3. If my business fails, I will lose all my capital.	0.426			
27. If my business fails, there will be a lot of family problems.	0.414			
40. If my business fails, my relationship with important others will be affected.	0.352			
46. If my business fails, I will not be sad		0.794		
14. If my business fails, I will be disappointed with myself.		0.627		
22. If my business fails, it will be an emotional setback for me.		0.602		
25. If my business fails, I will doubt my capabilities.		0.513		0.388
33. If my business fails, I will feel embarrassed.		0.492		
2. If my business fails, I will lose confidence in myself.		0.490		
45. If my business fails, I will not be afraid to be an entrepreneur again.		0.407		
16. If my business fails, I will feel ashamed.		0.383		0.384
24. If my business fails, I will lose face.		0.362	0.398	
47. If my business fails, I will not lose out to my peers in terms of work experience.		0.251		
6. If my business fails, others will have a bad impression of me.			0.896	
5. If my business fails, others will look down on me.			0.862	
31. If my business fails, others will judge me negatively.			0.603	
8. If my business fails, my reputation will be destroyed.			0.495	0.345
41. If my business fails, others will be disappointed with me.			0.456	
30. If my business fails, my family will lose face.			0.438	
36. If my business fails, others will lose confidence in me.			0.361	
18. If my business fails, I will lose status.			0.352	
44. If my business fails, others will not talk bad about me.			0.332	
7. If my business fails, I will think that all I'm good for is nothing.			0.329	0.697

Scale items:	F1	F2	F3	F4
20. If my business fails, people around me will be disappointed, as I did not meet their expectations.			0.326	
43. If my business fails, my reputation will not be at stake.			0.315	
10. If my business fails, I will not have a good career development.				0.688
39. If my business fails, I will think that I'm useless.				0.676
23. If my business fails, I will feel that I am getting nothing out of the venture.				0.666
12. If my business fails, I will view the failure for the rest of my life.				0.640
4. If my business fails, it will be a waste of time.				0.627
11. If my business fails, I will be at a loss of what to do for my career.				0.538
29. If my business fails, it will be difficult for me to get a job.				0.524
15. If my business fails, I will feel that I could have used the time to gain work experience instead.				0.509
21. If my business fails, I will feel as though my whole world has collapsed.				0.432
35. If my business fails, I will give up being an entrepreneur.				0.424
37. If my business fails, I will be one step behind everyone in the working world.				0.409
26. If my business fails, I will lose the trust of others.				0.393
9. If my business fails, it will take a lot of time to climb the corporate ladder.				0.366

Note. EFA results for four-factor solution. $\chi^2(899) = 2024.13, p < .001$, RMSEA = .056, SRMR = .041.

Scale Items:	F1	F2	F3	F4	F5
32. If my business fails, it will be financially tough for my family.	0.756				
38. If my business fails, I will face great financial burden.	0.669				
17. If my business fails, I will have difficulty providing financial support for my family.	0.666				
28. If my business fails, I will lose a lot of money.	0.603				
19. If my business fails, I will have to borrow money from my friends.	0.597				
42. If my business fails, I will not have difficulty paying the debt.	0.503				
1. If my business fails, I will face bankruptcy	0.457				
34. If my business fails, I will have to start from nowhere as I have no money.	0.456			0.346	
3. If my business fails, I will lose all my capital.	0.452				
13. If my business fails, I will have no income.	0.415				
27. If my business fails, there will be a lot of family problems.	0.386				
40. If my business fails, my relationship with important others will be affected.	0.328				
46. If my business fails, I will not be sad.		0.773			
2. If my business fails, I will lose confidence in myself.		0.526			
14. If my business fails, I will be disappointed with myself.		0.510			
22. If my business fails, it will be an emotional setback for me.		0.504			
25. If my business fails, I will doubt my capabilities.		0.436		0.396	
45. If my business fails, I will not be afraid to be an entrepreneur again.		0.424			
33. If my business fails, I will feel embarrassed.		0.381	0.460		
47. If my business fails, I will not lose out to my peers in terms of work experience.		0.248			
6. If my business fails, others will have a bad impression of me.			0.843		0.633
5. If my business fails, others will look down on me.			0.808		0.629
31. If my business fails, others will judge me negatively.			0.703		
41. If my business fails, others will be disappointed with me.			0.658		
36. If my business fails, others will lose confidence in me.			0.573		
30. If my business fails, my family will lose face.			0.565		
20. If my business fails, people around me will be disappointed, as I did not meet their expectations.			0.561		
24. If my business fails, I will lose face.			0.522		
18. If my business fails, I will lose status.			0.485		

Scale Items:	F1	F2	F3	F4	F5
8. If my business fails, my reputation will be destroyed.			0.428	0.349	0.362
44. If my business fails, others will not talk bad about me.			0.376		
16. If my business fails, I will feel ashamed.			0.356	0.387	
26. If my business fails, I will lose the trust of others.			0.334	0.384	
7. If my business fails, I will think that all I'm good for is nothing.				0.695	
10. If my business fails, I will not have a good career development.				0.681	
39. If my business fails, I will think that I'm useless.				0.670	
23. If my business fails, I will feel that I am getting nothing out of the venture.				0.663	
4. If my business fails, it will be a waste of time.				0.641	
12. If my business fails, I will view the failure for the rest of my life.				0.634	
11. If my business fails, I will be at a loss of what to do for my career.				0.539	
15. If my business fails, I will feel that I could have used the time to gain work experience instead.				0.509	
29. If my business fails, it will be difficult for me to get a job.				0.509	
35. If my business fails, I will give up being an entrepreneur.				0.435	
21. If my business fails, I will feel as though my whole world has collapsed.				0.428	
37. If my business fails, I will be one step behind everyone in the working world.				0.402	
9. If my business fails, it will take a lot of time to climb the corporate ladder.				0.371	
43. If my business fails, my reputation will not be at stake.				0.287	
<i>Note.</i> EFA results for five-factor solution. $\chi^2(856) = 1767.95, p < .001$, RMSEA = .052, SRMR = .036.					

