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Basic Psychological Needs: Satisfaction, Frustration and Entrepreneurial Intention

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Abstract

The presented study was proposed to investigate whether satisfaction and frustration for autonomy, competence and relatedness, identified as three universal Basic Psychological Needs within the Self-Determination Theory of motivation(Ryan and Deci, 2000) could contribute differently to entrepreneurial intention of undergraduate students (N =438) in Malaysia. Structural equation modelling was used to test the hypothesized model and structural relationships. The findings demonstrated the students' willingness to engage in starting their own businesses can be influenced by their need for both satisfaction and frustration. This implies that students may act volitionally and choose to be entrepreneurs and/or they may engage in entrepreneurial behaviour either out of obligation or necessity, although being volitional seems to be a stronger and dominant predictor of entrepreneurial intention.

1.0 INTRODUCTION

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

Understanding the formation of entrepreneurial intentions is essential for better understanding of the entrepreneurial behaviour (Shane & Venkataraman, 2000). Intention is regarded as a necessary precursor to act entrepreneurially (Fayolle, Gailly & Lassas-Clerc, 2006) and is considered the single best predictor of entrepreneurial behaviour (Barbosa, Gerhardt & Kickul, 2007; Krueger et al., 2000). Given the importance of entrepreneurial intention, it is then important to examine the factors that may foster or hinder it. In fact, this topic has been researched extensively, but only few, if any, have focused on why people start businesses? Is it because they choose to do so, or is it because they have to? If they have a choice on starting a business, then they have some intrinsic reasons. However, if they start a business for extrinsic reasons, it means they are compelled to do so. Self-determination theory of human motivation posits that people have three needs, when satisfied they become more intrinsically motivated to act, whereas not fulfilling these needs may result in hindering intrinsic motivation. And yet, people may engage in a behaviour (i.e. starting a business) out of necessity and obligation, and not by choice. As conceptualized in the self-determination theory, these needs are autonomy, competence and relatedness. Satisfaction and frustration of these needs may contribute to youths' intention to be entrepreneurs. Therefore, the main objective of this study was first: to test and

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establish the multi-dimensionality of psychological needs for satisfaction and frustration to construct. Second, it is to examine how uniquely psychological needs for satisfaction and frustration affect entrepreneurial intentions.

2.0 THEORETICAL BACKGROUND

Entrepreneurial Intention

Entrepreneurial intention refers to the readiness that people show to engage in a given behaviour such as being an entrepreneur. It is considered as an immediate determinant of behaviour. Ajzen, (1991) argued that it is most likely that a given behaviour will be performed if a strong intention to engage in that behaviour exists. It is defined "as a self-acknowledged conviction by a person that they will set up a new business venture and consciously plan to do so at some point in the future" (Thompson, 2009: p. 687). In the area of university graduates' entrepreneurship, entrepreneurial intention research has been widely used due to its predictive power of entrepreneurial behaviour (Almobaireek & Manolova, 2012; Krueger et al., 2000; Liñán & Chen, 2009). Entrepreneurial intention has been extensively researched and it has been found that it is influenced by a number of factors that may come from cognitive, psychological and demographic domains. However, it has not been examined from the self-determination theory perspective, which is one of the most influential motivational theories. Therefore, the present study proposed to examine motivational determinants of entrepreneurial intention using the Self Determination Theory (SDT) framework.

Basic Psychological Needs Theory

Basic psychological needs theory (BPNT) is one of the self-determination sub-theories that conceptualizes three psychological needs, namely autonomy, competence and relatedness as essential nutriments for people to function optimally and grow psychologically (Deci & Ryan, 2000). These needs are thought to be universal across people and cultures and are applicable throughout all aspects of a person's life (Milyavskaya & Koestner, 2011). Satisfying these needs seems to represent the underlying motivational mechanism that energizes and directs people's behaviour (Broeck, Vansteenkiste, Witte, Soenens & Lens, 2010; Deci & Ryan, 2000).

