

Original Article

Decision Making in Start-up Business: From Graduate to Entrepreneur

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Abstract - This research aimed at surveying the opinion of university students on the decision-making process in start-up business and exploring the life history of a graduate who succeeds in running a start-up business. A mixed-method approach was used by employing the concurrent triangulation strategy. The qualitative and quantitative data collection was concurrent in order to cross-validate findings. The result showed that a very small number of Thai students intended to run start-up businesses, whereas most of them decided to gain experience by working in organizations before establishing their own companies. According to Shapero's Entrepreneurial Event (SEE) model, students perceived a high level of desirability and perceived feasibility of engaging in a start-up business, whereas the propensity to act was at an average level. Unlike the key informant, in the qualitative approach, who has been successful in his business, all components of the SEE model were at a very high level.

Keywords - start-up, entrepreneur intention, SEE model, graduate, life history

I. INTRODUCTION

Many scholars define “start-up” from various perspectives. It can be defined as a temporary organization designed to search for a repeatable and scalable business model (Blank, 2007). It is also viewed as a venture created to launch new products or services into the market (Eisenmann *et al.*, 2011), especially under market conditions of great uncertainty (Ries, 2011). Whereas, Ripsas and Troger (2014) state that a start-up is a young company, normally less than 10 years old, with an innovative business model and/or innovative technologies that demonstrate significant growth in the number of employees and/or in turnover.

In Thailand, the government, universities and vocational schools have banded together with start-up communities to create an entrepreneur society. The government also aims at setting targets to make the country a “Start-up Nation,” a hub for international start-ups (Start-up Thailand, 2018). Thus, there has been increased investment in start-ups in Thailand. Due to the strong growth of e-commerce volume, there is an opportunity for e-commerce enabler start-

ups. Start-ups that help improve business are more likely to capture the growing number of e-commerce waves. Even greater awareness of the start-up scene has been created, but not everyone is ready to launch a start-up (Techsource, 2018).

Recent researches suggest that start-up entrepreneurs emerge from universities. For example, Hayter (2015) emphasize that individual academic entrepreneurs, who include faculty, technicians, postdoctoral fellows, or students, act as the primary entrepreneurial agent for the dissemination and commercialization of new knowledge generated in universities. Hayter, Lubynsky and Maroulis (2017) argue that graduate students play a critical role in the establishment and early development of university spinoff companies. Åstebro, Bazzazian, & Braguinsky (2012) also claim that universities can stimulate science and engineering students and recent graduates to create new high-quality firms. Boh *et al.* (2016) conclude that university culture and entrepreneurship programs can positively impact the entrepreneurial motivations and attitudes of students.

A number of universities have rich training programs, lectures, courses for credit and more. These programs and centres have a significant impact on how graduates learn about commercialization and the steps needed to start an early-stage company (Clayton *et al.*, 2018). University technology transfer offices are also crucial since the success of business incubators, and technology parks in university settings are often determined by how well technology is transferred from the labs to start-up firms (Markman, 2005).

Researches concerning start-ups in the Thai context are very limited, especially in graduate decision-making, to engage in entrepreneurship since start-ups are a recent phenomenon in the country. However, it has been found that most researchers are likely to rely on quantitative research with questionnaire measures. Many more types of research study factors affect career decision-making in general and focus on individual factors such as gender, faculty of graduation, parental expectation, expectations from organizational work, and so on. The greatest relevance on start-ups can be seen from Krittin Koyviriyakul (2019), who studied the intentions of software developers to be start-up entrepreneurs. The results revealed that the factors influencing the intention of software developers to



become start-up entrepreneurs included the passion for a start-up business, self-efficacy, individual attitudes toward start-up entrepreneurship, perceived opportunities, and innovativeness. It is interesting to note the lack of qualitative research addressing in-depth life stories and the associated complexities, issues, and processes involved in graduate career decision-making.

In conclusion, the complexity of the decision-making process undertaken by graduates in respect to starting their own businesses in Thailand is under-researched. This research is then designed to fill the gap by employing the mixed-method approach and focusing on graduates' decision-making on start-up businesses.

II. DECISION-MAKING THEORIES AND RESEARCHES

Nabi, Holden, and Walmsley (2006) argued that there are at least two schools of thought on the decision-making process in entrepreneurship. The first emphasized the general development of career over time by adding both individual and society as variables into the career choice. An example of this is Savickas's Career Construction Theory (Savickas, 2002) which is an extension of Super's work in 1953. The second perspective is based on the behaviourist focus on social learning, such as the theory of Krumboltz et al. (1976). At this point, Nabi, Holden, and Walmsley (2006) stated that "...this perspective is relevant to graduate career decision-making processes in terms of social learning during higher education and from significant others who are likely to play an important role in contributing to their readiness to making vocational decisions."