Scale items:	F1	F2	F3	F4	F5	F6
32. If my business fails, it will be financially tough for my family.	0.756					
17. If my business fails, I will have difficulty providing financial support for my family.	0.74					
38. If my business fails, I will face great financial burden.	0.672					
28. If my business fails, I will lose a lot of money.	0.594					
19. If my business fails, I will have to borrow money from my friends.	0.576					
34. If my business fails, I will have to start from nowhere as I have no money.	0.476			0.329		
42. If my business fails, I will not have difficulty paying the debt.	0.47					
3. If my business fails, I will lose all my capital.	0.466					
1. If my business fails, I will face bankruptcy.	0.447					
13. If my business fails, I will have no income.	0.439					
27. If my business fails, there will be a lot of family problems.	0.376					
40. If my business fails, my relationship with important others will be affected.	0.323					
46. If my business fails, I will not be sad.		0.573				0.553
2. If my business fails, I will lose confidence in myself.		0.528				
22. If my business fails, it will be an emotional setback for me.		0.517				
14. If my business fails, I will be disappointed with myself.		0.512				
25. If my business fails, I will doubt my capabilities.		0.487		0.340		
33. If my business fails, I will feel embarrassed.		0.435	0.444			
16. If my business fails, I will feel ashamed.		0.404	0.341	0.322		
24. If my business fails, I will lose face.		0.346	0.527			
45. If my business fails, I will not be afraid to be an entrepreneur again.		0.305				
6. If my business fails, others will have a bad impression of me.			0.944		0.642	
5. If my business fails, others will look down on me.			0.906		0.624	
31. If my business fails, others will judge me negatively.			0.73			
41. If my business fails, others will be disappointed with me.			0.648			
30. If my business fails, my family will lose face.			0.567			
36. If my business fails, others will lose confidence in me.			0.553			
20. If my business fails, people around me will be disappointed, as I did not meet their expectations.			0.527			
8. If my business fails, my reputation will be destroyed.			0.488	0.341	0.362	

Scale items:	F1	F2	F3	F4	F5	F6
18. If my business fails, I will lose status.			0.480			
44. If my business fails, others will not talk bad about me.			0.398			0.362
7. If my business fails, I will think that all I'm good for is nothing.			0.332	0.659		
26. If my business fails, I will lose the trust of others.			0.323	0.382		
23. If my business fails, I will feel that I am getting nothing out of the venture.				0.681		
10. If my business fails, I will not have a good career development.				0.670		
4. If my business fails, it will be a waste of time.				0.667		
39. If my business fails, I will think that I'm useless.				0.651		
12. If my business fails, I will view the failure for the rest of my life.				0.603		
15. If my business fails, I will feel that I could have used the time to gain work experience instead.				0.559		
29. If my business fails, it will be difficult for me to get a job.				0.524		
11. If my business fails, I will be at a loss of what to do for my career.				0.485		
37. If my business fails, I will be one step behind everyone in the working world.				0.469		
35. If my business fails, I will give up being an entrepreneur.				0.430		
21. If my business fails, I will feel as though my whole world has collapsed.				0.387		
9. If my business fails, it will take a lot of time to climb the corporate ladder.				0.366		
43. If my business fails, my reputation will not be at stake.						
47. If my business fails, I will not lose out to my peers in terms of work experience.						0.497

Note. EFA results for six-factor solution. $\chi^2(814) = 1584.94, p < .001$, RMSEA = .049, SRMR = .033.

Scale items:	F1	F2	F3	F4	F5	F6	F7
32. If my business fails, it will be financially tough for my family.	0.804						
17. If my business fails, I will have difficulty providing financial support for my family	0.774						
38. If my business fails, I will face great financial burden.	0.737						
19. If my business fails, I will have to borrow money from my friends.	0.627						
28. If my business fails, I will lose a lot of money.	0.609						
34. If my business fails, I will have to start from nowhere as I have no money.	0.549						
42. If my business fails, I will not have difficulty paying the debt.	0.486						
3. If my business fails, I will lose all my capital.	0.465				0.43		
1. If my business fails, I will face bankruptcy.	0.458				0.331		
13. If my business fails, I will have no income.	0.442						
27. If my business fails, there will be a lot of family problems.	0.387					0.325	
40. If my business fails, my relationship with important others will be affected.	0.344						
46. If my business fails, I will not be sad.		0.718					0.420
47. If my business fails, I will not lose out to my peers in terms of work experience.		0.46					
44. If my business fails, others will not talk bad about me.		0.398	0.340				
45. If my business fails, I will not be afraid to be an entrepreneur again.		0.307					
6. If my business fails, others will have a bad impression of me.			1.013		0.374		
5. If my business fails, others will look down on me.			1.010		0.358		
31. If my business fails, others will judge me negatively.			0.616				
8. If my business fails, my reputation will be destroyed.			0.525				
24. If my business fails, I will lose face.			0.495				0.463
41. If my business fails, others will be disappointed with me.			0.458				
30. If my business fails, my family will lose face.			0.445				
43. If my business fails, my reputation will not be at stake.			0.375				
18. If my business fails, I will lose status.			0.366				
36. If my business fails, others will lose confidence in me.			0.365				
33. If my business fails, I will feel embarrassed.			0.361				
20. If my business fails, people around me will be disappointed, as I did not meet their expectations.			0.308				
4. If my business fails, it will be a waste of time.				0.649			

Scale items:	F1	F2	F3	F4	F5	F6	F7
23. If my business fails, I will feel that I am getting nothing out of the venture.				0.600			
15. If my business fails, I will feel that I could have used the time to gain work experience instead.				0.495			
37. If my business fails, I will be one step behind everyone in the working world.				0.375			
35. If my business fails, I will give up being an entrepreneur.				0.367			
2. If my business fails, I will lose confidence in myself.					0.369		0.469
7. If my business fails, I will think that all I'm good for is nothing.						0.714	
39. If my business fails, I will think that I'm useless.						0.703	
12. If my business fails, I will view the failure for the rest of my life.						0.669	
21. If my business fails, I will feel as though my whole world has collapsed.						0.584	
10. If my business fails, I will not have a good career development.						0.559	
26. If my business fails, I will lose the trust of others.						0.46	
11. If my business fails, I will be at a loss of what to do for my career.						0.45	
29. If my business fails, it will be difficult for me to get a job.						0.447	
25. If my business fails, I will doubt my capabilities.						0.369	0.476
9. If my business fails, it will take a lot of time to climb the corporate ladder.						0.327	
22. If my business fails, it will be an emotional setback for me.							0.525
16. If my business fails, I will feel ashamed.							0.497
14. If my business fails, I will be disappointed with myself.							0.485

Note. EFA results for seven-factor solution. $\chi^2(773) = 1419.94, p < .001$, RMSEA = .046, SRMR = .030.