Deci and Ryan (2012) stated that BPNT was empirically formulated when they were trying to study what conditions make people thrive; not from clinical observations or philosophical assumptions. They asked questions related to the effects of reward on people's intrinsic motivation when they perform intrinsically interesting behaviour. After gathering data, psychological processes that described the phenomena were conceptualized. Then, they proposed a central proposition to SDT which is, "social-contextual factors that support satisfaction of the three basic psychological needs will promote autonomous functioning, persistence, effective performance (especially on heuristic tasks), and wellness, whereas social-contextual factors that thwart satisfaction of these three basic psychological needs will result in diminished autonomy, poorer performance, less persistence, and greater ill-being" (p. 3).

Autonomy refers to the perception that one's behaviour is self-congruent and volitional. Competence refers to the perception that one is capable of influencing the environment in desirable ways. Relatedness involves the feeling of meaningful closeness and connectedness with others (Weinstein & Ryan, 2011). All three innate needs are argued to have intrinsic value to the self and are essential for well-being and behavioural persistence (Teixeira, Silva, Mata, Palmeira & Markland, 2012). Metaphorically, just like sunlight, water and minerals are essential nutriments for plants to

bloom, thrive or flourish; the three basic psychological needs are conceptualized as essential nutriments for people's growth, integrity and health. (Broeck et al., 2010; Reis, Sheldon, Gable, Roscoe & Ryan, 2000; Ryan & Deci, 2000c).

It is stressed that the social contextual factors that provide people the opportunity to satisfy these needs will facilitate intrinsic motivation and integrated motivation (the fullest type of internalization of extrinsic motivation), whereas those that prevent satisfaction of these needs will decrease intrinsic motivation and the integration of extrinsic motivation (Deci & Ryan, 2000). Weinstein and Ryan (2011) described the state of individuals whose needs are satisfied or dissatisfied by the social environment by stating that individuals move towards motivational states that are characterized as self-volitional or autonomous when their environments support their needs. But, if environmental factors do not support the basic needs, motivation is pressured or controlled. These three basic needs are described next.

Autonomy

As mentioned earlier, in order to be intrinsically motivated, individuals experience a sense of autonomy (choice and volition) and competence (mastery of challenges). When these needs are satisfied, then intrinsic motivation exists. According to Niemiec et al. (2006), "the need for autonomy is feeling a sense of choice, endorsement, and volition with respect to initiating, maintaining, and terminating behavioural engagement" (p. 763). Autonomy is sometimes regarded as independence but it is conceptualized differently in SDT. In their commentary, Deci and Ryan (2012) stressed that autonomy is really distinguished from independence as it does not mean acting independently. They say that control is not the same as dependence, nor is autonomy the same as independence. Controlled or "heteronomous" is the opposite of autonomy, which means people are either coerced or seduced to think, feel or behave in a particular way.

Many studies have shown its impact in various aspects such as learning and education (Niemiec & Ryan, 2009; Ryan & Deci, 2011; Ryan & Powelson, 1991) where they suggest that quality learning cannot be gained without true volition. Autonomy also, has been shown to be effective in reducing stress and emotional exhaustion. Those who are volitional in their behaviour experience lower stress and anxiety (Weinstein & Ryan, 2011). Further, autonomy was found to foster intrinsic motivation of school teachers (Guay, Boggiano & Vallerand, 2001). Indeed, it is really an important element of SDT where it is argued that satisfying this need is essential for developing self-determined motivation and thus, positive outcomes will be associated with it (Oliver, Markland, Hardy & Petherick, 2008).

Competence

The need for competence concerns the feeling of effectiveness in interacting with the social or physical world (Niemiec et al., 2006) and "the belief that one has the ability to influence important outcomes" (Stone et al., 2009, p. 4). The feeling of competence about doing a certain task is characterized by challenge but within the capabilities and abilities of an individual, so that he/she can satisfy his/her innate need of competence and thus, be intrinsically motivated. Consequently, tendency for personal growth, well-being and performance is high (Deci & Ryan, 2000).