A number of theories and concepts tried to explain the variables affecting graduate career decision-making. Reynolds et al. (2004) argue that attempting to start up a business represents an aspect of entrepreneurship. The traditional literature emphasizes personality traits, demographics and behaviour that influence career choices (Nabi, Holden, and Walmsley, 2006). Krueger et al. (2000) focused on a cognitive process including beliefs, attitudes, and knowledge and attempted to consider the notion of entrepreneurial intent, which includes the processes driving intention and the careers support interventions.

One of the most famous theories that explain the intention of entrepreneurship is Shapero's Entrepreneurial Event (SEE). Shapero and Sokol (1982) stated that intentions to start a business derive from a propensity to act upon opportunities and from perceptions of desirability and feasibility. Perceptions of desirability and feasibility are products of cultural and social environments and help determine which actions will be seriously considered and subsequently taken into account.

From classic to the recent theories of decision-making, SEE is mainly employed in this study because it is more modern and directly concerns the area of decision making in start-up businesses. Perceived desirability was measured in the form of education, role models or successful business people, positive beliefs about entrepreneurship, the preference for entrepreneurship, and the necessary abilities to be an entrepreneur. Perceived feasibility is shaped by entrepreneurial self-efficacy, which is based on whether they have the skill and capability necessary to start a business, such as knowledge about business operations and understanding of entrepreneurship, business networks, and market accessibility. Propensity to act included the internal locus of control such as readily available opportunities for starting businesses, a friendly environment to start the business, etc.

III. RESEARCH OBJECTIVES

The first objective of this research was to survey the opinion of university students regarding the decision-making process in start-up businesses by employing the SEE model, which comprises three variables: perceived desirability, perceived feasibility, and a propensity to act. Moreover, support from universities was also included.

The second objective was to study the life history of a graduate who succeeds in a start-up business and explore the important turning points that may have contributed to their decision to be an entrepreneur.

IV. RESEARCH METHODOLOGY

A mixed-method was utilized in this research by employing the concurrent triangulation strategy. The qualitative and quantitative data collections were concurrent in order to confirm, cross-validate, or corroborate findings within a single study (Creswell, 2009). Details are presented step-by-step as follows.

A. Quantitative Research Method

The population was 4th-year students who will be graduating in the academic year 2019, at faculties of management in five universities at the Eastern Economic Corridor (EEC) in Thailand. The total population was 3,455 students. Using stratified random sampling, in accordance with the population in each university, the total sample population by Taro Yamane approach in this study was 359 students.

The questionnaire was designed using a 5-point Likert scale, where 1 was equal to strongly disagree, and 5 was equal to strongly agree. The content validity was approved by three experts; the experts included both academics and HR professionals. The validity test, using the index of item objective congruence (IOC) scores, ranged from 0.60 to 1.00. In the reliability test, Cronbach's alpha

was 0.97. Questionnaires were then distributed, and a total of 321 were returned. After that, descriptive statistics were used to analyse the opinions of students regarding the decision-making process in the start-up business.

B. Qualitative Research Method

This research used a biographical-narrative approach to study the life history of a graduate who succeeded in a start-up business and to explore factors that may have contributed to the decision to be an entrepreneur. A purposive sampling method was employed to select the single key informant. The participant established his first company while studying for his Master's degree in the university by developing an application for an advanced e-commerce system and a digital copyright security system. After that, he started another business by providing smart living solutions for the city where he lived.

An interview was designed by using the narrative interview approach introduced by Schütze (1983 quoted in Zinn, 2004), starting from the free narration followed by further questioning and then the period of questioning. The biographical case reconstruction step of the interview comprised of 1) analysis of the biographical data, 2) text and thematic field analysis, 3) reconstruction of the life history, 4) microanalysis of individual text segments, and 5) contrastive comparison of life history.

Member checking was conducted by taking the research results back to the key informant in order to test the accuracy of their answers. In addition, the research ethics of this study were approved by the Ethical Research Committee of Burapha University.

C. Mixed-Methods Analysis

Since concurrent triangulation was used as a mixed-method in this study, then data transformation is the appropriate data analysis and validation procedure as suggested by Creswell (2003). Creating factors or themes in qualitative data was required to be in the same direction of variables as in the quantitative method. Then, findings from both the quantitative and qualitative parts can be compared and validated.