Scale items:	F1	F2	F3	F4	F5	F6	F7	F8
32. If my business fails, it will be financially tough for my family.	0.711							
17. If my business fails, I will have difficulty providing financial support for my family.	0.666							
38. If my business fails, I will face great financial burden.	0.644							
19. If my business fails, I will have to borrow money from my friends.	0.554							
28. If my business fails, I will lose a lot of money.	0.529							
34. If my business fails, I will have to start from nowhere as I have no money.	0.475							
3. If my business fails, I will lose all my capital.	0.464		0.578					
1. If my business fails, I will face bankruptcy.	0.427		0.391					
42. If my business fails, I will not have difficulty paying the debt.	0.419							
13. If my business fails, I will have no income.	0.351					0.356		
27. If my business fails, there will be a lot of family problems.	0.346				0.414			
40. If my business fails, my relationship with important others will be affected.	0.280							
46. If my business fails, I will not be sad.		0.647						
47. If my business fails, I will not lose out to my peers in terms of work experience.		0.451						
4. If my business fails, it will be a waste of time.				0.694				
23. If my business fails, I will feel that I am getting nothing out of the venture.				0.605				
15. If my business fails, I will feel that I could have used the time to gain work experience instead.				0.485				
35. If my business fails, I will give up being an entrepreneur.				0.405				
37. If my business fails, I will be one step behind everyone in the working world.				0.324		0.37		
6. If my business fails, others will have a bad impression of me.					0.882		0.619	
5. If my business fails, others will look down on me.					0.831		0.611	
31. If my business fails, others will judge me negatively.					0.796			
41. If my business fails, others will be disappointed with me.					0.705			
30. If my business fails, my family will lose face.					0.664			
20. If my business fails, people around me will be disappointed, as I did not meet their expectations.					0.623			
36. If my business fails, others will lose confidence in me.					0.612			

Scale items:	F1	F2	F3	F4	F5	F6	F7	F8
24. If my business fails, I will lose face.					0.534			0.412
18. If my business fails, I will lose status.					0.533			
8. If my business fails, my reputation will be destroyed.					0.502			
33. If my business fails, I will feel embarrassed.					0.471			0.485
7. If my business fails, I will think that all I'm good for is nothing.					0.455			
26. If my business fails, I will lose the trust of others.					0.447			
16. If my business fails, I will feel ashamed.					0.401			0.449
44. If my business fails, others will not talk bad about me.					0.378			
39. If my business fails, I will think that I'm useless.					0.351			
21. If my business fails, I will feel as though my whole world has collapsed.					0.322			
43. If my business fails, my reputation will not be at stake.					0.240			
9. If my business fails, it will take a lot of time to climb the corporate ladder.						0.713		
10. If my business fails, I will not have a good career development.						0.611		
29. If my business fails, it will be difficult for me to get a job.						0.558		
11. If my business fails, I will be at a loss of what to do for my career.						0.557		
12. If my business fails, I will view the failure for the rest of my life.						0.389		
22. If my business fails, it will be an emotional setback for me.								0.503
2. If my business fails, I will lose confidence in myself.								0.489
14. If my business fails, I will be disappointed with myself.								0.471
25. If my business fails, I will doubt my capabilities.								0.468
45. If my business fails, I will not be afraid to be an entrepreneur again.								0.290

Note. EFA results for eight-factor solution. $\chi^2(733) = 1263.32, p < .001$, RMSEA = .043, SRMR = .027.

Appendix G

Final 36-item PACBF Scale

Instructions: Imagine you are an entrepreneur, to what extent do you think the following statements will likely or unlikely happen to you if your business fails. Using the scale below, please indicate your response to each statement.

Scale:

1	2	3	4	5
Highly Unlikely	Unlikely	Neutral	Likely	Highly Likely

If my business fails ...

1. I will be one step behind everyone in the working world.	1	2	3	4	5
2. My family will lose face.	1	2	3	4	5
3. I will view the failure for the rest of my life.	1	2	3	4	5
4. I will have no income.	1	2	3	4	5
5. It will take a lot of time to climb the corporate ladder.	1	2	3	4	5
6. I will think that I'm useless.	1	2	3	4	5
7. I will lose all my capital.	1	2	3	4	5
8. Others will look down on me.	1	2	3	4	5
9. My relationship with important others will be affected.	1	2	3	4	5
10. I will not have a good career development.	1	2	3	4	5
11. There will be a lot of family problems.	1	2	3	4	5
12. I will face bankruptcy.	1	2	3	4	5
13. I will lose the trust of others.	1	2	3	4	5
14. It will be a waste of time.	1	2	3	4	5
15. I will feel embarrassed.	1	2	3	4	5
16. I will not be sad.	1	2	3	4	5
17. It will be financially tough for my family.	1	2	3	4	5
18. Others will have a bad impression of me.	1	2	3	4	5
19. I will lose a lot of money.	1	2	3	4	5
20. I will be disappointed with myself.	1	2	3	4	5
21. It will be an emotional setback for me.	1	2	3	4	5
22. I will face great financial burden.	1	2	3	4	5
23. I will lose confidence in myself.	1	2	3	4	5
24. I will be at a loss of what to do for my career.	1	2	3	4	5
25. I will feel as though my whole world has collapsed.	1	2	3	4	5
26. It will be difficult for me to get a job.	1	2	3	4	5
27. I will have difficulty providing financial support for my family.	1	2	3	4	5
28. I will give up being an entrepreneur.	1	2	3	4	5
29. I will have to borrow money from my friends.	1	2	3	4	5
30. I will feel that I could have used the time to gain work experience instead.	1	2	3	4	5