It is argued that adapting to complex and changing environment may result when the need for competence is satisfied (Deci & Ryan, 2000). Although competence seems to be similar to Bandura's (1977, 1982) theory of self-efficacy, some differences need to be mentioned. Deci and Ryan (2000) argue that competence is contrasting the self-efficacy construct where competence is a source of satisfaction in itself, not from the outcome the efficacy may yield. In this study, perceived behavioural

control is mostly treated as self-efficacy, and competence is used but operationalized differently. Self-efficacy refers to an individual's expectations of his/her own capacities to successfully accomplish a specific future task that leads to some desirable outcomes (Bandura, 1977). The argument of SDT is that competence is an innate human need and people have a natural tendency to be competent and influence their environment rather than just the perception of one's capabilities to reach the desired outcome in the self-efficacy construct. According to Van den Broeck, Vansteenkiste, De Witte and Lens (2008), "the satisfaction of the inborn need for competence represents current (instead of future-oriented) and more general (instead of specific) feelings of effectiveness. Whereas self-efficacy stimulates the behaviour for which one feels self-efficacious, satisfaction of the need for competence is likely to stimulate individuals' functioning and well-being on a more general level" (p. 280). Thus, in this study, perceived behavioural control is mostly treated as self-efficacy and competence is used, but operationalized differently.

Relatedness

The need for relatedness refers to the feeling of being related and connected to others. It is the sense of belonging to a certain group; family, peers, managers or any social group. In addition to the needs for autonomy and competence, SDT posits that satisfaction of the need for relatedness facilitates the process of internalization. People tend to internalize and accept as their own values and practices of those to whom they feel, or want to feel connected, and from contexts in which they experience a sense of belonging. In the classroom, relatedness is deeply associated with a student feeling that the teacher genuinely likes, respects and values him/her. Students who report such relatedness are more likely to exhibit identified and integrated regulation for the arduous tasks involved in learning, whereas those who feel disconnected or rejected by teachers are more likely to move away from internalization and thus, respond only to external contingencies and controls (Niemiec & Ryan, 2009).

Psychological needs satisfaction and needs frustration

According to SDT, satisfying basic psychological needs for autonomy, competence and relatedness can make intrinsic motivation sustainable. All needs are important for maintaining intrinsic motivation. Stated differentially, if one need is satisfied and the other is not, intrinsic motivation may be hindered (Niemiec & Ryan, 2009; Stone et al., 2009). Satisfaction of these needs is said to function as a fundamental nutrient that energizes the integration process and that contributes to health and psychological well-being. Low fulfilment of these needs may hinder motivation to thrive and grow so that one acts out of obligation and frustration.

Based on the above discussion, it is expected that basic psychological needs will have an impact on entrepreneurial intention. Therefore, the following hypotheses were formulated:

People could have intention to be entrepreneurs and engage in entrepreneurial behaviour for the interest and joy they drive from this activity. They move towards starting their business for intrinsic reasons. Therefore, it was hypothesized that:

H1: Psychological need satisfaction is positively related to entrepreneurial intention.

While satisfaction of the three basic needs may facilitate entrepreneurial intention, the frustration may work otherwise and hinder such intentions. Therefore, it was hypothesized that:

H2: Psychological need frustration is negatively related to entrepreneurial intention.

3.0 METHODS

Participants

The sample consisted of 438 (Males = 166, Females =272) 3rd and 4thyear university students from four Public Universities in Malaysia. They were enrolled in various disciplines. The age distribution of the sample ranged from 19 to 33 years. The mean age was 22.56 (SD= 1.39). A majority (75%) have had some work experience and 46% of them had the experience of starting their own businesses. Furthermore, 46% had taken a course in entrepreneurship and 75% of them suggested that several of their immediate family members have their own businesses. A majority of them (82%) also agreed that their university does promote a culture of entrepreneurship.

Measures

Instruments were taken from previous empirical studies to measure all specified constructs. (See Appendix 1 for a list of the items used in the present study). The dependent variable (entrepreneurial intention) was assessed by a 6-item scale developed by Liñán & Chen (2009). Sample item included "My professional goal is becoming an entrepreneur." Basic psychological need satisfaction and frustration constructs were measured by a scale recently developed by Chen et al., (2015). The scale consisted of 24 items measuring autonomy, competence and relatedness needs. Each psychological need was assessed by an 8-item scale, ranging from 1= "totally false" to 5= "very true", 4 items assessed satisfaction of the need and the other 4 assessed the frustration of that need. Sample items of satisfaction of all three needs are "I feel a sense of choice and freedom in the things I undertake", "I feel connected with people who care for me, and for whom I care" and "I feel competent to achieve my goals". Sample items of frustration of all three needs are "I feel pressured to do too many things", "I feel the relationships I have are just superficial" and "I feel like a failure because of the mistakes I make". All measures were administered in English and data were collected during class sessions.

