



HOKKAIDO UNIVERSITY

Title	The entrepreneurial process from intention to behavior : Focusing on the moderating roles of human capital, social networks, and financial capital
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Degree Grantor	北海道大学
Degree Name	博士(経営学)
Dissertation Number	甲第14476号
Issue Date	2021-03-25
DOI	https://doi.org/10.14943/doctoral.k14476
Doc URL	https://hdl.handle.net/2115/96774
Type	doctoral thesis
File Information	NERGUI_ENKHZAYA.pdf



Thesis topic:

The entrepreneurial process from intention to behavior: Focusing on the moderating roles of human capital, social networks, and financial capital

In Japanese:

起業意図と起業行動の関係: 人的資本、社会的ネットワーク、財務資本
に着目して

ABSTRACT

The entrepreneurial intention, moreover, the relationship between entrepreneurial intention and behavior, is a rapidly growing field with numerous studies. Existing studies conceptualize that entrepreneurship is viewed as intentionally planned behavior and driven primarily by entrepreneurial intention. Therefore, the formation of entrepreneurial intention is considered an essential initial step in the new venture creation. Yet, empirical evidence suggests that not every entrepreneurial intention transformed into behavior. Thus, this study focuses on how human capital (general management experience, technical experience, industry experience), social networks (business network, mentor, professional forum, personal network), and financial capital influence the relationship between entrepreneurial intention and behavior. Using quantitative survey data from 532 Japanese entrepreneurs (n=532), an empirical analysis was carried out. This study's findings contribute to the understanding of the entrepreneurial intention and behavior association by showing that general management experience of human capital and personal networks of social networks positively moderate the relationship between entrepreneurial intention and behavior.

Keywords: entrepreneurial intention, entrepreneurial behavior, human capital, social networks, financial capital

ACKNOWLEDGEMENT

It is my pleasure and honor to write notes of thanks to everyone who has supported and motivated me for completion of my doctoral thesis.

First and foremost, I am extremely grateful to my supervisor Prof. UDA Tadashi for his constant trust, continuous support, invaluable advice, and patience during the course of my PhD degree. His enormous knowledge and plentiful experience have encouraged me in all the time of academic research and daily life. No words can express my special thanks to him for providing a great opportunity to study under his supervision. This thesis would not have been possible without his timely suggestions despite of his busy schedule.

My gratitude extends to Prof. SAKAGAWA Yuji for his treasured supervision, and invaluable comments at every stage of my study which were influential in shaping my research. I also would like to express the deepest appreciation to my committee chair, Prof. IWATA Satoshi for his helpful comments, significant suggestions and guidance on the improvement of my thesis.

I would like to extend my thanks to the following mentors: Prof. HIRAMOTO Kenta, Prof. OKADA Miyako, Prof. MATSUO Makoto, Prof. AIHARA Motohiro, and Prof. ABE Tomokazu for their kind support and advice. In addition, I greatly appreciate the support I received from the staff members of the Graduate School of Economics and Business.

I greatly acknowledge the Otsuka Toshimi Scholarship Foundation for granting me a scholarship, which removed financial concerns from my doctoral journey. Without the foundation's generous support to my research activities, PhD study would not have been achievable.

Finally, my deepest appreciation belongs to my family, and husband who have always been there for me no matter what. It would be impossible for me to complete my study without your unconditional love, support, tremendous understanding and patience. In addition, I would like to thank my dear friends and fellow students. You all have made my study and life in Hokkaido a most memorable and wonderful.

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CHAPTER 1: INTRODUCTION

1.1 Research objective and background

The present study aims to identify the role of moderating variables which are human capital, social networks, and financial capital on the relationship between entrepreneurial intention and behavior. Current studies have pointed out that investigating the relationship between meaning and behavior in entrepreneurship is essential to understand why starting a business or becoming an entrepreneur (Bird, 1988; Carter et al., 2003). This is because entrepreneurial intention is considered the first step of entrepreneurship, and entrepreneurial behavior meets several significant intentional, planned behavior characteristics, which can be explained by intention (Bird, 1988; Krueger, 1993).

For dealing with planned behaviors, intentions have been proven as the best predictor of the behaviors compared to other factors such as demographics, beliefs, attitudes, and personality traits (Kautonen et al., 2015; Krueger & Carsrud, 1993). Besides, the entrepreneurial intention has been viewed as a conscious awareness that precedes action (Bird, 1988; Shook, Priem, & McGee, 2003). Moreover, according to Ajzen (1991), intentions are "indications of how hard people are willing to try, how much of an effort they are planning to exert, to perform the behavior" (p.181). That is why entrepreneurial intention can be seen as a readiness to start a business and engage in entrepreneurial activities.

For investigating the relationship between entrepreneurial intention and behavior, social psychology offers behavioral intention models that provide a better understanding of broad behavioral phenomena including entrepreneurial behavior, based on the needs of theory-driven intention models in entrepreneurship (Krueger & Carsrud, 1993). Following from the evidence in previous studies, intention models, specifically Theory of Planned Behavior, is suited to understand the emergence of a new venture (e.g., Bogatyreva et al., 2019; Gielnik et al., 2014;

Gieure et al., 2019; Kautonen et al., 2013; Neneh, 2019; Van Gelderen et al., 2015). For instance, previous entrepreneurship studies find that the three antecedents, which are attitude, social norms, and PBC, jointly explain the substantial degree of entrepreneurial intention variation. Some studies show that those variables explain close to half (30-45%) of the variation in entrepreneurial intention (Iakovleva & Kolvereid, 2009; Liñán & Chen, 2009). These studies support applying TPB to understand the process of intention and behavior in the entrepreneurship context (Van Gelderen et al., 2015).

However, previous studies mostly focused on the relationship between antecedents of intention, which are attitude toward behavior, subjective norm and perceived behavioral control and intention during the past years (Liñán & Chen, 2009a; Osorio, Settles, & Shen, 2017; Schlaegel & Koenig, 2013), there are only a few studies have been focused on the relationship between entrepreneurial intention and behavior (Kautonen et al., 2015; Neneh, 2019; Shirokova, Osiyevskyy, & Bogatyreva, 2016). Yet, the literature that studied the relationship between intention and behavior suggests that even though the entrepreneurial intention is a good predictor of behavior, not every intention transforms into action. While many people develop their intention to start their own company, sometimes these intentions are postponed or abandoned due to personal preferences changes (Van Gelderen et al., 2015). It indicates the intention and behavior gap (Bogatyreva et al., 2019; Shirokova et al., 2016; Van Gelderen et al., 2015).

Therefore, previous studies have argued that mere intention could not be a sufficient predictor of entrepreneurial behavior (Kautonen et al., 2015; Shirokova et al., 2016). The other situational (Schlaegel & Koenig, 2013) or contextual factors (Shirokova et al., 2016) which can support the transforming process from intention into actual behavior, need to be addressed. That is why researchers' interests have been shifting to the potential factors that influence the association between entrepreneurial intention and behavior.

As such, this study rooted in the view that entrepreneurial intention explains the scope of start-up activity (Meoli et al., 2019; Neneh, 2019; Shirokova et al., 2016) and extends the current entrepreneurship literature by proposing the human capital, social networks, and financial capital that are likely to influence the relationship between entrepreneurial intention and behavior. These three variables have been played vital roles in start-up decisions (Chandler & Hanks, 1995; Davidsson & Honig, 2003; Fernández-Pérez et al., 2015) because the journey of entrepreneurship is characterized by risk-taking and uncertainties. Many people give up on their intention to start their own business due to the fear of loss, doubt, and self-confidence loss. However, more importantly, these psychological instability situations are mostly raised when people do not have sufficient skills, experiences, or networks that provide essential information related to the proposed business (Joensuu-Salo et al., 2015; Kautonen et al., 2015). Additionally, insufficient internal financial resources or unavailability to access external resources can make start-up activity delay or postpone (Bruderl et al., 1992; Dunn & Holtz-eakin, 2000; Neneh, 2019).

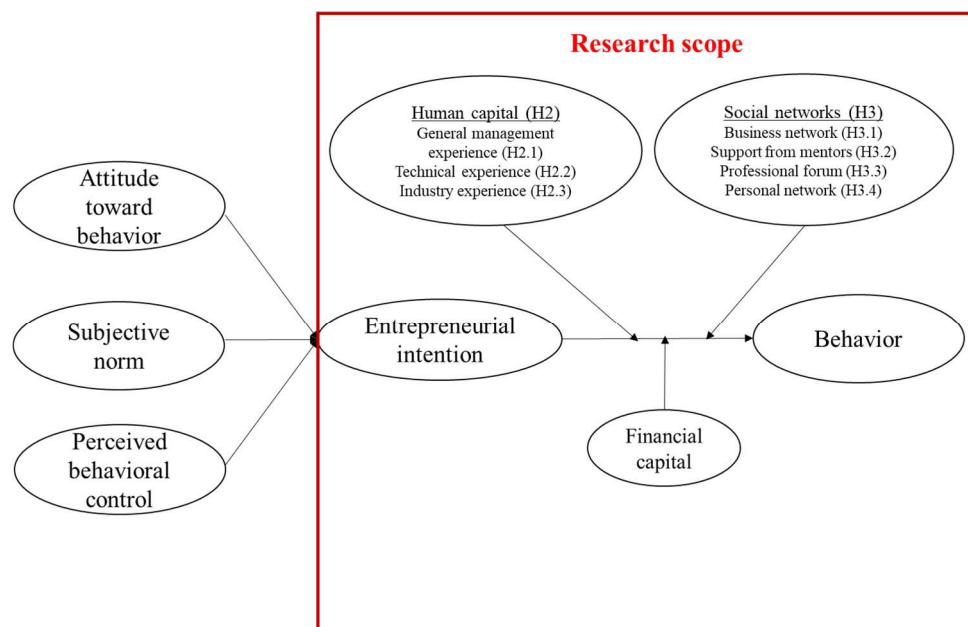


Figure 1: The research scope of this study

Moreover, this study focused on the non-experienced entrepreneurs who established their first company. Compared to experienced and serial entrepreneurs, human capital and social networks are critical factors to start a new business by themselves (Edelman et al., 2016; Stucki, 2016). However, previous studies mostly focused on the whole concepts of the human capital (Davidsson & Honig, 2003; Dimov, 2010; Khoshmaram et al., 2018) and social networks (Fatima et al., 2016; Sesen, 2012; Sultana et al., 2019), even though these two concepts consist of various aspects. Therefore, to get deeper insights into which aspects of human capital and social networks are more influential to the intention-behavior link, each aspect of human capital and social networks is carried out in this study. Human capital consists of three kinds of experiences which are general management experience, technical experience, and industry experience; and social networks are divided into business networks, mentor, professional forum, and personal networks based on the previous studies (Chandler & Hanks, 1995; Fernández-Pérez et al., 2015)

In addition, human capital, social networks, and financial capital have been investigated in previous entrepreneurship studies as mediator variables (Dimov, 2010; Edelman et al., 2016) and independent variables (Brush et al., 2003; Chandler & Hanks, 1995; Fernández-Pérez et al., 2015) that have a direct effect on start-up activity or entrepreneurial intention. As seen from the result of these prior studies, human capital (Davidsson & Honig, 2003; Dimov, 2010; Baba & Motohashi, 2013), social networks (Fatima et al., 2016; Fernández-Pérez et al., 2015; Ozgen & Baron, 2007a; Shane & Cable, 2002) and financial capital (Chandler & Hanks, 1995; Cooper et al., 1994; Sesen, 2012) can provide potential entrepreneurs with needed resources to push engaging in start-up activity.

However, empirical studies have not yet addressed these variables as moderator empirically, at the same time, prior studies have been calling that contextual variables which can strengthen the relationship between entrepreneurial intention and behavior should be

investigated in further studies (Kautonen et al., 2015; Meoli et al., 2019; Shirokova et al., 2016). Therefore, the objective of this study is to examine the moderating effects of human capital (general management experience, technical experience, industry experience), social networks (business network, mentor, professional forum, and personal network), and financial capital on the relationship between entrepreneurial intention and behavior.

The findings are expected to contribute to entrepreneurship literature by examining the relationship between entrepreneurial intention and behavior with the potential moderator variables from the sample of actual entrepreneurs instead of students. Further, this study contributes to entrepreneurship educators, public policymakers, aspiring and practicing entrepreneurs to foster entrepreneurial intention, which is the keystone of entrepreneurship development.

1.2 Contents of the thesis

This doctoral thesis consists of six chapters, as follows:

Chapter 1, Introduction begins with research aim, research background, and research need for the relationship between entrepreneurial intention and behavior and moderator variables that can reinforce the relationship. It then identifies the research objective and significance of the research. The last section of Chapter 1 presents the contents of the doctoral thesis.

Chapter 2 is for a Literature Review that provides insights on all core concepts, including understanding intention, development of entrepreneurial intention, and behavior. Furthermore, for developing the hypotheses, all dominant intention models have been reviewed in this chapter.

Chapter 3, Methodology, covers detailed insights into research design, measures, data collection, and validation checks. In the beginning, the procedures and measures used in this thesis are introduced. Then, the sampling and data collection process is explained in detail. After that, bias and validation checks, including data screening, demographics of respondents, descriptive statistics, measurement validation, and common method bias, are carried out to ensure the data are clean as well as reliable and valid for further statistical analyses.

Chapter 4, Results section states the findings of this study based upon the methodology. In this chapter, all proposed hypotheses are tested using hierarchical regression analysis, and findings are presented.

Chapter 5, Discussion section, presents an overview of the findings. Specifically, it interprets what the results mean and show why the findings are essential. In addition, the discussion chapter shows how this research linked to prior research and fill the existing gaps in the field in the meantime, highlighting what are new ideas and suggestions for further studies.

Chapter 6 is for the conclusion and future direction, including theoretical and practical implications and limitations with future research avenues. In this chapter, the entire thesis's brief conclusion with what can't the results tell us and what practical actions or scientific studies should follow are discussed.