31. Others will be disappointed with me.	1	2	3	4	5
32. Others will judge me negatively.	1	2	3	4	5
33. Others will lose confidence in me.	1	2	3	4	5
34. I will feel that I am getting nothing out of the venture.	1	2	3	4	5
35. I will not have difficulty paying the debts.	1	2	3	4	5
36. I will lose status.	1	2	3	4	5

Appendix H

Sample Coding Scheme for Kiasuism

Category	Description
Examples of Kiasu Behaviour	
Look out for promotion	Participant mentioned a typical example of kiasu behaviour is when someone is always on a look out for promotion or sales -- this category excludes a kiasu person looking for cheap things.
Comparing with others	Participant mentioned a typical example of kiasu behaviour is when someone is constantly engaging in comparing with others in terms of grades, materials, monetary.etc
Seeking extra academic info	Participant mentioned a typical example of kiasu behaviour is when someone is constantly asking for more academic information e.g., past year papers, tips for exams, notes.
Reasons of being Kiasu	
Not to lose out to others and/or to get ahead	Participant reported reasons for being kiasu is due to wanting to be better than others, performing better than others, winning others or afraid that they will perform worse than others.
Not to lose out potential benefits	Participant reported reasons for being kiasu is due to fear of not getting the common good or any available benefits (e.g., promotion, sales, freebies).
Emotions associated with Kiasuism	
Arouse disgust	Participant reported feeling disgusted by a kiasu person or kiasu behaviours.
Sense of achievement	Participant reported feeling a sense of achievement when he/she is kiasu or after they did the kiasu behaviour.
Cues for Kiasuism	
There is a genuine interest in the item	Participant reported that when one has genuine interest in an item or is a fan of the product, the typical behaviour is not considered as kiasu.
There is no need for the item	Participant reported that when one queues for freebies and do not need the item, the behaviour is considered as kiasu.

Appendix I

Additional Quotes Associated with Categories for Study 1b

Category	Quotes
Queuing for freebies	<p>“Queuing for anything.. I mean not just like to maintain the order. I mean for any freebie”. (P3)</p> <p>“You see people giving out like free stuff...like free drinks and it's a hot day. You see its running out then you will everyone will just queue”. (P7)</p>
Concern with sales and promotions	<p>“When you have online like discounts or sales going on then you would go to this kind of places to get all the cheap deals”. (P11)</p> <p>“He is always looking for news and things, maybe this person he has the need to know about things so that he doesn't lose out. Maybe email he'll check constantly if there's anything he will not miss out. He will always check for sales and he'll always be at those sales”. (P27)</p>
Ensuring one's own access to a public or common good at the expense of others	<p>“They're just making use of their old age thing, their outlook, they look older than us therefore they have to get the seat, I don't know, it's very kiasu, yeah. Everything must do first”. (P28)</p> <p>“Occupying the seat in the library? Even though if you are not there, you are afraid of there's no seat if you want to come at let's say two o'clock, so you, either you come yourself at 8 am just to <i>chope</i> (reserve) the seat, you put your bags there then you go somewhere else, or you get a friend to help you take a seat keep a seat for you in the morning when you come in the afternoon”. (P27)</p>
Studying ahead	<p>“He always be very diligent, and being very kiasu, he will do everything he can to ensure that he knows things very well, as much as he can of course, for example a very kiasu person in my opinion would be someone who almost every week consults the professor just to learn something, just to be ahead of everyone”. (P22)</p> <p>“Students in studying like many many hours, sleeping less just to do well in school...I think those are examples of kiasu probably seen in Singapore”. (P7)</p>
Sourcing extra study materials and academic information	<p>“They may be more eager to find out about more stuff, research more about free stuff or willing to go to the extra mile compared to others”. (P5)</p> <p>“I just want to get a lot of things... can like references.. for my papers. for tutorials. if you don't know.. then instead of asking others, can just look through your senior stuff”. (P24)</p>
Taking booster courses outside of regular classes	<p>“Flaunting their kids how they go for tuitions like send them for like 100 tuitions”. (P1)</p> <p>“I think most are obvious ones will be like you know children right so parents a bit kiasu. Tuition everything, tuition from the primary one start tuition before they go primary school like those enrichment classes and everything ya so I think its very kiasu”. (P18)</p>

Fear of Losing Out Potential Benefits	<p>“The mental part that was actually what they wanted to get the freebies, they were afraid that other people get it first, or they run out of freebies to get”. (P7)</p> <p>“You are queuing because you see other people queue, so it’s like you are scared that you will lose out to other people in getting some free stuff, so you are queuing, so I think that is actually kiasu”. (P25)</p>
Not to lose out to others and/or get ahead of others	<p>“I think they are they fear of losing to other so they want to find out what is going on to be on par with others”. (P5)</p> <p>“I think if it’s in a society where there is no competition i don’t think anybody will be kiasu, because there is nobody fighting with you, it’s a relative thing people, when you see people, like it’s a natural thing like when you see people, your friends studying very hard, you will feel compelled also to study hard, because you don’t want to lose out, yeah it’s a relative thing, a competition”. (P16)</p>
Anxiety	<p>“I would say that many of those people those kiasu people probably worry about things that they may not be able to control and so that is really something that is really not worth doing then they may also get let’s say upset over short term failures that is also like harmful to them in the long run”. (P2)</p> <p>“They just worry too much or they over think, or they are afraid of the unknown for example if I am late, what can happen, what will happen, there might be a lot of unforeseen problems, so I better be there early just in case something happens. So I think it is the “just in case” mentality that sparks of the kiasu-ness”. (P22)</p>
Happiness	<p>“I think happiness... many of the people are very happy by being kiasu.”yes I got something” then...happiness I feel”. (P24)</p> <p>“Maybe just to make myself happy because I think it's the save money thing”. (P10)</p>
Relief	<p>“I think the rest is just it’s actually negligible what is most important is that they are getting the reassurance”. (P8)</p> <p>“Sometimes I think they want to copy because they want the assurance that they have everything in their lecture and got all the information”. (P20)</p>
Satisfaction	<p>“Actually because I really want to like eat those food so when I really found those like cheaper like by maybe 10 cents after when I get home I will be like oh I got this yoghurt for cheaper price so I guess its there’s a sense of satisfaction to it”. (P1)</p> <p>“When you get there’s mental satisfaction, psychological satisfaction, they have managed to get what they want to get”. (P7)</p>
Achievement	<p>“They have a sense of accomplishment that when they do well”. (P2)</p> <p>“If they are being kiasu for the sake of comparing to be the best then they would get a ego boost, a self-esteem boost from it”. (P22)</p>
Embarrassment	<p>“People fighting for seats on the train, it’s quite embarrassing”. (P16)</p> <p>“He just rushes through things like that, it’s kind of yeah, I will feel embarrassed”. (P29)</p>

Appendix J

Psychological Entitlement Scale (Campbell et al., 2004)

Instructions: Please respond to the following items using the number that best reflects your own beliefs. Using the scale below, please indicate your response to each statement.