4.0 RESULTS

The descriptive statistics and intercorrelations among the constructs included in the study are displayed in Table1.

Table 1 Mean, SD, reliability and correlation among study variables

No.	Construct	Mean	SD	Alpha	1	2	3	4	5	6	7
1	Entrepreneurial Intention (6)	3.59	.85	92.4	-						
	Need Satisfaction										
2	Autonomy (4)	3.90	.68	.855	.292**	-					
3	Relatedness (4)	4.03	.72	.866	.172**	.444**	-				
4	Competence (4)	3.93	.70	.897	.281**	.467**	.524**	-			
	Need Frustration										
5	Autonomy (4)	3.42	.75	.751	.238**	.062	.029	.068	-		
6	Relatedness (4)	2.79	1.01	.888	.169**	-.104*	-.233**	-.055	.399**	-	
7	Competence (4)	3.13	.92	862	.171**	-.149**	-.133**	-.128**	.358**	.507**	

** p<.01, *p<.05; Numbers in parentheses are number of items in the measurement scales.

Mean scores indicated that all constructs have moderate to moderately high scores. Need frustration variables received the lowest means, competence being the lowest among all (2.79). Reliability of all construct indicated the study constructs were reliable. All correlations among the study variables were significant except for the relationship between autonomy need frustration and the three needs satisfaction. Structural equation modelling was employed for the analysis.

Measurement Model

Data were analysed using first-order and higher-order confirmatory factor analyses (CFAs), and Structural Equation Models (SEMs) using Amos 22. First, the first-order CFA was conducted to assess how well observed indicators (items) reflect the presumed underlying structure of a measure (represented by its factors). Researchers using first-order CFAs specify both the number of factors comprising a measure and the items loading onto each factor. The measurement model of the first-order CFA, which include six independent and one dependent factor, yielded a good and acceptable good fit indices: $\chi^2 = 868.486$, df = 384, CFI = .938, RMSEA =.054.

After the successful first-order model fitting, a higher order CFA was then performed to evaluate the degree to which first-order constructs (factors) contribute to higher-order constructs. In higher-order CFAs, first- order factors are typically modelled as independent indicators of the higher-order construct. In the current study, we used second-order CFA to determine the extent in which basic psychological needs contribute to higher order need satisfaction and frustration. Factor loadings in higher-order models represent hypothesized relationships between latent variables, unlike factor loadings in first-order models, which represent observed relations between manifest variables (items) and latent variables. The second order CFA showed that the measurement model fits the data well.

Construct Validity and Reliability

As a guideline for assessing convergent validity, factor loading should be 0.50 or greater, or ideally 0.70 or higher, the average variance extracted (AVE) values should be greater than $\geq$ 0.50 and construct reliability (CR) should be greater than .70. Discriminant validity refers to the extent in which latent variables are truly distinct from other constructs (Hair, Black, Babin, & Anderson, 2010). In order for the discriminant validity to be achieved, the AVE should be greater than the Maximum Shared Squared Variance (AVE>MSV) and the Average Shared Squared Variance (AVE > ASV) (Hair et al., 2010). Table 2 provides evidence of constructs reliability and validity.

Structural Model

Following the successful fitting of measurement model, a full structural equation modelling (containing both measurement model and structural model) was then conducted. As mentioned earlier, the present study sought to examine how students' basic need satisfaction and basic need frustration are related to their intention to start their own businesses. As depicted in Figure 1, the hypothesized relationships among latent variables are as follows: need satisfaction and need frustration $\rightarrow$ entrepreneurial intention. These structural relationships had been tested and the results show that the full hypothesized structural model had achieved a good and acceptable fit to the observed data: $\chi^2 = 917.387$, df = 396, CFI = .934, RMSEA =.055.