CHAPTER 2: LITERATURE REVIEW AND RESEARCH HYPOTHESES

2.1 Understanding of intention

The entrepreneurial intention has been attracting many researchers in entrepreneurship theory for a prolonged period. Not surprisingly, this concept critically contributes to capturing entrepreneurship (Fayolle & Liñán, 2014). Many scholars have been trying to define entrepreneurship in many contexts. Even though various definitions exist to understand and explain the phenomenon, we can find a significant common aspect in them. That is to say, it is a process. For instance, in managerial or organizational theory, entrepreneurship is referred to as a process of emerging new organizations (Antoncic et al., 2015; Carter et al., 1996; Moroz & Hindle, 2012) and the process of becoming entrepreneurs (Carter et al., 2003).

In this way, they especially emphasize the process in previous studies, but the entrepreneurial one is complex because it involves incredibly various aspects such as perception (Katz & Gartner, 1988; Krueger & Carsrud, 1993), attitude (Kautonen et al., 2015), behavior (Krueger et al., 2000; Shirokova et al., 2016), and situation (Bogatyreva et al., 2019; Oliveira & Rua, 2018). Thus, it can be said that how we grasp the whole picture of the process could be an essential issue in entrepreneurship theory (Low & Macmillan, 1988). However, the process is still less understood (Krueger & Carsrud, 1993; Shane & Venkataraman, 2000). The reason why entrepreneurial researchers focus on intention toward the direction of shedding light on the process is that the concept could predict (planned) behavior better than individual variables such as personality (Krueger & Carsrud, 1993).

Since the relatively early entrepreneurial research period, many of the works considered personality traits or cultural backgrounds as a determinant of entrepreneurial behavior and success (Low & Macmillan, 1988). Mainly in order to distinguish entrepreneurs from non-entrepreneurs, a large number of scholars have been presenting influential psychological characteristics (Antoncic et al., 2015; Brockhaus, 1980; DePillis & Reardon, 2007) which are

the locus of control (Mueller & Thomas, 2000), risk-taking propensity (Brandstätter, 2011; Cui et al., 2016), need for achievement (Barba-Sánchez & Atienza-Sahuquillo, 2012; McClelland, 1965), innovativeness (Altinnay et al., 2012; Mueller & Thomas, 2000), and tolerance for ambiguity (Acedo & Jones, 2007; Altinnay et al., 2012; Westerberg et al., 1997). Moreover, Goldberg (1981) represents the big five personality traits (OCEAN: openness, conscientiousness, extraversion, agreeableness, and neuroticism) approach. Yet, the question of whether specific personality traits or characteristics to explain behavior do exist has been raised. Herron and Robinson (1993) noted that "personal trait explains behavior if the level of aggregation is wide enough" (Herron & Robinson, Jr, 1993, p. 281). Hollenbeck and Whitener (1988) argued that personality traits are only able to predict and explain certain behavior and performance with mediating by motivation factors (Hollenbeck & Whitener, 1988).

On the other hand, as described above, intention tends to be regarded as a good predictor of the entrepreneurial process (Osorio et al., 2017; Sieger & Minola, 2017; Van Gelderen et al., 2015) because it could concern and form future actions (Kibler et al., 2014; Krueger & Carsrud, 1993; Nyello et al., 2015), as is confirmed from the expressions such as commitment to start a new business (Hsu et al., 2018; Krueger, 1993), willingness to take actions (Ajzen, 2011), and target behavior of starting a business (Kruger et al., 2000). In fact, Armitage and Conner (2001) showed that intention could have a significant effect on actual behaviors based on the meta-analysis, and Sheeran (2002) presented that intention predicts 28% of the variation in the future behavior on average.

However, as for entrepreneurial intention, scholars have not shared an influential definition of it (Shook et al., 2003). In contrast, most studies focusing on entrepreneurial intention tend to approach the phenomena from an "individual" psychological viewpoint (Van Gelderen et al., 2015).

As shown in Katz and Gartner (1988), the origin of the concept of intention is not limited only to cognitive or psychological aspects but it involves organizational and sociological aspects such as organizing and enacting realities. Furthermore, paying immoderate attention to “individual” intention would not be suitable to the current practical status in which the founder “team” is rising in starting a new business (Jong, 2016). Thus, it would be strongly required to organize the existing literature on entrepreneurial intention based on the way to firmly divide the theoretical streams into a psychologically-driven one and organizational or context-conscious.

2.2 Emergence and development of entrepreneurial intention and behavior

Entrepreneurial intention’s study was published in Shapero’s articles around 40 years ago (Shapero, 1975; Shapero & Sokol, 1982). Soon after that, more authors begin to recognize the importance of the intention approach in the field of entrepreneurship (Krueger et al., 2000). For instance, numerous studies of entrepreneurial intention (Drennan, 2008; Liñán, 2008; Liñán & Chen, 2009; Osorio et al., 2017) and the relationship of entrepreneurial intention and behavior (Kautonen et al., 2015; Neneh, 2019; Shirokova et al., 2016; Van Gelderen et al., 2015; Weiss et al., 2019) are done in entrepreneurship field during the recent years. Scholars also confirm that understanding entrepreneurial intention is the main part of the new venture creation process (Lee & Wong, 2004; Nabi & Liñán, 2013), the vital element of prediction in actual behavior (Krueger & Carsrud, 1993).

Entrepreneurial intention indicates the effort and willingness of people who plan to do activities to start a new business (Jeon, 2018; Nowiński & Haddoud, 2019) and trying to reach the new venture creation goal (Shook et al., 2003). The origin of intention concept in entrepreneurship has derived from the psychological and organizational domains.

In psychology terms, intentions define the self-instructions of specific actions toward certain behavior for attaining goals (Sheeran & Webb, 2016; Triandis, 1980). According to

Webster's New Collegiate Dictionary (1980), the intention is referred to as "a determination to act in a certain way" and as "to have in mind as a purpose or goal" (Woolf, 1980, p.596). Thus, intentions are the cognitive structure that emphasizes the level of motivation that influences behavior or setting goals and plans (Krueger & Carsrud, 1993). Previously goals are usually formalized in subjects' minds, then plans to reach the goals are formalized. It can be inferred as the form of "I intend to do something," "I plan to do something", or "I will do something" (Sheeran, 2002, p.2). Further, behavioral intention theory represented by the Theory of Planned behavior shows the influence of intentions as the drivers and most immediate predictor of behaviors (Sniehotta et al., 2005).

On the other hand, Katz and Gartner (1988) suggested that the "word of intention is derived from the works of the process in the organizational theory literature" (p.431). Accordingly, creating a new organization is the whole complex process that starts with the intention to continue until establishing (Katz & Gartner, 1988; Shook et al., 2003). Thus, word of intention can be seen from the studies that defined organization creation as the process. The intention refers to an individual collecting and seeking necessary information for achieving the goals of venture creation in the organizational theory (Bird, 1988; Katz & Gartner, 1988). By seeking information, an individual shows interest and readiness in creating a new venture.

Hence, it can be said that we could divide theoretical orientations for understanding the entrepreneurial intention and behavior into two: psychologically-driven and organization or context conscious. When examining the intention and behavior in entrepreneurship, as for psychologically-driven, there are the following models that are prevalent in the entrepreneurial literature: Theory of Planned Behavior (TPB) presented by Ajzen (1991), and Entrepreneurial Event Model (EEM) offered by Shapero and Sokol (1982). For discussing the TPB, the Theory of Reasoned Action (TRA) should be addressed in the following psychologically-driven

intention model section, even though this model does not use for entrepreneurial behavior. On the other hand, as for organization or context-conscious, Bird's (1988) model could be raised.

2.3 Overview of intention models

2.3.1 Psychologically-driven intention models

TRA, TPB, and EEM are purely psychological models. TRA and TPB come from social psychology, and it is known as well-developed and widely used in studies of analyzing intention and behavior. EEM is an entrepreneurial intention model that is specific to the organization and entrepreneurship studies. Using intention-based models in entrepreneurship gives a great opportunity to researchers for predicting entrepreneurial behavior. Furthermore, empirical evidence supports the application of the Theory of Planned Behavior (e.g., Bogatyreva et al., 2019; Joensuu-Salo et al., 2015; Rauch & Hulsink, 2015; Van Gelderen et al., 2015) and the Entrepreneurial Event Model (Byabashaija & Katono, 2011; Ngugi et al., 2012; Uy et al., 2013; Wang et al., 2011) to predict entrepreneurial intention and behavior. For further understanding, these models are discussed in detail.

Theory of Reasoned Action

The Theory of Reasoned Action (TRA) was developed by Martin Fishbein and Icek Ajzen (1975) to explain and predict customer intentions and widely studied (Paul, Modi, & Patel, 2015; Sheppard, Hartwick, & Warshaw, 1988) in consumer behavior. The main purpose of this theory is to explain behavior by intention. The TRA excludes those behaviors that may require specific resources, opportunities, or special skills, knowledge, experience, or abilities (Ellen & Ajzen, 1992). According to the TRA, there are two antecedents, which are attitudes and subjective norms. One's attitude toward performing the behavior expresses the feeling of positive or negative. For example, when a person decides to start a diet, the positive or negative feeling of eating vegetables or fruits would be necessary. A subjective norm is a significant

other's opinion and permission to perform the target behavior. For example, if surrounding friends, family members feel that the target person should give up on smoking, it would be an important factor to take action toward the behavior.

Fishbein and Ajzen (1975) suggest that most human behaviors can be predicted if the behavior is under volitional control. However, TRA addresses only motivational factor and omitting non-motivational factors such as the context of opportunity and resources (Mathur, 1998; Sarver, 1983). For starting-up, it requires non-motivational factors along with motivational factors such as resource, opportunity, and financial capital. As such, simple behavior like attending class or lectures encounters a few problems of behavioral control. The meta-analysis of Sheppard et al. (1988) confirms that there would be a significant relationship between intention and performance when it predicts single behavior. However, problems of control are more related to people who set challenging goals.

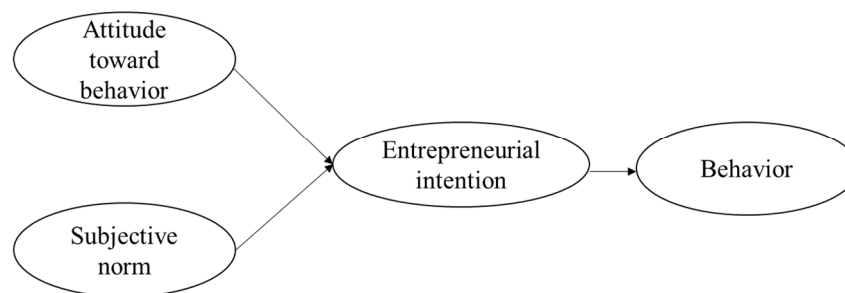


Figure 2. Theory of Reasoned Action (Ellen & Ajzen, 1992)

Thus, behavioral control was incorporated into the Theory of Planned Behavior (TPB) for improving prediction ability. The TRA, which relies on intention, would be insufficient for predicting intended behavior under control (Ajzen & Madden, 1986).

Theory of Planned Behavior

According to Fishbein, an individual's intention is the best single predictor of one's behavior (Brinberg, 1979). The Theory of Planned Behavior is one of the leading, tightly specified social psychological theories in intention studies (Armitage & Conner, 2001; Sutton, 1998).

Ajzen (1985, 1991) developed the Theory of Planned Behavior (TPB) by adding perceived behavioral control (PBC) to the Theory of Reasoned Action (TRA). This leads to considerable improvements of the model in predicting intention as well as behavior. Previous studies show that regression coefficients of perceived behavioral control were significant (Ajzen, 1991; Mathur, 1998).

According to Ajzen (2011), the intention is a willingness and readiness to behave. The intention has three cognitive preceding factors (Ajzen, 1991): attitude, subjective norms, and perceived behavioral control and acts as a mediator between the three antecedents and behavior. "Attitude" reflects a person's upbeat assessment and negative assessment of the behavior and is defined as an evaluative statement about an object (Brinberg, 1979). "Subjective norms" is the perceived social perception of important groups or individuals such as family, friends, relatives, as well as co-workers to perform or not perform. Ajzen and Fishbein (1980) define subjective norms as one's impression of other people regarding certain behavior (Ajzen & Madden, 1986). The values held by these significant others directly influence an intention to perform (Ajzen, 1991). "Perceived behavior control" refers to a person's perception of capability and skills to act toward given behavior (Ajzen, 1991). Ajzen and Madden (1986) argued that both attitude and subjective norm played a significant role in predicting intention; moreover, adding the perceived behavioral control to TPB notably improved the prediction of intention (Ajzen & Madden, 1986).

Furthermore, there are two possible versions of the TPB are discussed in previous literature (Ajzen & Madden, 1986). The first version does not include the link from PBC to behavior. This version assumes that intention mediates the relationship between PBC and behavior. In contrast, the second one considers the PBC directly influences behavior.

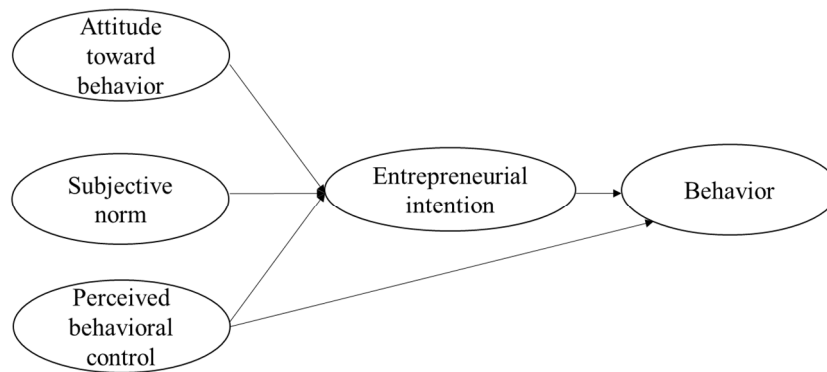


Figure 3. Theory of Planned Behavior: Version 1 without arrow between behavior and PBC. Version 2 with an arrow between behavior and PBC (Ajzen & Madden, 1986).