Scale:

1	2	3	4	5	6	7
Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Moderately Agree	Strongly Agree

1. Things should go my way.	1	2	3	4	5	6	7
2. People like me deserve a special break now and then.	1	2	3	4	5	6	7
3. I do not necessarily deserve special treatment.	1	2	3	4	5	6	7
4. Great things should come to me.	1	2	3	4	5	6	7
5. I demand the best because I'm worth it.	1	2	3	4	5	6	7
6. I feel entitled to more of everything.	1	2	3	4	5	6	7
7. If I were on the Titanic, I would deserve to be on the first lifeboat!	1	2	3	4	5	6	7
8. I honestly feel I am just more deserving than others.	1	2	3	4	5	6	7
9. I deserve more things in my life.	1	2	3	4	5	6	7

Appendix K

Inter-competitiveness Scale (Griffin-Pierson, 1990)

Instructions: Consider how much you agree or disagree with each of the following statements. Using the scale below, please indicate your response to each statement.

Scale:

1	2	3	4	5
Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree

1. When I win an award or game it means that I am the best compared to everyone else that was playing. It is only fair that the best person win the game.	1	2	3	4	5
2. Because it is important that a winner is decided, I <i>do not</i> like to leave a game unfinished.	1	2	3	4	5
3. I have always wanted to be better than others.	1	2	3	4	5
4. I <i>do not</i> feel that winning is important in both work and games.	1	2	3	4	5
5. I would want an A because that means that I did better than other people.	1	2	3	4	5
6. In school, I always liked to be the first one finished with a test.	1	2	3	4	5
7. I perform better when I am competing against someone rather than when I am the only one striving for a goal.	1	2	3	4	5
8. When nominated for an award, I focus on how much better or worse the other candidates' qualifications are as compared to mine.	1	2	3	4	5

Appendix L

Kiasu Tendency Scale (Ho et al., 1998)

Instructions: How often do you engage in the following behaviours?
Using the scale below, please indicate your response to each statement.

Scale:

1	2	3	4	5
Never	Seldom	At Times	Often	Very Often

1. Queuing way ahead of time to buy tickets	1	2	3	4	5
2. Piling food during buffets	1	2	3	4	5
3. Studying before semester commences	1	2	3	4	5
4. Elbowing one's way into crowded lifts	1	2	3	4	5
5. Rushing for train/bus seats	1	2	3	4	5
6. Rushing to sales	1	2	3	4	5
7. Grabbing more expensive food at buffets	1	2	3	4	5
8. Reserving seats in the library	1	2	3	4	5
9. Bringing back toiletries/utensils	1	2	3	4	5
10. Stowing reference books on other shelves	1	2	3	4	5

Appendix M

Positive and Negative Kiasuism Scale (Hwang et al., 2002)

Instructions: How often do you engage in the following behaviours?
Using the scale below, please indicate your response to each statement.

Scale:

1	2	3	4	5	6	7
Not at all	Rarely	Occasionally	Sometimes	Frequently	Usually	All the time

Negative Kiasu Attitude:

1. I try not to let others have access to useful books and notes.	1	2	3	4	5	6	7
2. I try not to let others know the right answers.	1	2	3	4	5	6	7
3. I do not share useful knowledge with others.	1	2	3	4	5	6	7

Positive Kiasu Attitude:

4. I do research on my coursework.	1	2	3	4	5	6	7
5. I read beyond my assigned readings.	1	2	3	4	5	6	7
6. I supplement my knowledge with non-required course materials.	1	2	3	4	5	6	7

Appendix N

EFA Results for One to Seven-factor Solution (KBM)

Scale items:	F1
1. Performing better than others is more important than performing well.	0.658
2. It is important to get what I want at all cost.	0.635
3. I feel compelled to be ahead of others.	0.613
4. It is important that my peers are not aware of my competency so that I can be ahead of them.	0.603
5. I feel a sense of achievement when I know that I am ahead of others.	0.598
6. I feel proud when I have something that others do not have.	0.594
7. It is important that I don't lose out.	0.575
8. It is important to secure all potential benefits.	0.575
9. Knowing that I'm performing better than my peers helps to reduce my anxiety.	0.565
10. I will do what I can to prevent myself from losing out.	0.558
11. When I do better than others, I feel an immense sense of accomplishment.	0.553
12. It is important to maximize the value of my dollar.	0.539
13. It is important to hide my capabilities from others so that they will not strive to be better than me.	0.539
14. I want to get the most out of everything.	0.537
15. I want the best all to myself.	0.532
16. I will do anything to be ahead of my peers.	0.517
17. I always worry about not performing well as compared to my peers.	0.516
18. I get excited when I can get something for nothing.	0.491
19. I cannot afford to be worse than others.	0.483
20. I want to be first in everything.	0.481
21. It is important that I am not short-changed from any benefits.	0.458
22. When it comes to getting freebies, thinking about whether I need them is secondary.	0.412
23. It doesn't matter if I excel at the expense of others.	0.361
24. Losing is the last thing I want.	0.359
25. Even if I perform to my expectation, it is important to know whether I am performing better than others.	0.345
26. I do not have to be the best.	0.345
27. It is not important to achieve better outcomes than others.	0.261
28. It is not important to be ahead of my peers.	0.202

Note. EFA results for one-factor solution. $\chi^2(350) = 1783.34, p < .001$, RMSEA = .102, SRMR = .093.