Table 2 Standardized Factor Loading, Constructs Reliability, Convergent and Discriminant Validity

Construct	Item	Standardized loadings	C.R.	AVE	MSV	ASV
First-Order CFA						

Entrepreneurial Intention	EI1	.721	0.923	0.668	0.097	0.058
	EI2	.737				
	EI3	.828				
	EI4	.863				
	EI5	.909				
	EI6	.830				
Autonomy Satisfaction	AS1	.721	0.858	0.604	0.267	0.110
	AS2	.829				
	AS3	.846				
	AS4	.701				
Relatedness Satisfaction	RS1	.699	0.874	0.637	0.348	0.121
	RS2	.871				
	RS3	.878				
	RS4	.727				
Competence Satisfaction	CS1	.831	0.900	0.694	0.348	0.122
	CS2	.891				
	CS3	.846				
	CS4	.759				
Autonomy Frustration	AF1	.475	0.754	0.440	0.233	0.084
	AF2	.709				
	AF3	.768				
	AF4	.665				
Relatedness Frustration	RF1	.842	0.888	0.666	0.338	0.116
	RF2	.842				
	RF3	.855				
	RF4	.826				
Competence Frustration	CF1	.703	0.865	0.617	0.338	0.109
	CF2	.791				
	CF3	.865				
	CF4	.774				
Second-Order CFA						
Need Satisfaction			0.777	0.538	0.125	0.088
Need Frustration			0.757	0.512	0.069	0.060

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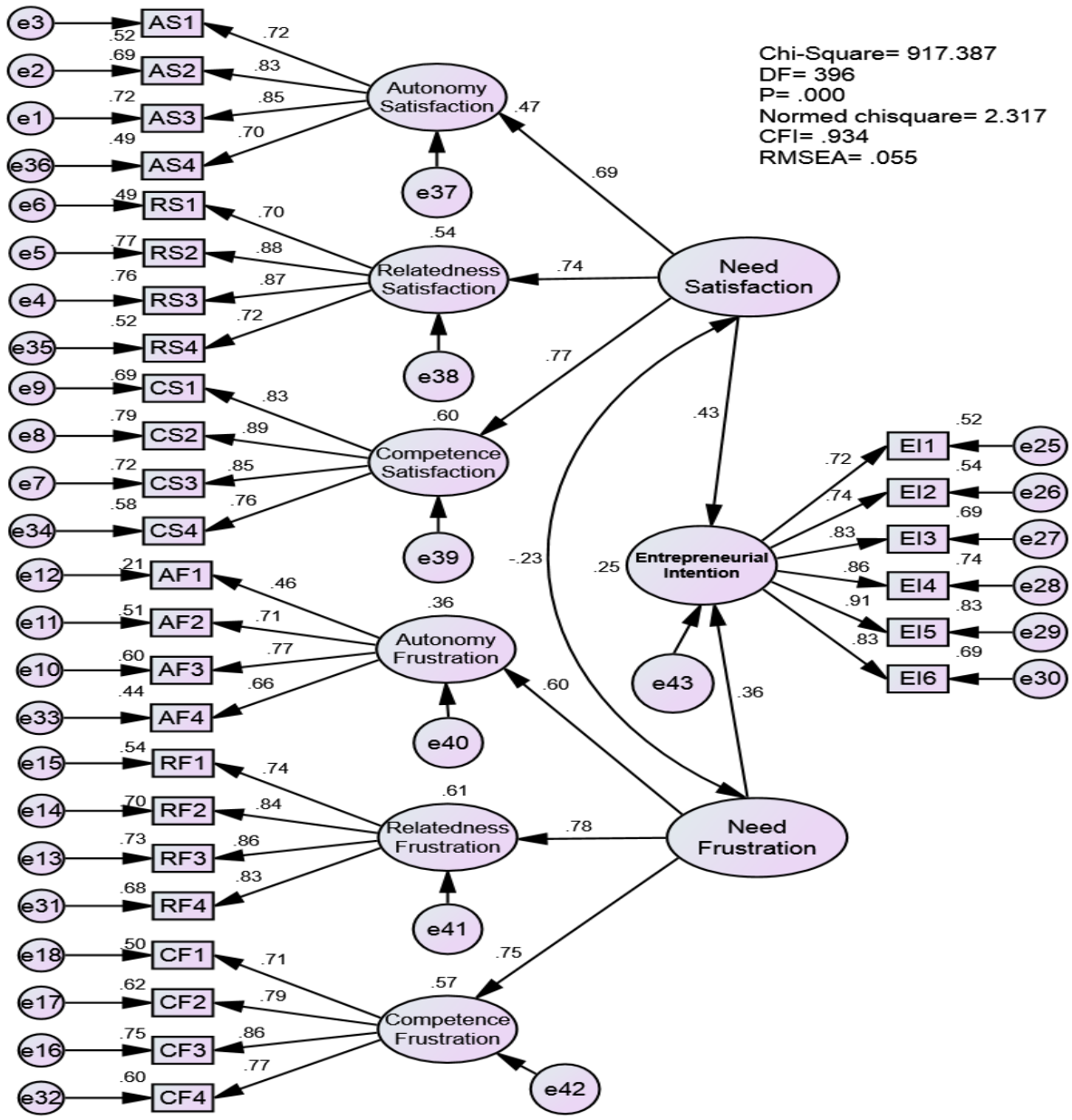