As noted in TPB, behaviors depend not only on motivation factors but on the control factors, which may often relate to available resources and opportunities (Ajzen & Madden, 1986). If the individual can decide to act or not act, the behavior depends on the will, and behavior affords a person to have complete control over the performance; it is easier to predict by mere intention. However, most behaviors do not meet this requirement, and they require some degree of non-motivational factors, specifically, the availability of resources and opportunities. From this concept, it can be said that the prediction power of PBC might depend on the types of behavior (Ajzen, 1991; Ajzen & Madden, 1986). For instance, when an individual controls the behavior at a high level, intention predicts the behavior sufficiently (Ajzen, 1991). In this condition, the PBC and behavior are fully mediated by intention. However, when an individual has a low degree of control over the behavior, PBC directly affects the behavior (Kautonen et al., 2013). In such circumstances, the behavior could be

predicted by PBC and intention (Ajzen, 1991). Entrepreneurial behavior is considered as one of those behaviors which require both motivational factors and non-motivational factors (ability) to perform successfully (Kautonen et al., 2015).

As such, numerous entrepreneurship intention studies have used Ajzen's TPB (e.g., Almobaireek & Manolova, 2012; Ferry et al., 2019; Jeon, 2018; Krueger et al., 2000; Neneh, 2019; Shirokova et al., 2016). These studies support the applying TPB to investigate the relationship between intention and behavior in the entrepreneurship context (Van Gelderen et al., 2015). Previous entrepreneurship studies find that the three antecedents, which are attitude, social norms, and PBC, jointly explain the substantial degree of variation in intentions. Some studies show that those variables explain close to half (30-45%) of the variation in entrepreneurial intention (Iakovleva & Kolvereid, 2009; Liñán & Chen, 2009). Furthermore, Kautonen et al. (2015) showed a higher result that those three antecedents explain 59% of the entrepreneurial intention.

Entrepreneurial Event Model

Shapero and Sokol's entrepreneurial event model (EEM) is for predicting entrepreneurial intention and start-up behavior (Schlaegel & Koenig, 2013). Shapero and Sokol (1982) state that entrepreneurial intentions consists of perceived desirability, propensity to act, and perceived feasibility.

"Perceived desirability" indicates the attractiveness of starting-up their own business and represented by a desire to perform the activities of start-up (Krueger et al., 2000). "Propensity to act" is viewed as the person's willingness to act depends on the other's decision and desire to improve an authority through the action. Further, the propensity to act reflects the volitional aspect of intention. "Perceived feasibility" refers to the feasibility of behaviors that are important to a start-up business (Fitzsimmons & Douglas, 2011; Schlaegel & Koenig, 2013).

Shapero defines that perceived feasibility is related to the degree of a personal feeling capable of starting a business (Krueger et al., 2000).

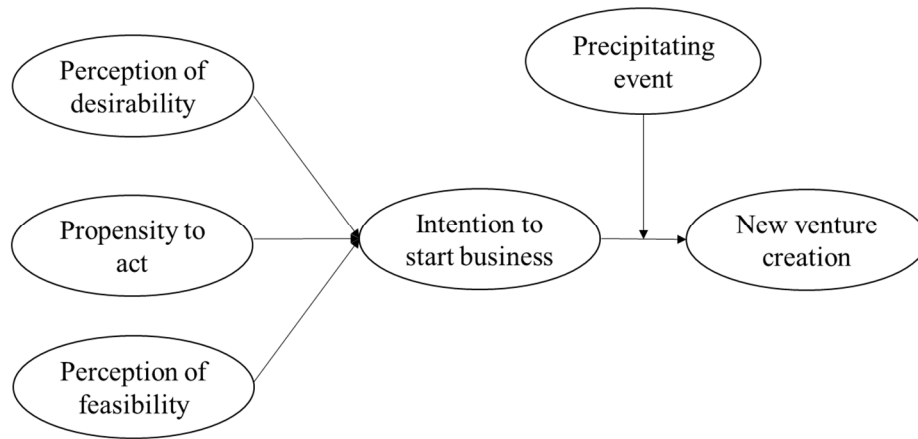


Figure 4. Entrepreneurial Event Model (Farsi, Arabiun, & Moradi, 2012)

This model also includes the "precipitating event," which is guided by displacement. Displacement could occur positively like getting financial support and promotion or a negative form like losing a job, illness, and injury (Farsi et al., 2012; Wang et al., 2011). Moreover, these displacements have the potential to push ones to engage in start-up behavior (Wang et al., 2011).

Throughout the years, several meta-analyses and empirical studies of entrepreneurial intention adopted this theoretical model for examining entrepreneurial intention (Ngugi et al., 2012; Schlaegel & Koenig, 2013; Uysal, 2016). For instance, Krueger (1993) used EEM with three antecedents of intention to explore the students' entrepreneurial intention, analyzing the data collected from 126 university business students. The result supports the concept of the EEM model that entrepreneurial intentions drive from perceived desirability, perceived feasibility, and propensity to act.

Byabashaija and Katono (2011) conducted a longitudinal study on the entrepreneurial intention of students in Uganda. The result showed that perceived desirability and feasibility

have a significant influence on entrepreneurial intention. Similarly, data from respondents in Turkey and Kosovo (Uysal & Güney, 2016; Uysal, 2016), China, and the USA (Wang et al., 2011) showed that perceived desirability and feasibility have significant positive effects on the entrepreneurial intention.

The integrated model of TPB and EEM

Prior research has been proposed and tested conceptual models as partially integrated (Krueger et al., 2000) and fully integrated (Esfandiar et al., 2019; Iakovleva & Kolvereid, 2009; Schlaegel & Koenig, 2013). Krueger et al. (2000) were ahead of testing both models of TPB and EEM. After that, Iakovleva and Kolvereid (2009) and Schlaegel and Koenig (2013) attempted to integrate the models.

Iakovleva and Kolvereid (2009) and Schlaegel and Konig (2013) attempted to integrate two intention models into one based on the Perugini and Bagozzi's (2001) model of goal-directed behavior (MGB) to achieve more theoretical clarity in their meta-analysis. They proposed that desires are goal-directed and the basis of motivation for an intended behavior (Perugini & Bagozzi, 2001).

Furthermore, the intention to perform is mainly motivated by desire. Iakovleva and Kolvereid (2009) and Schlaegel and Konig (2013) suggest that the desirability-feasibility of EEM mediates the relationship between attitude, social norm, and perceived behavioral control of TPB and intention.

Iakovleva and Kolvereid (2009) tested the integrated conceptual model using data from 324 Russian students. The study's findings confirm that perceived behavioral control's effect on intention is fully mediated, and the effects of attitudes and social norms are partially mediated by desirability and feasibility.

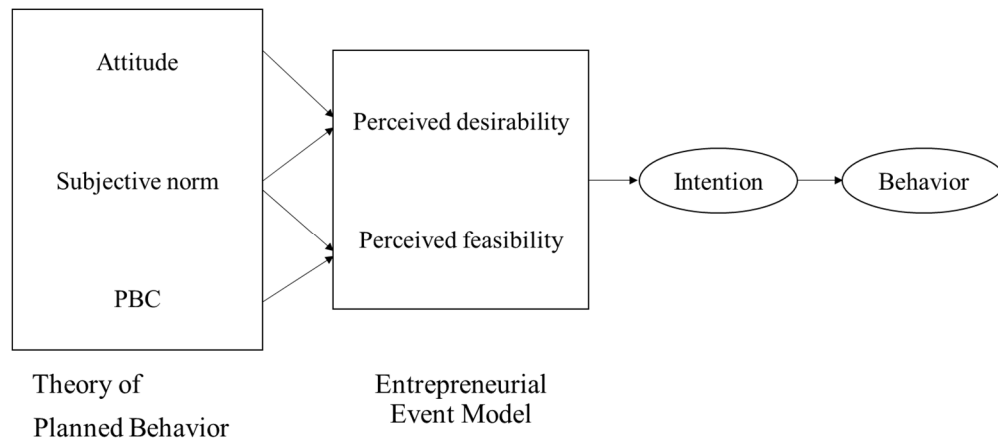


Figure 5. An integrated model of entrepreneurial intention (Iakovleva & Kolvereid, 2009; Schlaegel & Koenig, 2013).

In addition, Schlaegel and Konig (2013) used meta-analytic data from 114,007 individuals reported in 98 studies. According to the meta-analyses, desirability mediates the relationship between TPB antecedents and intention as well as the perceived feasibility of SEE and intention. These important findings confirm the finding of Iakovleva and Kolvereid's (2009) study.

2.3.2 Organization or context conscious

Organizational intention reflects the goals of an individual (founder) and various environmental sectors in the creation of a new organization process (Bird, 1988). New venture creation occurs when social, economic, political contexts interact with certain personal variables such as ability, experience, characteristics, and personality (Katz & Gartner, 1988). For creating a new organization, the pre-organizational process is vital. Because the location, size, marketing section, and any other important decision might be made at that time. For addressing the pre-organizational process, Bird (1988) proposed the entrepreneurial intentionality model.

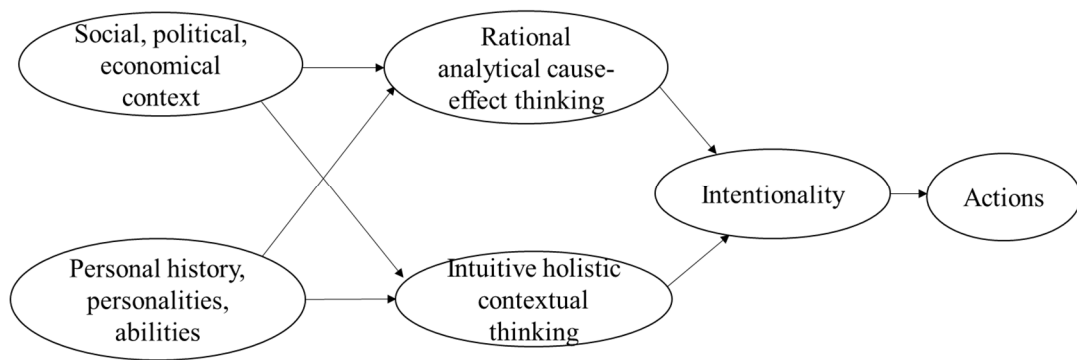


Figure 6. Bird's model of intentionality (Bird, 1988)

Bird's entrepreneurial intention model is different from the two models (TPB, EEM) above mentioned by consisting of psychological factors and contextual factors. Bird's model shows the following two antecedents of intention (Bird, 1988): rational, analytic, cause-effect thinking, and intuitive holistic, contextual thinking. As seen from this model, psychological processes such as rational and analytic thinking and contextual factors such as resources and potential ability both have an important effect on the development of intention toward specific actions.

Moreover, according to Bird (1988), organizational intentionality is crucial for initial decision and characteristics for shaping a new organization's concept and context, which have a continuous influential effect on the organization long after emergence (Bird, 1988; Katz & Gartner, 1988; Krueger & Carsrud, 1993). After the organization's emergence, the concept of intention would be separated and different from the initial intention. This separate intention can be seen from the purpose, goal, culture, or history of an organization. Therefore, the intention is important to understand the overall emergence process.

Although Bird's intention model for the organization and entrepreneurship studies, Bird's model has no empirical validity yet (Fayolle & Liñán, 2014). On the other hand, there are some entrepreneurial intention models with contextual factors (Fini et al., 2012; Liñán et al., 2011),

organizational factors (Lee et al., 2011) as the antecedents, which have a direct influence on entrepreneurial intention.

For instance, Fini et al. (2012) studied the factors influencing entrepreneurial intention in corporate settings as corporate entrepreneurial intention (CEI). Based on Bird's (1988) concept of both psychological and contextual variables affecting the formation of entrepreneurial intention, they proposed an entrepreneurial intention model (see Figure 6) which including individual, psychological and contextual variables based on TPB (Fini et al., 2012).

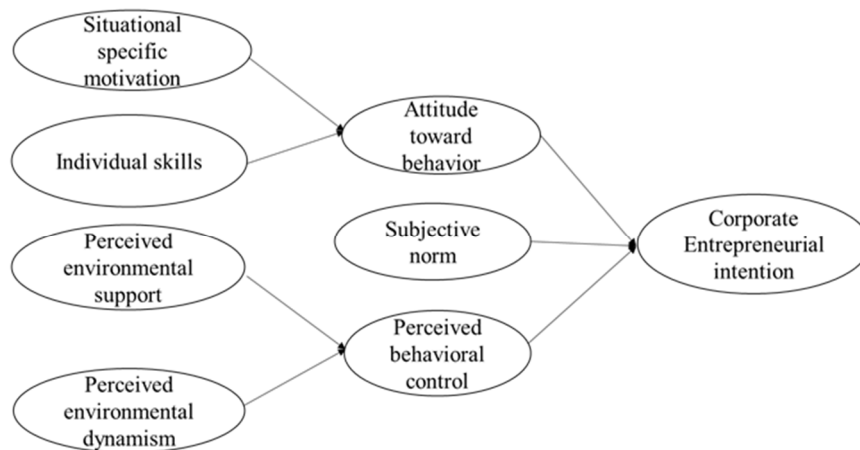


Figure 7. Intention Model of the Micro-Foundation of CEI (Fini et al., 2012)

Lee et al. (2011) studied the reason for leaving the job and starting their business. They focused on the entrepreneurial intention by introducing a multilevel perspective of organizational and individual factors, including innovation climate, technical excellence incentives, job satisfaction. Taken as a whole, they proposed the intention model (see Figure 7) that includes organizational and individual-level factors that influence entrepreneurial intention as well as innovation orientation and self-efficacy as the moderator variables in their study (Lee et al., 2011).