Scale Items:	F1	F2
23. It doesn't matter if I excel at the expense of others.	0.799	
13. It is important to hide my capabilities from others so that they will not strive to be better than me.	0.714	
16. I will do anything to be ahead of my peers.	0.695	
4. It is important that my peers are not aware of my competency so that I can be ahead of them.	0.611	
2. It is important to get what I want at all cost.	0.512	
15. I want the best all to myself.	0.481	
20. I want to be first in everything.	0.452	
22. When it comes to getting freebies, thinking about whether I need them is secondary.	0.412	
1. Performing better than others is more important than performing well.	0.352	
26. I do not have to be the best.	0.314	
5. I feel a sense of achievement when I know that I am ahead of others.		0.730
11. When I do better than others, I feel an immense sense of accomplishment.		0.656
6. I feel proud when I have something that others do not have.		0.615
7. It is important that I don't lose out.		0.604
28. It is not important to be ahead of my peers.		0.594
9. Knowing that I'm performing better than my peers helps to reduce my anxiety.		0.58
3. I feel compelled to be ahead of others.		0.559
14. I want to get the most out of everything.		0.559
17. I always worry about not performing well as compared to my peers.		0.554
27. It is not important to achieve better outcomes than others.		0.541
10. I will do what I can to prevent myself from losing out.		0.529
8. It is important to secure all potential benefits.		0.528
19. I cannot afford to be worse than others.		0.45
12. It is important to maximize the value of my dollar.		0.445
25. Even if I perform to my expectation, it is important to know whether I am performing better than others.		0.423
21. It is important that I am not short-changed from any benefits.		0.410
24. Losing is the last thing I want.		0.367
18. I get excited when I can get something for nothing.		0.223

Note. EFA results for two-factor solution. $\chi^2(323) = 1237.34, p < .001$, RMSEA = .085, SRMR = .065.

Scale Items:	F1	F2	F3
28. It is not important to be ahead of my peers.	0.673		
27. It is not important to achieve better outcomes than others.	0.518		
5. I feel a sense of achievement when I know that I am ahead of others.	0.478		0.382
3. I feel compelled to be ahead of others.	0.477		
1. Performing better than others is more important than performing well.	0.461	0.349	
4. It is important that my peers are not aware of my competency so that I can be ahead of them.	0.428	0.685	
25. Even if I perform to my expectation, it is important to know whether I am performing better than others.	0.417		
13. It is important to hide my capabilities from others so that they will not strive to be better than me.		0.772	
23. It doesn't matter if I excel at the expense of others.		0.732	
16. I will do anything to be ahead of my peers.		0.611	
2. It is important to get what I want at all cost.		0.449	
15. I want the best all to myself.		0.42	0.322
22. When it comes to getting freebies, thinking about whether I need them is secondary.		0.383	
20. I want to be first in everything.		0.375	
26. I do not have to be the best.		0.256	
14. I want to get the most out of everything.			0.648
8. It is important to secure all potential benefits.			0.62
10. I will do what I can to prevent myself from losing out.			0.554
12. It is important to maximize the value of my dollar.			0.532
21. It is important that I am not short-changed from any benefits.			0.503
6. I feel proud when I have something that others do not have.			0.498
9. Knowing that I'm performing better than my peers helps to reduce my anxiety.			0.46
11. When I do better than others, I feel an immense sense of accomplishment.			0.456
7. It is important that I don't lose out.			0.432
19. I cannot afford to be worse than others.			0.431
17. I always worry about not performing well as compared to my peers.			0.395
24. Losing is the last thing I want.			0.347
18. I get excited when I can get something for nothing.			0.293

Note. EFA results for three-factor solution. $\chi^2(297) = 950.36, p < .001$, RMSEA = .075, SRMR = .052.

Scale Items:	F1	F2	F3	F4
28. It is not important to be ahead of my peers.	0.731			
27. It is not important to achieve better outcomes than others.	0.563			
3. I feel compelled to be ahead of others.	0.504			
25. Even if I perform to my expectation, it is important to know whether I am performing better than others.	0.43			
1. Performing better than others is more important than performing well.	0.389			
5. I feel a sense of achievement when I know that I am ahead of others.	0.376			0.517
16. I will do anything to be ahead of my peers.		0.705		
20. I want to be first in everything.		0.629		
23. It doesn't matter if I excel at the expense of others.		0.619		
26. I do not have to be the best.		0.529		
2. It is important to get what I want at all cost.		0.507		
15. I want the best all to myself.		0.471		
24. Losing is the last thing I want.		0.364		
22. When it comes to getting freebies, thinking about whether I need them is secondary.		0.292		
4. It is important that my peers are not aware of my competency so that I can be ahead of them.			0.786	
13. It is important to hide my capabilities from others so that they will not strive to be better than me.			0.731	
14. I want to get the most out of everything.				0.599
8. It is important to secure all potential benefits.				0.594
6. I feel proud when I have something that others do not have.				0.587
12. It is important to maximize the value of my dollar.				0.568
9. Knowing that I'm performing better than my peers helps to reduce my anxiety.				0.536
11. When I do better than others, I feel an immense sense of accomplishment.				0.535
21. It is important that I am not short-changed from any benefits.				0.505
10. I will do what I can to prevent myself from losing out.				0.468
7. It is important that I don't lose out.				0.445
18. I get excited when I can get something for nothing.				0.410
19. I cannot afford to be worse than others.				0.355
17. I always worry about not performing well as compared to my peers.				0.346

Note. EFA results for four-factor solution. $\chi^2(272) = 751.24, p < .001$, RMSEA = .067, SRMR = .044.