Figure 1: The Full Structural Model

Testing the study hypotheses was followed through by the fitting of the structural model. The significance of estimated path was examined as it provided the basis to accept or reject a hypothesis. Hypotheses 1 and 2 proposed that need satisfaction and need frustration are uniquely related to entrepreneurial intention. As such, while need satisfaction should positively predict entrepreneurial intention, need frustration should work otherwise. However, both predictors were statistically significant and showed positive contribution to entrepreneurial intention. Table 3 below demonstrate the significance of all structural relationships in the model.

Table 3 Standardized Regression Weights of the Structural Model

Structural Relationships		Standardized Regression Weights	Significance
Need Satisfaction →	Autonomy	.685	***
	Relatedness	.738	***
	Competence	.774	***
Need Frustration →	Autonomy	.601	***
	Relatedness	.781	***
	Competence	.752	***
Main Hypotheses			
Need Satisfaction →Entrepreneurial Intention		.434	***
Need Frustration →Entrepreneurial Intention		.361	***

5.0 DISCUSSION AND CONCLUSION

The study proposed to examine the effect of basic psychological needs satisfaction and frustration on entrepreneurial intention. As conceptualized in the self-determination theory, human beings across cultures and backgrounds have three innate psychological needs, namely autonomy, competence and relatedness. Positive outcome will result from satisfying these needs and when they are not met, people's intrinsic motivation may be hindered. In the entrepreneurship context, people may engage in starting businesses for intrinsic or extrinsic reasons. That is, some will start businesses for the interest and joy they derive from this activity while others will engage in starting businesses because for a variety of external reasons such as obligation and out of necessity.

Self-determination theory is relevant in this context and that is why it has been applied in the present study. It was hypothesized that psychological need satisfaction are related to entrepreneurial intention, while need frustration may not facilitate it. Students may intend to be entrepreneurs after their graduation because they choose and like to, or may intend to do so because of some extrinsic reasons, such as family or university culture, past experiences or fear of unemployment etc. When perceiving that entrepreneurship is interesting and advantageous to them, it means that their psychological needs are satisfied. When they perceive that engaging in an entrepreneurial activity is just to run out of unemployment and to get extrinsic rewards, then their needs are not fulfilled.

To test the hypothesized relationships, structural equation modelling was employed. First, higher-order CFA was conducted to validate the model and establish multi-dimensionality of need satisfaction and frustration constructs(Chen et al., 2015).The result supported that they were indeed multi-dimensional constructs that included three distinct basic need satisfaction and frustration dimensions. However, while the hypothesized relationship between need satisfaction and entrepreneurial intention was supported, it was not the case for need frustration. The finding was not in line with the hypotheses. It showed that even if the basic needs are not satisfied, the entrepreneurial intention remains intact. The possible reasons may be the background profile of the respondents. As reported earlier, almost half of the respondents had the experience of starting their own businesses, as well as had taken a course in entrepreneurship. Furthermore, 75% of them had reported that several of their immediate family members have started their own businesses. In addition to that, 82% also agreed that their university promoted a culture of entrepreneurship. As such, even if the students'

basic needs of autonomy, competence, and relatedness were not being met, they still had entrepreneurial intentions.

Further studies are suggested to examine the moderating and mediating variables that may explain the unique relationship of basic need satisfaction and basic need frustration with entrepreneurial intention.

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