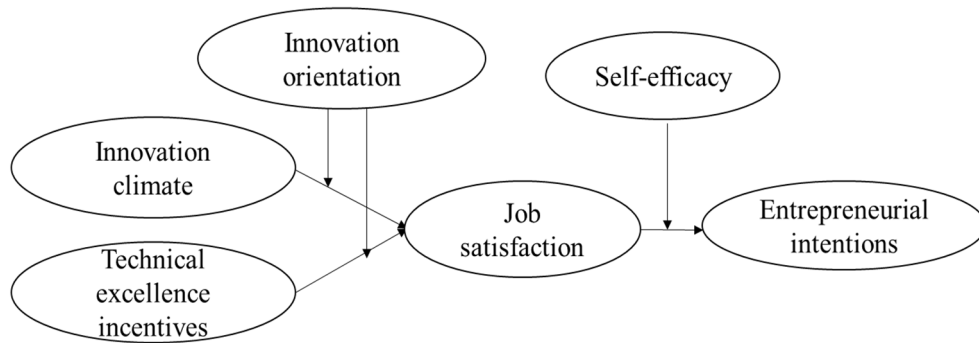


Figure 8. Model of relationships key constructs with entrepreneurial intention (Lee et al., 2011)

Linan et al. (2011) studied the environmental factors that may explain how regional differences influence entrepreneurial intention. They developed the entrepreneurial intention model (see Figure 8) that is theoretically based on the TPB, including environmental factors (Liñán et al., 2011).

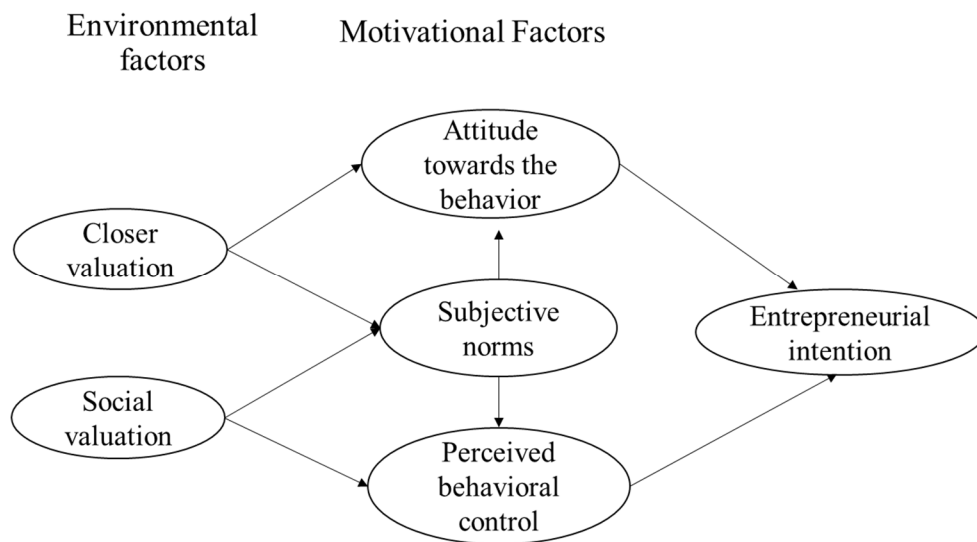


Figure 9. Entrepreneurial intention model (Liñán et al., 2011)

2.4 The conceptual model and hypotheses development

Entrepreneurship research has used mainly TPB to predict the emergence of the new venture. TPB has been explaining entrepreneurial intention and behavior empirically and theoretically since introduced by Krueger and Carsrud (1993) to the entrepreneurship literature. As such, this study adopted the TPB model as the basis for examining the relationship between entrepreneurial intention and behavior. The human capital (general management experience, technical experience, industry experience), social networks (business network, mentor, a professional forum, personal network), and financial capital are proposed as moderator variables which supposed to strengthen this association as previous studies have suggested that contextual variables need to be investigated (Shirokova et al., 2016; Van Gelderen et al., 2015).

2.4.1 The entrepreneurial intention and behavior

Entrepreneurial intention is considered as the first step in the process of entrepreneurship (Gatewood et al., 1995) and the commitment of an individual to start a new business (Krueger, 1993). Following the underlying principles of the TPB, Kautonen et al. (2013), firstly tested the intention and behavior relationship in the context of the Finnish population. They argued that entrepreneurial intention is a significant predictor of entrepreneurial behavior among adults from Finland. Similarly, Kautonen et al. (2015) further confirmed the positive and significant relationship between entrepreneurial intention and behavior using data from Austria and Finland. In addition, Shirokova et al. (2016) provided support for a positive association between intention and behavior among 34 countries' students using the GUESS data set. Lastly, Neneh (2019) and Meoli et al. (2019) showed that the intention significantly predicts entrepreneurial behavior among students from Africa and Italy, respectively.

Nevertheless, there is still a lack of empirical evidence of the relationship between entrepreneurial intention and behavior on Japanese entrepreneurs, even though there is a study

of entrepreneurial intention conducted in Japan (Nakayama, 2016). Nakayama (2016) focused on the factors which can influence entrepreneurial intention and highlighted that promoting entrepreneurial intention leads to the growing number of entrepreneurs. In the meantime, previous studies noted that intention studies need to be extended by behavior to see the whole process of how entrepreneurial intention translates into behavior (e.g., Kautonen et al., 2015). Besides, research on entrepreneurial intention and behavior mainly comes from the U.S. and Europe, and the results of such previous studies cannot be explained and applied to the situations in different cultures.

Consequently, based on the available empirical evidence, this study hypothesizes that:

Hypothesis 1. Entrepreneurial intention positively relates to entrepreneurial behavior.

2.4.2 Intention-behavior gap and the role of human capital, social networks, and financial capital

However, researchers have identified that every entrepreneurial intention does not translate into behavior. They suggest that the gap between intention and behavior occurred between what people think, what they intend, and what they actually do (Carrington et al., 2010; Hassan et al., 2016). As such, entrepreneurship researchers have raised the question of what is the reason for the gap and what influences the intention and behavior gap in entrepreneurship? Kautonen et al. (2015) argued that over half (63%) of the 371 respondents expressing positive intention toward start-up activity in the first survey took no action in the second survey. The other study of Van Gelderen et al. (2015) showed that over half (60%) of the 161 respondents responding to positive intention, did no action. It shows a need to study additional factors that influence translation from intention to behavior rather than mere intention (Kautonen et al., 2015; Van Gelderen et al., 2015).

Thus, recent studies have been focused on how intention and behavior relationships are strengthened and weakened by moderator variables under certain circumstances (Harris & Hagger, 2007; Meoli et al., 2019; Weiss et al., 2019). For instance, Kibler et al. (2014) studied the role of regional social legitimacy on the TPB. The sample group is the working-age respondents of Austria and Finland. The findings suggested that regional social legitimacy enhances the impact of intention on subsequent behavior and strengthens the association of intention and behavior (Kibler et al., 2014).

Van Gelderen et al. (2015) studied the entrepreneurial intention and entrepreneurial behavior relationship with moderator variables of self-control, action fear, aversion, and doubt using TPB from 161 Finnish respondents. They showed that entrepreneurial intention and behavior relationship was positively moderated by self-control (Van Gelderen et al., 2015).

Shirokova et al. (2016) examined how the individual (family entrepreneurial, background, gender, age), and environmental (uncertainty avoidance, university entrepreneurial environment) factors moderate the relationship of entrepreneurial intention and behavior relying on the dataset of Global University Entrepreneurial Spirit Students' Survey (GUESS) 2013-2014. According to this study, the association between entrepreneurial intention and behavior is reinforced by an entrepreneur's family background, age, and entrepreneurial environment and weakened by uncertainty avoidance (Shirokova et al., 2016).

Likewise, Bogatyreva et al. (2019) carried out the study of how the entrepreneurial intention-action link is moderated by the role of national culture using the GUESS data set of 2011 and 2013/2014. According to it, core concepts of national culture, which are individualism, masculinity, long-term orientation, and indulgence, positively moderate the relationship of entrepreneurial intention and behavior.

Weiss et al. (2019) focused on regional social capital as the moderator variable. They used the 2013/2014 and 2016 GUESS data set and a final sample of 663 students. Regional

social capital was divided into structural regional social capital (cultural diversity, associational density), relational regional social capital (interpersonal trust), and cognitive regional social capital (hierarchy values) (Weiss et al., 2019). According to their study, the intention-behavior link is strengthened by cultural diversity, associational density, and interpersonal trust and is weakened by hierarchy values (Weiss et al., 2019).

Lastly, Neneh (2019) contributed to the literature of entrepreneurial intention-behavior by indicating two crucial moderator variables, which are anticipated regret and proactive personality, using data among 277 students from South African university. According to the results, the negative emotions of anticipated regret and proactive personality trait positively moderate the relationship between entrepreneurial intention and behavior.

As seen from the prior studies, besides the psychological trait, contextual factors such as financial capital and social networks play a vital role in the association of entrepreneurial intention and behavior (Neneh, 2019).

2.4.2.1 The role of human capital

Entrepreneurial behavior can be shaped through an individual's human capital and social networks (Khoshmaram et al., 2018). Human capital theory suggests that knowledge provides individuals with skills to see the opportunity, which leads to productive activities (Davidsson & Honig, 2003; Lévesque & Minniti, 2006). Indeed, several studies confirm that an individual's knowledge and experience influence entrepreneurs' capabilities of opportunity discovery, evaluate opportunities, and access financial or physical (Davidsson & Honig, 2003; Dimov, 2010). The greater human capital of founders increases intention to start a business (Bruderl et al., 1992; Davidsson & Honig, 2003). Carter (1962) states that human capital is one of the most important factors to start-up and contributes to the more realistic decision about entrepreneurial activity (Liñán & Chen, 2009a). Founders with a high level of human capital are more likely

to see the opportunities, find ways to acquire the necessary capital, and start their business successfully (Chandler & Hanks, 1995; Khoshmaram et al., 2018).

In particular, for a newly established company, the founder's human capital is regarded as the critical factor to determine successfully start their business, innovatively managing, and growth of the company (Stucki, 2016). Moreover, the founders' human capital is directly related to the venture's financial capital, which is why start-ups fail (Chandler & Hanks, 1995). Empirical research has demonstrated the relationship between human capital and entrepreneurial activities, specifically how education influences and supports becoming an entrepreneur or achieving success in entrepreneurship (Baba & Motohashi, 2013; Linan, 2014).

On the other hand, how experiences including labor market experience, industry experience, previous entrepreneurial experience as well as specific technical or vocationally oriented experience influence entrepreneurial intention and entrepreneurial behavior received a less attention (Brush et al., 2003; Davidsson & Honig, 2003; Dimov, 2010).

Therefore, this study focused on the three aspects of experience which are general management experience, technical experience, and industry experience to get the detailed insights of the human capital (Chandler & Hanks, 1995). Following from the discussion, this study hypothesizes that:

Hypothesis 2. Human capital positively moderates the relationship between entrepreneurial intention and behavior.

General management experience may be obtained from previous work in a business organization as a manager. “Availability of general management know-how may affect the performance of the firm through more promising strategies or better management methods” (Cooper et al., 1994, p.374). In addition, greater general management experience provides greater skills to manage diverse functions and solve various problems when starting a business (Baba & Motohashi, 2013). Thus, we hypothesize that:

Hypothesis 2.1 General management experience positively moderates the relationship between entrepreneurial intention and behavior.

Technical experience includes the abilities and knowledge to perform specific tasks that often relate to information technology, mechanical or scientific tasks. It provides entrepreneurs to identify new opportunities regarding technology by solving technical problems (Landqvist & Lind, 2019). Moreover, individuals who have technical experience tend to be more innovative-oriented and often technically up-to-date (Lee et al., 2011), which is critical for entrepreneurship. Therefore, this study hypothesizes that:

Hypothesis 2.2 Technical experience positively moderates the relationship between entrepreneurial intention and behavior.

Industry-specific know-how can affect the start-up process by providing a specific understanding of the main factors in the industry and specialized knowledge of the technologies, strategies, demand of customers and suppliers, or products (Cooper et al., 1994). In addition, prior industry experience can provide more profound knowledge and valuable information of stakeholders who are interested in the same industry and can support the entrepreneurs to approach new venture creation (Dimov, 2010). Therefore, we hypothesize the following:

Hypothesis 2.3 Industry experience positively moderates the relationship between entrepreneurial intention and behavior.

2.4.2.2 The role of social networks

The entrepreneurship studies support that the social networks are significant (Khoshmaram et al., 2018) very strong and consistent predictors of start-up activity (Davidsson & Honig, 2003). Because, several previous studies have confirmed that information plays a crucial role in identifying the opportunities which have been viewed as the key concept of start-up activity (Fernández-Pérez et al., 2015; Ozgen & Baron, 2007). In other words, for starting

a new business, entrepreneurs need to gather information about the markets, policies, and industries, then process that gathered information to interpret and apply information. Family, friends, co-workers, and business partners may affect personal perceptions of entrepreneurial activity (Fernández-Pérez et al., 2015). Thus, the social networks provide information, emotional support, necessary knowledge, and advice for entrepreneurial activity (Davidsson & Honig, 2003).

Moreover, previous social psychology studies indicate that people can get the knowledge and understanding by exchanging information with others (Aldrich & Zimmer, 2016). Thus, entrepreneurs could learn from the experienced ones to foster entrepreneurial intention and start a business. Singh (2000) suggested that entrepreneurs' greater social networks lead to a greater possibility of start-up. Therefore, we hypothesize that:

Hypothesis 3. The social network positively moderates the relationship between entrepreneurial intention and behavior.