Scale Items:	F1	F2	F3	F4	F5
28. It is not important to be ahead of my peers.	0.714				
27. It is not important to achieve better outcomes than others.	0.547				
3. I feel compelled to be ahead of others.	0.513				
25. Even if I perform to my expectation, it is important to know whether I am performing better than others.	0.413				
5. I feel a sense of achievement when I know that I am ahead of others.	0.408				0.629
1. Performing better than others is more important than performing well.	0.386				
26. I do not have to be the best.	0.254				
22. When it comes to getting freebies, thinking about whether I need them is secondary.	-0.284				
16. I will do anything to be ahead of my peers.		0.705			
20. I want to be first in everything.		0.647			
2. It is important to get what I want at all cost.		0.621			
23. It doesn't matter if I excel at the expense of others.		0.56			
15. I want the best all to myself.		0.468			
13. It is important to hide my capabilities from others so that they will not strive to be better than me.			0.789		
4. It is important that my peers are not aware of my competency so that I can be ahead of them.			0.776		
24. Losing is the last thing I want.				-0.252	
17. I always worry about not performing well as compared to my peers.				-0.309	
19. I cannot afford to be worse than others.				-0.663	
6. I feel proud when I have something that others do not have.					0.665
11. When I do better than others, I feel an immense sense of accomplishment.					0.581
8. It is important to secure all potential benefits.					0.55
14. I want to get the most out of everything.					0.534
12. It is important to maximize the value of my dollar.					0.517
9. Knowing that I'm performing better than my peers helps to reduce my anxiety.					0.492
21. It is important that I am not short-changed from any benefits.					0.438
7. It is important that I don't lose out.					0.412
10. I will do what I can to prevent myself from losing out.					0.392
18. I get excited when I can get something for nothing.					0.376

Note. EFA results for five-factor solution. $\chi^2(248) = 625.42$, $p < .001$, RMSEA = .062, SRMR = .039.

Scale Items:	F1	F2	F3	F4	F5	F6
28. It is not important to be ahead of my peers.	0.728					
27. It is not important to achieve better outcomes than others.	0.576					
3. I feel compelled to be ahead of others.	0.364					
1. Performing better than others is more important than performing well.	0.317					
16. I will do anything to be ahead of my peers.		0.739				
20. I want to be first in everything.		0.604				
2. It is important to get what I want at all cost.		0.579				
15. I want the best all to myself.		0.532				0.370
26. I do not have to be the best.		0.522				
23. It doesn't matter if I excel at the expense of others.		0.519				
22. When it comes to getting freebies, thinking about whether I need them is secondary.		0.184				
4. It is important that my peers are not aware of my competency so that I can be ahead of them.			0.816			
13. It is important to hide my capabilities from others so that they will not strive to be better than me.			0.783			
5. I feel a sense of achievement when I know that I am ahead of others.				0.807		
6. I feel proud when I have something that others do not have.				0.602		
11. When I do better than others, I feel an immense sense of accomplishment.				0.568		
19. I cannot afford to be worse than others.					0.806	
24. Losing is the last thing I want.					0.617	
10. I will do what I can to prevent myself from losing out.					0.414	
7. It is important that I don't lose out.					0.375	
17. I always worry about not performing well as compared to my peers.					0.37	
25. Even if I perform to my expectation, it is important to know whether I am performing better than others.					0.35	
21. It is important that I am not short-changed from any benefits.					0.349	
9. Knowing that I'm performing better than my peers helps to reduce my anxiety.					0.319	
14. I want to get the most out of everything.						0.614
12. It is important to maximize the value of my dollar.						0.588
8. It is important to secure all potential benefits.						0.494
18. I get excited when I can get something for nothing.						0.347

Note. EFA results for six-factor solution. $\chi^2(225) = 528.25, p < .001$, RMSEA = .058, SRMR = .035.

Scale Items:	F1	F2	F3	F4	F5	F6	F7
28. It is not important to be ahead of my peers.	0.793						
27. It is not important to achieve better outcomes than others.	0.584						
3. I feel compelled to be ahead of others.	0.378						
1. Performing better than others is more important than performing well.	0.319						
22. When it comes to getting freebies, thinking about whether I need them is secondary.	-0.296						
16. I will do anything to be ahead of my peers.		0.708		0.366			
2. It is important to get what I want at all cost.		0.600					
20. I want to be first in everything.		0.593					
15. I want the best all to myself.		0.507		0.555			
26. I do not have to be the best.		0.497					
23. It doesn't matter if I excel at the expense of others.		0.495					
24. Losing is the last thing I want.		0.180					
4. It is important that my peers are not aware of my competency so that I can be ahead of them.			0.825				
13. It is important to hide my capabilities from others so that they will not strive to be better than me.			0.819				
18. I get excited when I can get something for nothing.				0.269			
5. I feel a sense of achievement when I know that I am ahead of others.					0.788		
6. I feel proud when I have something that others do not have.					0.762		
11. When I do better than others, I feel an immense sense of accomplishment.					0.608		
9. Knowing that I'm performing better than my peers helps to reduce my anxiety.					0.334		
8. It is important to secure all potential benefits.						0.691	
14. I want to get the most out of everything.						0.511	
12. It is important to maximize the value of my dollar.						0.463	
21. It is important that I am not short-changed from any benefits.						0.445	
10. I will do what I can to prevent myself from losing out.						0.359	0.370
19. I cannot afford to be worse than others.							0.792
17. I always worry about not performing well as compared to my peers.							0.375
25. Even if I perform to my expectation, it is important to know whether I am performing better than others.							0.349
7. It is important that I don't lose out.							0.320

Note. EFA results for seven-factor solution. $\chi^2(203) = 437.72, p < .001$, RMSEA = .054, SRMR = .031.

Appendix O

Final 20-item KBM Scale

Instructions: Indicate to what extent you agree or disagree with each statement. Using the scale below, please indicate your response to each statement.

Scale:

1	2	3	4	5
Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree

1. I want to get the most out of everything.	1	2	3	4	5
2. I feel compelled to be ahead of others.	1	2	3	4	5
3. It is important to secure all potential benefits.	1	2	3	4	5
4. I will do what I can to prevent myself from losing out.	1	2	3	4	5
5. It not important to achieve better outcomes than others.	1	2	3	4	5
6. It doesn't matter if I excel at the expense of others.	1	2	3	4	5
7. When I do better than others, I feel an immense sense of accomplishment.	1	2	3	4	5
8. I always worry about not performing well as compared to my peers.	1	2	3	4	5
9. It is important to hide my capabilities from others so that they will not strive to be better than me.	1	2	3	4	5
10. It is important to get what I want at all cost.	1	2	3	4	5
11. I cannot afford to be worse than others.	1	2	3	4	5
12. I feel proud when I have something that others do not have.	1	2	3	4	5
13. It is important to maximize the value of my dollar.	1	2	3	4	5
14. I will do anything to be ahead of my peers.	1	2	3	4	5
15. Knowing that I'm performing better than my peers helps to reduce my anxiety.	1	2	3	4	5
16. I want to be first in everything.	1	2	3	4	5
17. It is important that I don't lose out.	1	2	3	4	5
18. It is not important to be ahead of my peers.	1	2	3	4	5
19. It is important that I am not short-changed from any benefits.	1	2	3	4	5
20. Even if I perform to my expectation, it is important to know whether I am performing better than others.	1	2	3	4	5

Appendix P

Modified Perceived Contextual Barrier (Lent, Brown, Schmidt, et al., 2003)

Instructions: We realize that you may or may not actually intend to be an entrepreneur. But for the purposes of the questions in this part, **assume that you wanted to be an entrepreneur**. How likely would you be to experience each of the following situations?