A growing number of the literature indicated that social networks come from professional and non-professional sources (Edelman et al., 2016; Fernández-Pérez et al., 2015). Non-professional networks refer to family, relatives, friends, and colleagues who have a friendly and close relationship. In other words, these personal relations are generally based on trust or shared values that are not related to the official working networks (Ozgen & Baron, 2007). On the other hand, professional networks are viewed as more formal relations formed through academic conferences, business forums, or mentorship programs (Fernández-Pérez et al., 2015). Professional networks are believed to make a potential development on the start-up process by investors, potential customers, and suppliers. Following Fernández-Pérez et al. (2015) and Ozgen and Baron (2007), we distinguished between a business network, mentor, a professional forum, and personal network.

Previous studies showed that personal network is not only an important part when establishing a new company (Dimov, 2010; Fernández-Pérez et al., 2015). Besides personal networks, developing business networks and relationships with potential customers, lawyers, suppliers, and investors has been considered an important factor for new venture creation (Landqvist & Lind, 2019). Therefore, we hypothesize the following:

Hypothesis 3.1 Business network positively moderates the relationship between entrepreneurial intention and behavior.

A mentor is defined as “a more experienced individual, willing to share his/her knowledge with someone less experienced” (David & Belle, 2002, p.7). In entrepreneurship, support from mentor and mentorship is considered the critical component for starting the business (Fernández-Pérez et al., 2015; Kauppinen et al., 2019). Individuals can get information such as industry information, nature of the market, and important skills such as problem-solving efficiently and creatively through mentoring. Several empirical studies have suggested the importance of support from a mentor, a significant effect on entrepreneurial behavior (Fernández-Pérez et al., 2015; Meoli et al., 2019). Moreover, this study focuses on the inexperienced entrepreneurs who benefit greatly from mentoring. Therefore, we hypothesize that:

Hypothesis 3.2 Support from mentors positively moderates the relationship between entrepreneurial intention and behavior.

Ozgen and Baron (2007) suggest that entrepreneurs who participating in professional forums such as conferences, workshops, and seminars are more likely to have greater alertness to new business opportunities. Moreover, entrepreneurs can often obtain useful information from people who meet in such kinds of professional forums and technical or professional conferences before starting a new business (Fernández-Pérez et al., 2015; Ozgen & Baron,

2007). The shared information among colleagues could have a positive impact on entrepreneurial behavior. Therefore, we hypothesize the following:

Hypothesis 3.3 Professional forum positively moderates the relationship between entrepreneurial intention and behavior.

The personal network includes informational and emotional support from family, friends, and close colleagues. Prior studies suggest that personal networks and family support encourage the entrepreneurial activities providing by resources, information, and skills required for new venture creation (Davidsson & Honig, 2003; Edelman et al., 2016; Fernández-Pérez et al., 2015). Specifically, inexperienced entrepreneurs trying to start their first company are more likely to seek the necessary support from their personal networks (Edelman et al., 2016). Therefore, we hypothesize that:

Hypothesis 3.4 Personal network positively moderates the relationship between entrepreneurial intention and behavior.

2.4.2.3 The role of financial capital

Financial capital is one of the necessary factors in new venture creation process. Some studies showed that many people give up on their entrepreneurial intention because of inadequate financial capital and inability to access necessary capital (Chandler & Hanks, 1995; Cooper et al., 1994; Sesen, 2012) even demand of financial capital is various by industry types (Chandler & Hanks, 1995). Moreover, scarcity of financial capital are noted as one of the main reasons to lead businesses fail (Boden, Nucci, & Bureau, 1987; Cooper et al., 1994). Prior studies also emphasized that greater financial resources give more opportunity to develop products/services at the higher quality (Cooper et al., 1994). However, individuals who start the first business often have a limited financial sources. They acquire initial financial capital required for start-up from a variety of sources such as savings, personal properties, loans from

banks and families, home on a mortgage, and investments (Carter & Van Auken, 1991). Therefore, we hypothesize that entrepreneurial intention and behavior relationship will be more possible for individuals with greater financial capital.

Hypothesis 4. Financial capital positively moderates the relationship between entrepreneurial intention and behavior.

The conceptual model of the study is presented in Figure 10.

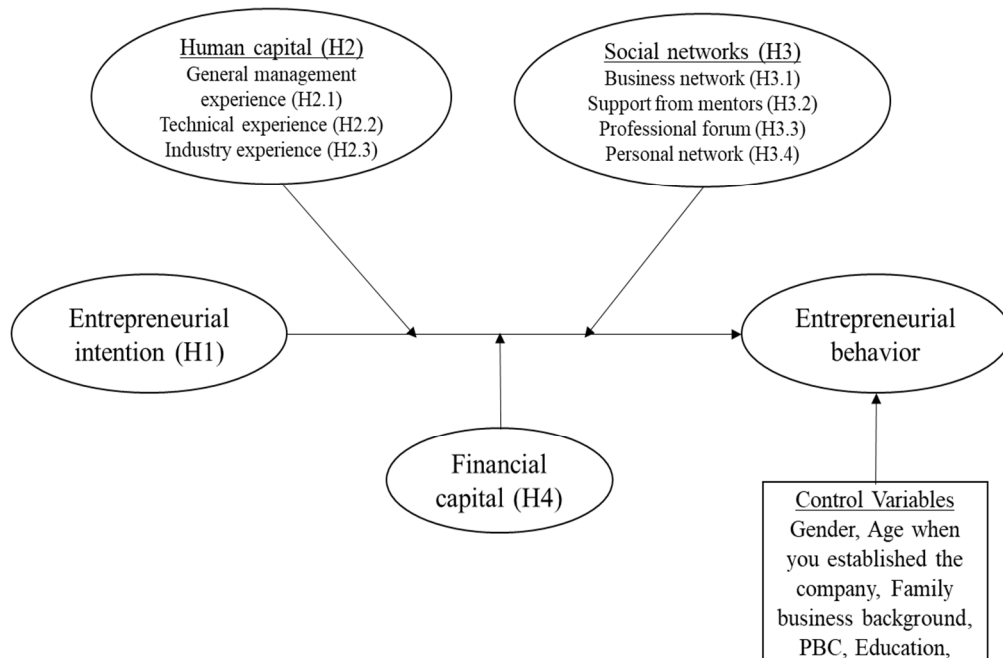


Figure 10. Conceptual model of the study

CHAPTER 3: METHODOLOGY

3.1 Research design

In this study, the survey was administered to entrepreneurs in Japan in order to determine the impact of moderator variables on the relationship between entrepreneurial intention and behavior. Entrepreneurs were defined as owning all or part of a business they helped manage and had paid wages or made profits (Koellinger et al., 2007). The survey questionnaire included questions related to demographic profile, moderator variables, entrepreneurial intention, and start-up activities.

The questionnaires developed for English speakers were adopted from previous studies (Liñán & Chen, 2009; Neneh, 2019; Shirokova et al., 2016). For collecting data from Japanese entrepreneurs, question items in the questionnaire were translated into Japanese and carefully reviewed by a native Japanese speaker to avoid distortion of the meaning. The translated questionnaire was distributed to the respondents.

The data was collected from Japanese entrepreneurs to obtain a deeper understanding of the relationship between entrepreneurial intention and behavior in Japan; at the same time, this analysis contributes to the literature on intention-behavior in the entrepreneurship context while there is little evidence of focusing on the Japanese entrepreneurs. Moreover, empirical evidence from Japanese entrepreneurs would demonstrate the reasons that are hampering entrepreneurship in Japan from the viewpoint of intention, which is considered as the starting point of new venture creation.

3.2 Measures

3.2.1 Dependent variable

New venture creation is “the process that takes place between the intention to start a business and making the first sales” (Gatewood et al., 1995, p.380) and “the more time and efforts one devotes toward accomplishing a task, the more likely it is that the achievement of this task will occur” (Gatewood et al., 1995, p.373). Therefore, how many activities are done to start a new business could determine how close an entrepreneur comes to start their business.

Scholars agree that any organization’s emergence process is consists of multiple start-up activities (Gatewood et al., 1995). This study's dependent variable represents the entrepreneurial behavior, which consists of start-up activities that an entrepreneur has already carried out. Based on the approaches used in previous studies (e.g., see Neneh, 2019; Shirokova et al., 2016), the list of 11 start-up activities was adopted from Panel Study of Entrepreneurial Dynamics (PSED) and includes the following items: (1) I discussed product or business idea with potential customers, (2) I collected information about markets or competitors, (3) I have written a business plan, (4) I started product/service development, (5) I started marketing or promotion efforts, (6) I purchased material, equipment or machinery for the business, (7) I attempted to obtain external funding, (8) I developed financial projections, such as income or cash flow statements or break-even analyses, (9) I applied for a patent, copyright or service, (10) I registered the company, (11) I sold products or service. Start-up activities were operationalized with a 7-point Likert scale ranging from 1 "nothing done" and 7 "entirely done". As similar to previous studies, a summative index of the number of start-up activities that has done divided by the overall 11 activities on the list was used (Neneh, 2019; Shirokova et al., 2016). The index ranges from 1 (nothing done) to 7 (entirely done).

3.2.2 Independent variable

Entrepreneurial intentions were measured 6 items from prior studies (Neneh, 2019; Shirokova et al., 2016; Van Gelderen et al., 2015). The questionnaire adopted from Linan and

Chen (2009) and the items were operationalized on a 7-point scale by 1 “strongly disagree” to 7 “strongly agree”. The respondents were offered to assess the following statements: “I was ready to do anything to be an entrepreneur”, “My professional goal was to become an entrepreneur”, “I made every effort to start and run my own firm”, “I was determined to create a firm in the future”, “I had very seriously thought of starting firm”, “I had the strong intention to start a firm someday”. Multiple-item variables are calculated as an average score on all the items.

3.2.3 Moderator variables

Human capital was measured by using 5 point scale (1 - no experience in that area to starting the current business, 2 – low experience level which less than 1 year, 3 – low experience level which 1 year and less than 3years, 4 – average experience level which 3 years and less than 5 years, and 5 – high experience level which more than 5 years) with 4 items, adopted from Chandler and Hanks (1995). Entrepreneurs have answered the following items: general management experience, technical experience, industry experience.

Social networks - We used 7 points Likert scale with 13 items to measure social networks. 4 items for business network, 3 items for mentor, 3 items for professional forum, and 3 items for personal network. Questionnaires adopted from Fernández-Pérez et al. (2015). Multiple-item variable is calculated as an average score on all the items.

Financial capital was self-respondent questionnaires and answered by the proportion of initial capital that came from the listed source by respondents. Questions adopted from Chandler and Hanks (1995). The following items were evaluated by respondents: internal funding devices (founders’ savings, and equity contributions by cofounders) and external funding devices (trade credit, mortgage on home, bank loans, equity from friends and relatives, and equity from outside investors).

3.2.4 Control variables

In this study, the number of control variables were employed.

The first control variable is gender. Gender is one of the widely associated with entrepreneurial behavior (Shinnar et al., 2018). Generally, women are more likely to have lower entrepreneurial propensity compared to men (Kautonen et al., 2015; Shinnar et al., 2018). Similar to prior studies (Gielnik et al., 2014; Kautonen, Hatak et al., 2015; Kautonen et al., 2013; Neneh, 2019; Shirokova et al., 2016) gender was measured as dummy variables (0 – female, 1 – male).

The second control variable is age of starting the business. According to Levesque and Minniti (2006), older individuals are less likely to start a new business than younger individuals (Lévesque & Minniti, 2006). Moreover, prior studies showed that age influences new venture creation (Davidsson & Honig, 2003; Lévesque & Minniti, 2006; Neneh, 2019). In this study, respondents answered the question: “How old you were when you established your company?”

The third variable is the entrepreneurial family background which provides individuals with useful information, contextual knowledge, and support that can help translate intention into actions (Dimov, 2010; Edelman, Manolova et al., 2016). Similar to previous studies (Bogatyreva et al., 2019; Neneh, 2019), the family business background was measured as dummy variables which were coded as “0” – No, “1” – Yes for the following question: does any of your family members run a business? (1) Parents, (2) Brothers and Sisters.

Next control variables is perceived control variable (PBC). According to Ajzen (1991), except the intention, perceived behavioral control has direct influence on entrepreneurial behavior among the TPB elements. Thus, same as previous studies, perceived behavioral control is included in this study as a control variable (Bogatyreva et al., 2019; Neneh, 2019; Shirokova et al., 2016; Weiss et al., 2019). PBC is measured by 6 items with a 7-point Likert

scale adopted from Linan and Chen (2009) demonstrating the alpha of 0.875. These items were included: (1) To start a firm and keep it working would be easy for me, (2) I am prepared to start a viable firm, (3) I can control the creation process of a new firm, (4) I know the necessary practical details to start a firm, (5) I know how to develop an entrepreneurial project, (6) If I tried to start a firm, I would have a high probability of succeeding.

Last control variable is education. Individuals' education background may have impact on the readiness to engage the start-up activity (Linan, 2014). Similar to prior study, education was included as the control variable (Virginia & Carlos, 2012). Education has 8 categories which indicated the education level. The categories were (1) middle school, (2) high school, (3) vocational school, (4) college, (5) university, (6) graduate school (master), (7) graduate school (doctor), (8) others.

3.3 Sampling and data collection

We conducted a survey in Japanese entrepreneurs in order to determine the moderating variables of human capital (general management experience, technical experience, industry experience), social networks (business network, mentor, professional forum, personal network), and financial capital on the relationship between entrepreneurial intention and behavior. The previous studies of entrepreneurial intention and behavior studies have not involved Japanese entrepreneurs yet.

According to the GEM, Japanese entrepreneurial activity ratio in 2010 was 3.3% which placed at the second lowest among 59 countries and total early-stage Entrepreneurial Activity rate of 2014 (Baba & Motohashi, 2013), Japan was at the lowest among 29 nations (Nakayama, 2016). Thus, "situation where the ratio of new enterprises in Japan pales significantly against that of other countries around the world" (Nakayama, 2016, p.82). Moreover, even entry rate of entrepreneurship at its peak, this would not be considered as high by global scale (Nakayama,

2016). Therefore, collecting data of entrepreneurial intention and behavior with 2 waves from Japanese respondents have been challenging issue due to the lower rate of entrepreneurial activity and entry rate. For addressing this issue, the present study collected the data from actual entrepreneurs in Japan. When answering the questions, the respondents recall the period before start-up when formed the entrepreneurial intentions to decide becoming entrepreneurs and period when took actions for translating from intention into behavior. The other studies also indicate that recall is fairly proper to start-up process, activities, and other key events which were considered as an important (Brush & Pieter, 1992; Chandler & Hanks, 1995).

The questionnaire was distributed by a research company among 1195 Japanese entrepreneurs and 693 responded back (response rate 58.0%). The entrepreneurs were active in advertising/design/marketing (7.5%), commercial (15.8%), education and training (5.6%), financial services (12.2%), other services (20.3%), design/engineering (5.3%), IT communication (10.9%) and others field (30.3%). Building upon the Theory of Planned Behavior (Ajzen, 1987), the survey aims at gaining an understanding of entrepreneurial intention and behavior relationship and factors which affected on this relationship.

3.4 Bias and validation check of data

3.4.1 Data screening and non-respondent bias

Before the further analyses, data screening process which included checking raw data, and addressing the missing data was carried out. From the sample of 693 respondents, 532 qualified for further analysis.

Upon further detailed review, 88 respondents were omitted from the database because giving inappropriate answers (inserting symbols or other characters instead of appropriate answers, etc). Moreover, respondents who gave the same answers on all items were considered to show no engagement to this study.

Table 1: Sample size

Total initial sample size: 693	
Category	Omitted respondent
Inappropriate answers	88
No engagement answers	4
Established 2 or more companies	69
Final sample size: 532	

Therefore, to avoid this problem, the standard deviation technique was used. The result indicated that 4 respondents gave the same answers (st.dev=0). Thus, these 4 respondents were excluded from further investigation. Lastly, this study focused on the entrepreneurs who established and ran their first company within 10 years. Thus, 69 respondents who established two or more companies by themselves were omitted from the sample.

Nonresponse bias

The examination for potential response bias was carried out. Non-respondent bias can be assessed by comparing the response from early and late waves, such as the first and last quarterly of responses (Rogelberg & Stanton, 2007). The t-test analysis did not point the significant differences between early and late respondents in the intention. Moreover, there are no significant differences in groups of age (old and young) and gender (male and female). From this results, non-respondent bias not serious in this study.

3.4.2 Demographics of respondent

A total 1195 questionnaires distributed to the Japanese entrepreneurs who have been running their business since 2009. The 532 respondents were considered as valible to further analysis. Among the 532 respondents, 11.5 % were female, and 88.5 % percent were male. The

majority of respondents distributed between the ages of 31-60 years. 4.7% of the total respondents were 21-30 years and 11.3 % of 61 years or older.

Table 2: Demographics of Respondents (N = 532)

Category	N	%	Category	N	%
<i>Gender</i>			<i>Industry Type</i>		
Female	61	11.5	advertising/design/marketing	40	7.5
Male	471	88.5	commercial	84	15.8
<i>Age</i>			education and training	30	5.6
21-30	25	4.7	financial services	65	12.2
31-40	105	19.7	other services (transportation, etc.)	108	20.3
41-50	153	28.8	design/engineering	28	5.3
51-60	189	35.5	IT communication	58	10.9
61 over	60	11.3	other fields	161	30.3
<i>Education</i>					
middle school	17	3.2			
high school	118	22.2			
vocational school	62	11.7			
college	11	2.1			
university	282	53.0			
graduate school (master)	22	4.1			
graduate school (doctor)	11	2.1			
other	9	1.7			

Considering education level, 53% of respondents had earned undergraduate degrees, 22.2% had graduated high school and 6.2% had achieved a postgraduate degree (master and doctoral). The rest of the respondents graduated from middle school, vocational school, and

other schools respectively 3.2%, 11.7%, and 1.7%. The respondents were active in advertising/design/marketing (7.5%), commercial (15.8%), education and training (5.6%), financial services (12.2%), other services (20.3%), design/engineering (5.3%), IT communication (10.9%) and other fields (30.3%).

3.4.3 Descriptive statistics

Descriptive statistics are used to describe the basic features of the data.

The mean scores of start-up activities ranged from 2.56 (item 9) – *I applied for a patent* to 5.44 (item 10) – *I registered the company*. It indicates that respondents registered their company very firstly compared to other start-up activities in turning intentions to actions.

The mean scores of entrepreneurial intention ranged from 3.64 (item 2) – *My professional goal was to become an entrepreneur* to 4.72 (item 5) – *I had very seriously thought of starting firm*. Seeing from the lowest and the highest mean scores, from the very beginning some respondent did not necessarily intend to be an entrepreneur. They graduated from many ranges of the university with different majors other than the business-related field. On the other hand, even if they did not have a professional goal for becoming entrepreneurs, as they answered they developed serious thoughts of becoming entrepreneurs.

From the descriptive statistics of financial capital, the mean score of the internal funding fund is more than the external funding fund. Therefore, an internal funding fund will carry out for further analysis.

Table 3: Descriptive Statistics

	Min (no)	Max (yes)	Mean	S.D.
Entrepreneurial behavior	1	7	3.99	1.24
Entrepreneurial intention	1	7	4.39	1.45
Human capital				
General management experience	1	5	3.23	1.60
Technical experience	1	5	3.51	1.56
Industry experience	1	5	3.66	1.54
Social networks				
Business network	1	7	4.30	1.38
Mentor	1	7	4.03	1.56
Professional forum	1	7	3.54	1.53
Personal network	1	7	4.01	1.42
Financial capital				
Internal funding fund	0	100	25.78	11.33
External funding fund	0	100	3.77	5.67
Gender	0 (61)	1 (471)	-	-
Age when you established the company	15	68	44.35	10.16
Family Business Background	0 (358)	1 (174)	-	-
Perceived behavioral control	1	7	3.97	1.24
Education	1	8	4.09	1.56

Note. N =532

3.4.4 Measurement validation

Firstly, latent variables were subjected to confirmatory factor analysis (CFA). The result shows that all items loaded on the proposed factor at the 0.001 significance level. Then several quality criteria were used to validate the data of this study. Cronbach alpha (CA), Composite Reliability (CR), Average Variance Extracted (AVE) were measured using SPSS 20, and AMOS software.

The data in Table 4 shows that the intention and social networks of this study met the quality criteria of Cronbach's alpha (CA), composite reliability (CR), and average variance extracted (AVE).

The data in Table 4, all reflective measurement scales of this met the quality criteria of Cronbach's alpha (CA), composite reliability (CR), and average variance extracted (AVE). Cronbach alpha values ranged from 0.76 to 0.95 and CR values ranged from 0.76 to 0.95 which are above the acceptable threshold of 0.7 (Henseler et al., 2009). This shows that the internal consistency reliability of intention and social networks construct of this study is viewed as acceptable.

Table 4: Quality criteria for constructs

Constructs	CA	CR	AVE
Entrepreneurial intention	0.90	0.90	0.60
Social networks			
Business network	0.89	0.90	0.69
Mentor	0.95	0.95	0.92
Professional forum	0.87	0.87	0.69
Personal network	0.75	0.76	0.51

Note. CA = Cronbach Alpha, CR = Composite Reliability, AVE = Average Variance Extracted

Similarly, the AVE value confirms the convergent validity of the constructs by showing the result of 0.60 for intention, 0.69 for business networks, 0.92 for mentors, 0.51 for personal networks which are above the acceptable threshold of 0.5 (Henseler et al., 2009).

Table 5: Correlations and discriminant validity

	1	2	3	4	5	6	7
1 Entrepreneurial intention	0.77						
2 Start-up activity	.480**	-					
Human capital							
3 General management experience	.179**	.317**	-				
4 Technical experience	.177**	.263**	.487**	-			
5 Industry experience	.128**	.281**	.416**	.464**	-		
Social Networks							
6 Business network	.597**	.492**	.187**	.227**	.245**	0.83	
7 Mentors	.423**	.381**	.065	.084	.090*	.562**	0.96
8 Professional forum	.425**	.420**	.083	.084	-.009	.469**	.544**
9 Personal network	.364**	.409**	.150**	.178**	.148**	.493**	.529**
10 Internal financial capital	-.038	-.085	.079	.100*	.064	-.035	-.044
Control variables							
11 Gender	.028	.010	.080	.022	.048	.036	-.010
12 Established age	.014	-.020	-.035	.020	-.022	.030	-.043
13 Family business background	-.009	.067	.034	.021	.061	.043	.033
14 PBC	.470**	.372**	.243**	.224**	.165**	.429**	.269**
15 Education	-.095*	-.042	-.024	-.105*	-.077	-.067	-.043

	8	9	10	11	12	13	14	15
1 Intention								
2 Start-up activity								
Human capital								
3 General management experience								
4 Technical experience								
5 Industry experience								
Social Networks								
6 Business network								
7 Mentors								
8 Professional forum	0.83							
9 Personal network	.424**	0.72						
10 Internal financial capital	-.069	-.044	-					
Control variables								
11 Gender	-.028	-.020	.040	-				
12 Established age	-.011	-.047	.087*	-.080	-			
13 Family business background	-.011	.020	-.101*	-.063	-.064	-		
14 PBC	.265**	.334**	.101*	-.005	.048	.009	-	
15 Education	.018	-.104*	.062	.005	-.067	.000	.043	-

Note. N = 532 ***p < 0.001, **p < 0.01, *p < 0.05. All reported significance levels are two-tailed. Diagonal values in bold represent the square root of the AVE value.

Moreover, discriminant validity was checked according to the Fornell and Larcker (1981) criterion for convergent validity of the construct. According to the Fornell and Larcker (1981) criterion, discriminant validity is accepted when the square roots of the AVE is greater than the inter-construct correlations (Fornell & Larcker, 1981). In this study, as can be seen in Table 5, measures have adequate discriminant validity that showing the square root of the AVEs which are greater than the inter-construct correlations (values in bold).

The correlation variable determines the co-relationship between the variables. As seen from the correlation table, the largest correlation coefficient is 0.597, between intention and business network. Further, intention is positively correlated with start-up activity, $r = 0.480$, $p < 0.01$.

As seeing from Table 5, correlation coefficients of aspects of human capital with each other are ranging from 0.416 (industry experience between general management experience) to 0.487 (technical experience between general management experience) and correlation coefficients of aspects of social networks with each other are ranging from 0.424 (personal network between professional forum) to 0.562 (business network between mentor) which are not so different from the previous study (Fernández-Pérez et al., 2015). In addition, these coefficients are not indicating high correlation and compatible with the moderate correlation which ranged from 0.40 to 0.69 (Schober & Schwarte, 2018; Taylor, 1990). Thus, this removes concerns about correlations for carrying out the aspects of human capital and social networks to further analysis.

3.4.5 Common method bias

CMB was checked by Harman single factor test. All constructs from the same respondent by self-report measures, the results could be distorted by CMB (Podsakoff, Mackenzie, Lee, & Podsakoff, 2003). Common method bias (CMB) is resulting from “variance that is attributable

to the measurement method rather than to the constructs the measurement represents” (Podsakoff et al., 2003, p.879). According to the result of the Harman test, only one factor emerged which accounted for 25.974 of variance less than the threshold criteria of 50 percent (Nowiński & Haddoud, 2019; Rodríguez-Ardura & Meseguer-Artola, 2020). Therefore, CMB is unlikely to bias the results of the current study.

CHAPTER 4: RESULTS

4.1 Hierarchical regression analysis

The hierarchical OLS regression analysis was applied to analyze the theoretical model. The independent variable, eight moderator variables, and five control variables were introduced into the model. The outcome of the hypotheses testing is presented in Table 6. Firstly, the control variables were introduced in model 1. Secondly, direct effects were examined in model 2. Afterward, two-way interactions were introduced in model 3. In this study, we focused on the two-way interaction effects to see moderation effects following from the previous studies which investigated three or more moderator variables (Bogatyreva et al., 2019; Meoli et al., 2019; Shirokova et al., 2016; Weiss et al., 2019).

Before conducting hierarchical regression, the multicollinearity issue was checked. An examination of correlations (see Table 5) revealed that no independent variables were highly correlated. Moreover, as the collinearity statistics, VIF indices were ranged from 1.005 to 2.508, and tolerance was ranged from 0.432 to 0.923, thus eliminating the possible multicollinearity concerns.

From Table 6, it is observed that the F-values for all the models were significant at the level of $p < 0.001$, thus all models are statistically significant. Moreover, as shown in Table 6, a significant regression equation was found ($F(14,517) = 25.797, p < 0.001$) with an adjusted R^2 of 0.395 for the main effects. The entrepreneurial intentions with other independent variables predict 39.5% of the variance in the entrepreneurial behavior ($R^2 = 0.395$) and significantly positively associated with entrepreneurial behavior. Specifically, general management experience, industry experience, business networks, professional forums, and personal networks were positively related to the entrepreneurial behavior ($b = 0.160, p < 0.001$; $b = 0.147, p < 0.01$; $b = 0.121, p < 0.05$; $b = 0.182, p < 0.001$; $b = 0.116, p < 0.01$ respectively), while mentor was

not significant ($b=0.021$) and technical experience and internal financial capital indicated the negative main effects ($b=-0.023$, $p<0.00$; $b=-0.079$ $p<0.05$, respectively).

In Model 3, when we add general management experience, technical experience, industry experience, business network, mentor, professional forum, personal network, and internal financial capital, the predictive capacity increased by 2.1% (R^2 change) from model 2 to model 3 with R^2 0.432 and adjusted R^2 0.407. This is showing that adding those moderator variables to the model increases the model's predictive capacity at predicting overall quality in a statistically significant way ($p<0.05$).