Scale:

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Sort of Disagree	Neither agree nor disagree	Sort of Agree	Agree	Strongly Agree

If I were to be an entrepreneur, I would...

1. Feel a lack of support from my professors or advisors.	1	2	3	4	5	6	7
2. Experience financial strain, especially if this career path required additional training.	1	2	3	4	5	6	7
3. Feel that I am different from others in this career because of my gender.	1	2	3	4	5	6	7
4. Have trouble getting assistance.	1	2	3	4	5	6	7
5. Receive unfair treatment because of my gender.	1	2	3	4	5	6	7
6. Worry that such a career path would require too much time.	1	2	3	4	5	6	7
7. Feel pressure from my family to get out of university and begin making money.	1	2	3	4	5	6	7
8. Receive unfair treatment because of my racial or ethnic group.	1	2	3	4	5	6	7
9. Have too little money to afford things that I might need to do well in my business.	1	2	3	4	5	6	7
10. Feel that I don't fit in socially with others in this career	1	2	3	4	5	6	7
11. Feel that I am different from others in this career path because of my racial or ethnic group.	1	2	3	4	5	6	7
12. Feel that my career options are limited by financial concerns.	1	2	3	4	5	6	7
13. Feel pressure from parents or other important people to change my career to some other field.	1	2	3	4	5	6	7
14. Be concerned about the amount of competition among other entrepreneurs in this field.	1	2	3	4	5	6	7
15. Receive negative comments or discouragement about my career from family members.	1	2	3	4	5	6	7
16. Receive negative comments or discouragement about my career from friends.	1	2	3	4	5	6	7
17. Feel that demands of pursuing such a field would get in the way of family responsibilities	1	2	3	4	5	6	7
18. Not have enough time for social or leisure activities.	1	2	3	4	5	6	7

Appendix Q

Modified Perceived Contextual Support (Lent, Brown, Schmidt, et al., 2003)

Instructions: We realize that you may or may not actually intend to be an entrepreneur. But for the purposes of the questions in this part, **assume that you wanted to be an entrepreneur**. How likely would you be to experience each of the following situations? Indicate the number that best reflects how likely you believe you would be to encounter each situation.

Scale:

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Sort of Disagree	Neither agree nor disagree	Sort of Agree	Agree	Strongly Agree

If I were to be an entrepreneur, I would...

1. Get helpful assistance from a tutor, if I felt I needed such help.	1	2	3	4	5	6	7
2. Feel that my family members support this decision.	1	2	3	4	5	6	7
3. Be able to afford the extra cost of advanced training in this field.	1	2	3	4	5	6	7
4. Feel accepted by my classmates.	1	2	3	4	5	6	7
5. Have enough money saved up to be able to pursue my entrepreneurial career.	1	2	3	4	5	6	7
6. Get encouragement from my friends for pursuing this career.	1	2	3	4	5	6	7
7. Have enough financial support from my family to pursue this career.	1	2	3	4	5	6	7
8. Feel support for this decision from important people in my life (e.g., teachers).	1	2	3	4	5	6	7
9. Have friends or family who would help me with the business problems.	1	2	3	4	5	6	7
10. Be able to receive enough money through financial aid or other sources to allow me to pursue this career.	1	2	3	4	5	6	7
11. Have access to a "role model" in this field (i.e., someone you can look up to and learn from by observing).	1	2	3	4	5	6	7
12. Feel that there are people "like me" in this field.	1	2	3	4	5	6	7
13. Have access to a "mentor" who could offer me advice and encouragement.	1	2	3	4	5	6	7
14. Get helpful assistance from my advisor.	1	2	3	4	5	6	7
15. Feel that close friends or relatives would be proud of me for making this decision.	1	2	3	4	5	6	7

Appendix R

Entrepreneurial Self-Efficacy (Chan et al., 2012)

Instructions: Please use the scale below and rate how confident you are to perform the following tasks successfully:

Scale:

1	2	3	4	5
Not At All Confident	A Little Bit Confident	Moderately Confident	Fairly Confident	Extremely Confident

1. Manage the financial assets and performance of a company or firm.	1	2	3	4	5
2. Start a firm and keep it growing.	1	2	3	4	5
3. Plan a business (including market analysis, pricing, finances/costs, and marketing/sales).	1	2	3	4	5
4. Design an effective campaign for market new product or service.	1	2	3	4	5
5. Come up with ideas for products and services that may be needed in a market.	1	2	3	4	5
6. Build a network of contacts or partners who will support my business.	1	2	3	4	5
7. Identify opportunities to start-up viable businesses.	1	2	3	4	5

Appendix S

Entrepreneurial Intention (Chan et al., 2012)

Instructions: Indicate to what extent you agree or disagree with each statement using the scale below. Please indicate your response to each statement.

Scale:

1	2	3	4	5
Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree

1. I am definitely going to be an entrepreneur after my studies and am prepared to do anything to achieve that goal.	1	2	3	4	5
2. I will start my business in the next 5 years.	1	2	3	4	5
3. When I have enough work experience and finances, I am certain to start my own business.	1	2	3	4	5
4. I will start my business in the next 10 years.	1	2	3	4	5
5. I have a viable business idea and intend to start my own business soon after graduation.	1	2	3	4	5
6. I do not see myself taking over any business or buying any franchise in the future.	1	2	3	4	5