For the control variables, only perceived behavioral control ($b=0.376$, $p<0.001$) was positively associated with start-up activity. This significant positive effect was also observed across the other models.

Table 6: Hierarchical regression analysis on entrepreneurial start-up activities

Variables	Model 1		Model 2		Model 3	
	b	t-value	b	t-value	b	t-value
Control variables						
Gender	0.013	0.312	-0.006	-0.186	0.007	0.212
Age when you established the company	-0.037	-0.915	-0.003	-0.099	0.017	0.097
Family business background	0.062	1.531	0.039	1.147	0.046	1.347
PBC	0.376	9.305***	0.085	2.085*	0.074	1.818
Education	-0.061	-1.511	0.008	0.230	-0.013	-0.359
Main effects						
Entrepreneurial intention (EI)			0.193	4.262***	0.227	4.873***
General management experience (GME)			0.160	4.023***	0.162	4.081***
Technical experience (TE)			-0.023	-0.483	-0.048	-0.978
Industry experience (IE)			0.147	3.150**	0.165	3.513***
Business network (BN)			0.121	2.44*	0.102	2.029*
Mentor			0.021	0.455	0.013	0.282
Professional forum (PF)			0.182	4.220***	0.177	4.079***
Personal network (PN)			0.116	2.718**	0.108	2.516*
Internal financial capital (IFC)			-0.079	-2.274*	-0.086	-2.485*
Two-way interaction						
EI x GME					0.117	2.876**
EI x TE					-0.067	-1.318
EI x IE					-0.013	-0.266
EI x BN					-0.022	-0.417
EI x Mentor					-0.079	-1.556
EI x PF					0.087	1.783
EI x PN					0.092	2.091*
EI x IFC					0.047	1.360
Model Parameters						
R ²	0.147		0.411		0.432	
Adjusted R ²	0.139		0.395		0.407	
F-value	18.154***		25.797***		17.576***	
R ² -change	0.147***		0.264***		0.021*	

Note. N = 532 ***p < 0.001, **p < 0.01, *p < 0.05. All reported significance levels are two-tailed.

4.2 Hypotheses testing results

Hypothesis 1, regarding the positive impact of entrepreneurial intentions on entrepreneurial behavior, was tested in Model 2. The entrepreneurial intention was significantly positively associated with entrepreneurial behavior ($b=0.193$ and $p<0.001$). The model suggests that a one standard deviation increase in entrepreneurial intention increases the entrepreneurial behavior index by 0.193 standard deviations and entrepreneurial intention predicts 22.9% of the variance in the entrepreneurial behavior. Thus, hypothesis 1 was supported.

Hypothesis 2.1, 2.2, 2.3, hypothesis 3.1, 3.2, 3.3, 3.4, and hypothesis 4 were tested using the two interaction model (Table 6).

Hypotheses 2 suggested that human capital positively moderates the relationship between entrepreneurial intention and entrepreneurial behavior. In model 3, the 3 aspects of the human capital were entered into the regression equation. As interaction term EI x general managerial experience (GME) for H2.1 ($b=0.117$, $p<0.01$) was positively and significantly associated with start-up activity. However, the other interaction terms EI x technical experience (TE) for H2.2 and EI x industrial experience (IE) for H2.3 indicated non-significant results in all models. Thus, hypothesis 2 was partially supported.

Hypotheses 3 suggested that social networks (business network (H3.1), support from mentor (H3.2), professional forum (H3.3), and personal network (H3.4)) positively moderate the relationship between entrepreneurial intention and behavior. In model 3, the 4 aspects of the social networks were added to the regression equation. As interaction term EI x business network for H3.1, EI x mentor for H3.2, EI x professional forum for H3.3 were all non-significant. Only EI x personal network for H3.4 ($b=0.094$, $p<0.05$) was positive and significantly associated with start-up activity.

Table 7: Hypotheses summary

Hypothesis	Results
H1 - Entrepreneurial intention positively relates to entrepreneurial behavior.	Supported
H2 - Human capital positively moderates the relationship between entrepreneurial intention and behavior.	Partially supported
H2.1 - General management experience positively moderates the relationship between entrepreneurial intention and behavior.	Supported
H2.2 - Technical experience positively moderates the relationship between entrepreneurial intention and behavior.	Not supported
H2.3 - Industry experience positively moderates the relationship between entrepreneurial intention and behavior.	Not supported
H3 - Social network positively moderates the relationship between entrepreneurial intention and behavior.	Partially supported
H3.1 - Business network positively moderates the relationship between entrepreneurial intention and behavior.	Not supported
H3.2 - Support from mentor positively moderates the relationship between entrepreneurial intention and behavior.	Not supported
H3.3 - Professional forum positively moderates the relationship between entrepreneurial intention and behavior.	Not supported
H3.4 - Personal network positively moderates the relationship between entrepreneurial intention and behavior.	Supported
H4 - Financial capital positively moderates the relationship between entrepreneurial intention and behavior.	Not supported

Hypothesis 4 suggested that internal financial capital positively moderates the relationship between entrepreneurial intention and entrepreneurial behavior. As seen from the result, the interaction term EI x internal financial fund was non-significant in model 3. Thus, hypothesis 4 was rejected.

CHAPTER 5: DISCUSSIONS

This study is rooted in the view that entrepreneurial behavior is explained by the Theory of Planned Behavior and the starting point is the development of entrepreneurial intention. In line with this view, the entrepreneurial intention is considered the key predictor of entrepreneurial behavior (H1). The finding confirmed that there is a significant positive association between entrepreneurial intention and entrepreneurial behavior and it is consistent with relevant prior studies (Kautonen et al., 2015; Neneh, 2019; Shinnar et al., 2018; Shirokova et al., 2016). In addition, the result of entrepreneurial intention explains 22.9% of the variance in entrepreneurial behavior is higher than the previous studies, which used a sample from students (Bogatyreva et al., 2019; Shirokova et al., 2016). For instance, Shirokova et al. (2016) showed that entrepreneurial intentions explain 9.9% of the variance in students' entrepreneurial behavior. Young entrepreneurs have less experience, few social relations, and a lack of financial capital (Davidsson & Honig, 2003; Dimov, 2010). Specifically, university students are often related to their parents' household and partially or fully depend on their household income (Edelman et al., 2016). As such, individuals may be more likely to engage in entrepreneurial activities after getting work experience and having available financial sources from jobs rather than just graduating from universities.

Nevertheless, the result is indicating that the only formation of entrepreneurial intention is not sufficient for individuals to take start-up activity (e.g., Van Gelderen et al., 2015), and translation from intention into behavior is influenced by other factors (Meoli et al., 2019; Neneh, 2019; Shirokova et al., 2016; Van Gelderen et al., 2015). That is the reason, to understand why some individuals start a new venture whereas others give up on their intention, the present study introduced three moderators, which are human capital (general management

experience, technical experience, and industry experience), social networks (business network, support from mentor, professional forum, and personal network), and financial capital.

Thus, our next main finding concerns the moderating role of human capital. The entrepreneurs are seen as the main decision-makers in the start-up phase (Stucki, 2016). Hence, higher levels of founder's human capital enhance entrepreneurial intention into behavior successfully (Dimov, 2010; Khoshmaram et al., 2018). Specifically, previous studies argued that diverse and depth experiences are required for successful entrepreneurial activities (Davidsson & Honig, 2003; Dimov, 2010). However, examining the experience as the integrated one whole factor has not been showing what experiences are more influential to the relationship between entrepreneurial intention and behavior. Thus, this study's three items of human capital indicated three aspects of experience type. Each item was entered in regression analysis one by one to get deeper insights of human capital. As shown in Table 6, the intention and behavior link is reinforced by general management experience, but technical experience, industry experience provide no moderation effects. Below, we present our interpretation of the findings of general management, technical experience, and industry experience.

Firstly, our result suggests that general management experience positively significantly moderates the relationship between entrepreneurial intention and behavior. According to previous studies, the general management experience is important for managing the new business at the start-up phase because general management skills cover various duties such as managing the performance of each employee, creating business plans, decision making, problem-solving. (Brush et al., 2003; Cooper et al., 1994; Baba & Motohashi, 2013). Moreover, obtaining general management experience can promote innovative thinking, which is crucial for entrepreneurs to bring innovative and creative ideas (Custódio et al., 2013). This finding is congruent with Baba and Motohashi (2013)'s study, which indicated that individuals who attained managerial experience and other multiple skill sets are more likely to choose to become

entrepreneurs. In addition, Brush et al. (2003) indicated that lacking general management experience leads to a high number of business failures.

Secondly, industry experience showed a non-significant effect on entrepreneurial intention and behavior, although, prior literature showed that industry experience has a positive effect on the funding stage (Chatterji, 2009; Dimov, 2010) and the growth process (Bruderl et al., 1992) while no effect on the survival stage (Delmar & Shane, 2004). On the other hand, Parker and Van Praag (2012) suggested that industry experience is not to be more critical for new venture creators than takeovers who getting already establishing companies (Parker & Van Praag, 2012). It might that industry experience is narrower and more specific; thus, it could be less crucial than the managerial experience at the start-up phase where required to deal with various tasks related to the start-up process. In addition, Dimov (2009) argued that industry insiders could get more critical information such as market share, revenue, and investors than the outsiders of the industry. This preference helps entrepreneurs to make more effective decisions in the development process rather than the start-up process. Additionally, Baba and Motohashi (2013) argued that the start-up and success phases require different human capital. Therefore, following these views, the effect of industry experience on the relationship between entrepreneurial intention and behavior might differ depending on the phase of entrepreneurship.

Lastly, the relationship between entrepreneurial intention and behavior is not moderated by technical experience. According to the previous studies, technical experience fosters entrepreneurial intention (Lee & Wong, 2004), and the number of business failures related to the lack of technical experience and other managerial skills (Brush et al., 2003). However, depending on the industry types, the technical experience might be indicating different effects. For instance, high-tech ventures require more specific experience and knowledge than other industries such as service, real estate, and hospitality (Rydehell et al., 2018). As seen from Table 2 (demographics of respondents), 20.3% of the respondents are related to the services

such as transportation, and 30.3% of them are from other fields. When seeing the other fields in detail, it included mostly the service industry such as the medical consulting, welfare, care industry, and hospitality, while high-tech industries such as chemicals, drugs, and aircraft have a lower percentage. Hence, technical experience may strengthen the relationship between entrepreneurial intention and behavior if the respondents would have mainly related to the industry which requires more specific technical experience rather than general skills such as high-tech industry or IT communication (Lee & Wong, 2004).

The next finding concerns the moderating role of social networks. Social networks are considered one of the important factors in the new venture creation process, because it provides critical information, and supports in personal and professional ways (Edelman et al., 2016; Khoshmaram et al., 2018; Sultana et al., 2019). Empirical findings indicated that social networks have a significant effect on entrepreneurial intention to be an entrepreneur (Fernández-Pérez et al., 2015; Sesen, 2012). As such, social networks were investigated as the moderator, which expected to strengthen the relationship between entrepreneurial intention and behavior in this study. In addition, if social networks are an essential factor in start-up activity, it is important to gain an understanding of the social networks' aspects. Therefore, following Fernández-Pérez et al. (2015), we distinguished between business network, mentor, professional forum, and personal network for getting deeper insights of each aspect of social networks. According to the results, the relationship between entrepreneurial intention and behavior is positively moderated by personal networks. However, we found non-significant moderation effects of business network, mentor, and professional forum.

Firstly, the finding demonstrates that personal network strengthens the relationship between entrepreneurial intention and behavior, which is consistent with the consensus that personal network provides individuals who aim to start a new venture with informational and emotional support (Aldrich & Zimmer, 2016; Davidsson & Honig, 2003; Edelman et al., 2016).

This finding is also supported by the prior study conducted in Japan, which argued that individuals who do not have previous entrepreneurial experience are less likely to start a business without a personal network and family business background (Honjo, 2015). Nakayama (2016) also suggested that individuals have a more entrepreneurial intention, and they can be greatly benefited from a personal network if having parents who run a business. Moreover, individuals, especially those who establish their first company, feel more confident to start a business if they are provided with the support of family, friends, and colleagues (Edelman et al., 2016).

As for the business network, although previous studies of entrepreneurship show how supportive business network and being a member of the business network to start-up activity (Davidsson & Honig, 2003; Rydehell, Isaksson, & Löfsten, 2018), our result indicated the non-significant effect of the business network on the association between entrepreneurial intention and behavior. According to the prior studies, a business network is important to enhance an entrepreneur's ability to see the business opportunity, understand the market legitimacy, access vital resources, and provide beneficial information (Davidsson & Honig, 2003; Rydehell et al., 2018). In particular, Davidsson and Honig (2003) argued that a business network is consistently crucial and significant to the start-up activity as well as a successful continuation after start-up. Moreover, Rydehell et al. (2018) also suggested the importance of business network for start-ups, but they pointed out that business network is more likely to foster new venture creation process in some industries (e.g., manufacturing or technological industry where develops new products), which require more extended business networks such as the investors, patent advisors and lawyers to start a new business. Besides, for the non-experienced entrepreneurs, the personal network can be substituted for a business network unless it is not related to the specialized network such as patent advisors and lawyers, at the beginning of start-ups.

As for the moderation effect of support from a mentor, it appeared to be a non-significant on the relationship between entrepreneurial intention and behavior, which is a contrary proposition to the prior evidence of Brush et al. (2003) arguing that mentoring is important factor as education, and experience to develop the entrepreneurial intention and start their own business. Significantly, someone who does not have the entrepreneurial background or social networks and has fewer years of work experience or managerial experience can benefit greatly from mentors (Boden et al., 1987). Moreover, according to Meoli et al. (2019), students are more likely to get mentoring from their university professors engaged in entrepreneurship because those professors can represent the critical mentors for university students. As seen from this view, students can easily have a mentor while studying without a specific mentoring program, which requires time and money. Moreover, mentors and mentoring program is more critical to students or non-experienced individuals who are aiming to become entrepreneur compared to experienced entrepreneurs (Fernández-Pérez et al., 2015; Ozgen & Baron, 2007). As such, we expected a significant effect of mentors on the relationship between entrepreneurial intention and behavior, but a non-significant result came out for the non-experienced entrepreneurs' sample. In our study, although respondents do not have entrepreneurial experience and established their first company by themselves, most of all respondents are 41-60 years old, which is a higher age range than the other studies (Gieure et al., 2020; Meoli et al., 2019; Shirokova et al., 2016). Therefore, when we see the effects of mentor, the result might be influenced by age, life, and work experiences (other than the entrepreneurial experience).

Lastly, the professional forum was supposed to strengthen the association between entrepreneurial intention and behavior, but the result indicated a non-significant moderation effect of the professional forum in this study. According to prior studies, participating in the professional forum is one of the main sources to get information and extend networking, which

is crucial to start a new business (Ozgen & Baron, 2007). As such, professional forum has positive effects on entrepreneurial intention (Fatima et al., 2016; Fernández-Pérez et al., 2015), opportunity recognition (Ozgen & Baron, 2007b), and exploiting opportunities (Ozgen & Baron, 2007), as well as entrepreneurial behavior (Sultana et al., 2019). Ozgen and Baron (2007) argued that individuals, especially in technical and scientific fields, are more likely to seek the formal information of recent trends and developments at workshops, conferences, and forums.

Besides the above mentioned moderator variables, financial capital was hypothesized as the moderator variable to strengthen the relationship between entrepreneurial intention and behavior. According to previous studies, financial capital is considered one of the key contextual variables (Chandler & Hanks, 1995) and plays a vital role in starting a business (Sesen, 2012). However, our result did not found a significant interaction effect of internal financial capital on the relationship between entrepreneurial intention and behavior. Boden et al. (1987) argued that acquiring initial financial capital could differentially impact the men and women owners due to some cultural contexts. Moreover, Chandler and Hanks (1995) suggested that depending on the industry types and founder's human capital, financial capital needed in new venture creation is different, while Sesen (2012) indicated that availability to access internal financial capital such as personal and family savings and support from co-founders is the first preference and more crucial for the students and younger people. Therefore, following these views, financial capital might exert a different effect on the relationship between entrepreneurial intention and behavior depending on the age, gender, cultural contexts, and industry types. In addition, if people can access a great amount of internal financial capital, it may lead to a less ambitious and lower level of entrepreneurial behavior (Sesen, 2012).

As for the control variables, this study controlled the five variables that could affect entrepreneurial behavior. The findings of this study showed that perceived behavioral control

has a positive and significant effect on entrepreneurial behavior. This result is consistent with previous studies such as Weiss et al. (2019), Kautonen, Hatak, Kibler et al. (2015), Neneh (2019), and Shirokova et al. (2016), which found that perceived behavioral control has a positive and significant association with entrepreneurial behavior.

However, the rest of the control variables, gender, age when established the company, family business background, and education were not significant in all the models, which is contrary to the prior studies that these factors influence entrepreneurial behavior (Edelman et al., 2016; Nakayama, 2016; Shinnar et al., 2018; Shirokova et al., 2016). For the gender, previous studies of Kautonen et al. (2015), and Neneh (2019) argued that gender is not significant on the entrepreneurial behavior, which is congruent with the result of this study. However, Shinnar et al. (2018) suggested that women and men face different challenges, social expectations, and receive a different level of support in order to become entrepreneurs (Shinnar et al., 2018). For the age when you established the company, this study confirms the concept of ages of starting new businesses being diversified (Hsu et al., 2007), that individuals are becoming entrepreneurs at younger ages, but also at older ages too. In addition, Neneh (2019) showed a similar finding that age has no positive association with entrepreneurial behavior. The next control variable concerns the family business background, which is not significant in our study. The previous studies focused on the students' sample indicated that those who have parents or siblings with business experience would have a greater entrepreneurial intention to start their businesses (Edelman et al., 2016; Nakayama, 2016; Shirokova et al., 2016). Therefore, a family business background might be more crucial for students who intend to become an entrepreneur. Lastly, education is not significant in entrepreneurial behavior. This finding is contrary to the proposition that education plays a vital role in start-up activity (Barba-Sánchez & Atienza-Sahuquillo, 2012). On the other hand, Baba and Motohashi (2013) argued that a higher level of education positively correlates with the success of the venture, but

education differences are not significant in the intending and starting a business, which is similar to this study.

CHAPTER 6: CONCLUSION AND FUTURE DIRECTION

6.1 Theoretical implications

The results of this study hold at least the following implications for the theory. First, this study makes contributions to entrepreneurial intention-behavior literature by providing a more insightful understanding of the process that entrepreneurial intention turns into entrepreneurial behavior in the context of Japan. Result confirms that entrepreneurial intention has a direct positive impact on entrepreneurial behavior among Japanese entrepreneurs as similar with other countries' context (Neneh, 2019; Van Gelderen et al., 2015; Weiss et al., 2019). This is relevant for the entrepreneurship literature, because entrepreneurial intention-behavior link has not investigated yet with Japanese entrepreneurs, although there are some studies related to the Japanese entrepreneurship (Baba & Motohashi, 2013; Honjo, 2015) or entrepreneurial intention (Nakayama, 2016).

Second, the current study concerns the entrepreneurial intention-behavior gap. In the process of new venture creation, the mere intention is not sufficient to act and additional external factors influence a decision to start a business (Kautonen et al., 2015; Van Gelderen et al., 2015). Therefore, recently, entrepreneurship scholars taking attention to the intention-behavior gap and potential moderator variables which can be strengthen the relationship between entrepreneurial intention and behavior (Bogatyreva et al., 2019; Gieure et al., 2020; Meoli et al., 2019; Neneh, 2019). By this means, this study provides a comprehensive effects of the potential moderator variables namely human capital (general management experience, technical experience, industry experience) social networks (business network, mentor, professional forum, personal network), and financial capital.

Third, in terms of moderator variables, our study provides more nuanced insights of the human capital and social networks in the entrepreneurial intention-behavior literature. For

revealing the specific aspects of human capital and social networks for the transformation of intentions into behavior, each aspects of these 2 variables were carried out separately. Detailed analysis of general management experience, technical experience, industry experience, and business network, mentor, professional forum, personal network shows which one is more influential, and how these variables moderate the relationship between entrepreneurial intention and behavior, whereas the prior studies provide understanding of the importance of human capital and social networks to the entrepreneurship studies (Baba & Motohashi, 2013; Davidsson & Honig, 2003; Fatima et al., 2016; Khoshmaram et al., 2018; Sesen, 2012).

Lastly, to address the limitation of the student samples of previous studies (Meoli et al., 2019; Neneh, 2019; Shirokova et al., 2016), the present study involved the entrepreneurs who already established their company. Starting a business may not be a realistic and serious decision for the students although students are considered as one of the suitable respondents to entrepreneurial intention study, because they might receive entrepreneurship education and developed their intention toward subsequent behavior during their university years (Meoli et al., 2019). Thus, using a sample of actual entrepreneurs provides a more nuanced understanding for the translation from entrepreneurial intention to behavior and evaluation of the factors that can influence the relationship.

6.2 Practical implications

We investigate the relationship between entrepreneurial intention and behavior with moderator variables. The findings of this study have direct implications for entrepreneurship educators, policymakers, and aspiring entrepreneurs.

Primarily, this study corroborates the view that entrepreneurial intention is the starting point of the entrepreneurial process (Kautonen et al., 2015; Krueger & Carsrud, 1993; Liñán & Chen, 2009). Therefore, for entrepreneurship educators and policymakers, our results show

that fostering entrepreneurial intentions is a foundation of entrepreneurial ecosystems' development. Moreover, stimulate the individual's entrepreneurial intention is one of the important way to promote entrepreneurial activities which is leading to economic growth and technological development (Nowiński & Haddoud, 2019; Sultana et al., 2019). Specifically, Japan is indicating low level of entrepreneurial activity rate, thus for policy makers willing to stimulate entrepreneurial activity (Baba & Motohashi, 2013; Nakayama, 2016), this empirical evidence from Japanese entrepreneurs provides insights regarding the entrepreneurial intention which is considered as the starting point of new venture creation.

In addition, for aspiring entrepreneurs, our results show that necessary factors that support to move forward from intention to start-up behavior. To reach the goal of start a new business, individuals enhance entrepreneurial intention to take into consideration along with aspects of general management experience and personal networks. Moreover, entrepreneurship training programs or mentors should encourage aspiring entrepreneurs to develop their specific aspects of human capital and social networks for not postponing the entrepreneurial intention which can be becoming actual entrepreneurial activity.

6.3 Limitations and future research avenues

This study has some of the limitations that open promising avenues for future studies.

First, a generalization of the findings might not be applicable since the study sample is gathered from only Japanese entrepreneurs. Thus, future studies can investigate the moderating role of human capital (general management experience, technical experience, industry experience), social networks (business network, mentor, professional forum, personal network) and financial capital on the relationship between entrepreneurial intention and behavior with actual entrepreneurs' samples in other national contexts.

Secondly, this study focused on the aspects of human capital and social networks to see the deeper understanding of each factors. Human capital's general management experience, technical experience, industry experience; social network's business network, mentor, professional forum, personal network; and financial capital were expected to strengthen the relationship between entrepreneurial intention and behavior. However, except for the general management experience, and personal network indicated a non-significant effects. As such, further studies should consider the industry types. Depending on the industry types, general management experience, technical experience, industry experience; business network, mentor, professional forum, personal networks; and financial capital might be more diverse and different. For instance, some industry requires more financially driven and required more capital for engaging in the start-up process. In addition, this study focused on the two-way interaction effects when we examine the moderator variables. Therefore, the other interaction effects of moderator variables such as three-way interactions (e.g., intention x GME x PN, etc) should be carried out for more comprehensive understanding in further studies.

Thirdly, the present study used a single method which was the self-report survey. For reducing bias and capturing non-cognitive variables, especially for investigating entrepreneurial behavior future studies should consider other methods such as observations and interviews.

Lastly, this study did not focus on the antecedents of intention. To gain an understanding of the whole process of entrepreneurship, the formation of entrepreneurial intention is important as well as an intention-behavior link (Ajzen, 1991). Thus, future studies should examine the whole process for analyzing the emergence of entrepreneurial intention and their translation into actions.

APPENDIX. Questionnaire of the study

Intention Adopted from (Liñán & Chen, 2009)								
1	I was ready to do anything to be an entrepreneur	1	2	3	4	5	6	7
2	My professional goal was to become an entrepreneur	1	2	3	4	5	6	7
3	I made every effort to start and run my own firm	1	2	3	4	5	6	7
4	I was determined to create a firm in the future	1	2	3	4	5	6	7
5	I had very seriously thought of starting firm	1	2	3	4	5	6	7
6	I had the strong intention to start a firm someday	1	2	3	4	5	6	7
Social Networks Adopted from (Fernández-Pérez et al., 2015)								
<i>Business Networks</i>								
1	My contacts or discussions with potential customers provided me with information and support that could help or encourage me to undertake a new venture.	1	2	3	4	5	6	7
2	My contacts or discussions with potential suppliers provided me with information and support that could help or encourage me to undertake a new venture.	1	2	3	4	5	6	7
3	My contacts or discussions with potential competitors provided me with information and support that could help or encourage me to undertake a new venture.	1	2	3	4	5	6	7
4	My contacts or discussions with new partners or potential investors provided me with information and support that could help or encourage me to undertake a new venture.	1	2	3	4	5	6	7
<i>Mentors</i>								
1	Having a mentor helped me recognize an opportunity.	1	2	3	4	5	6	7
2	Having a mentor helped me undertake a new venture.	1	2	3	4	5	6	7
3	Having a mentor provided me with information to undertake a new venture.	1	2	3	4	5	6	7
<i>Professional Forums</i>								
1	Practitioners' seminars, conferences, workshops or courses helped me to obtain information and skills to undertake a new venture.	1	2	3	4	5	6	7
2	Technical or professional publications helped me to obtain information and skills, encouraging me to undertake a new venture.	1	2	3	4	5	6	7
3	My contacts or discussions with colleagues in forums provided me with useful information and skills to undertake a new venture.	1	2	3	4	5	6	7
<i>Personal networks</i>								
1	My friends would approve and help in my decision to create a firm.	1	2	3	4	5	6	7
2	My close family would approve and help in my decision to create a firm.	1	2	3	4	5	6	7
3	My colleagues would approve and help in my decision to create a firm	1	2	3	4	5	6	7

Financial Capital

Adopted from (Chandler & Hanks, 1995)

*Could you report the proportion of initial capital that came from each of the listed source?**Internal fund* _____ + *External fund* _____ % = 100%

<i>Internal funding devices</i>		
1	Founders savings	%
2	Equity contributions by cofounders	%
3	Others	%
<i>External funding devices:</i>		
1	Trade credit	%
2	Mortgages on home	%
3	Bank loans	%
4	Equity from friends and relatives	%
5	Equity from outside investors	%
6	Others	%

Human Capital

Adopted from (Chandler & Hanks, 1995)

“1” indicated no experience in that area prior to starting the current business,

“2” represented a low experience level less than 1 year,

“3” indicated a low experience level (1-3) years,

“4” indicated an average experience level (3-5) years

“5” indicated a high experience level (more than 5 years)

1	General management (years spent as a general manager in a business owned by someone else) experience	1	2	3	4	5
2	Technical (years spent in a technical or specialist position) experience	1	2	3	4	5
3	Industry (years spent in the industry) experience	1	2	3	4	5

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