V. RESEARCH RESULTS

According to the research method, the quantitative research findings are used explained to address the first research objective, while the qualitative research findings are used to address the second research objective. Finally, the mixed-methods research process validated the conclusion of this study.

A. The Opinion of Universities' Students Regarding Decision-making in Start-up

The response rate from 4th-year students' opinions toward decision-making in doing start-up

business in this study was 89%. It was revealed that only a few students intended to engage in start-up businesses after their graduation. Even those who prefer to engage in start-up business perceived lack of experiences in business, lack of knowledge in start-up, and budgetary constraints as the major obstacles to acting as start-up entrepreneurs. Details were as follow;

Table 1. Number and Percentage of Students' decision-making in Start-up business

Decision-making in start-up business	Number	Percentage
Intent to do start-up business after graduation	19	5.9
Gaining experience from other works	173	53.9
Have not been making-decision	95	29.6
Definitely not doing start-up business	21	6.5
Others	13	4.1
Total	321	100

Table I reveals that most students (53.9%) prefer to gain experiences from other works before engaging in a start-up business. Many of them (29.6%) have not made the decision concerning what to do after their graduation. Only a few students (5.9%) intended to practice start-up business after graduation. In an overview, it seems that a start-up business is not the first career choice of the students in this study.

Table 2. Mean and Standard Deviation of Students' opinion toward SEE

SEE	\bar{x}	SD	Interpretation
Perceived desirability	4.01	0.63	High
Perceived feasibility	3.84	0.62	High
Propensity to act	3.36	0.85	Average
Total	3.74	0.70	High

Table II showed a high level of students' perceived desirability and perceived feasibility in engaging in start-up business (\bar{x} = 4.01, SD = 0.63; and \bar{x} = 3.84, SD = 0.62, respectively). However, they reported the propensity to act was at an average level (\bar{x} = 3.36, SD = 0.85). In detail, students reported that they desired to start their own businesses have the personality traits that can do start-up business, but the lack of experience in business, lack of knowledge in start-up, and lack of budget were obstacles to them acting as start-up entrepreneurs.

Table 3. Mean and Standard Deviation of Students' opinion toward Start-up Support Context

Support context	\bar{x}	SD	Interpretation
Learning /training from universities	3.75	0.58	High
Start-up Image	3.82	0.68	High

Total	3.79	0.63	High
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Table III presents students' opinions in the context of supporting start-up businesses. It was found that both start-up image and learning /training from universities were rated highly in the opinion of students ($\bar{x} = 3.82$, $SD = 0.68$ and $\bar{x} = 3.75$, $SD = 0.58$, respectively). In details of learning/training from universities, data revealed a higher mean score in training compared to that of learning. Students reported that start-up did not appear as a subject of study or curriculum in their learning programs.

B. The Life History of a Graduate Who Become a Successful Start-up Entrepreneur

The key informant in this study was Mr Phanuwat Promsiri. He was born in Chonburi Province, located in the EEC region of Thailand. He grew up in the Chinese family context, in which most of his relatives run businesses. He often mentioned that family had influenced his lifestyle.

When he was a child, he had introverted tendencies and was not very much assertive. However, the successes in business, which he absorbed from his family, pulled him out from the introverted character. He then turned to be an activist in any activities conducted in the school. He later decided to study for a Bachelor's degree in engineering, which he was very much interested in. He also participated in the faculty's activities as much as he could. These activities were very beneficial later since they helped him make a strong connection when he started doing business.

After graduation, he worked in a private company for a short period of time and resigned due to limited opportunities for career advancement. He later decided to further his study at the Master's degree level. Simultaneously, he also worked as a research assistant with his professor. Through the connection of his professor, his first start-up business was established under the support of the parent company, a very well-known book store in Thailand. His product was an application for the copyright protection of E-books, which was used in the parent company. From the acceptance of his product, the start-up was then spun off into a company named "Baes Lab." He also developed the "Bangsaen Smart City" solution by introducing the wristband for ageing people in the city. The wristband was used as a health warning tool to alert when an emergency case occurred.

Until now, he still keeps developing his applications. When asked what happiness was, he replied that it was any success of his family. The application that could save the lives of the elderly was also his happiness.

According to the decision to be a start-up entrepreneur, it was obvious that his experience in the family business had influenced his decision, as he said, "It is because of my family. We are a Chinese

family. We get familiar with doing businesses. I, therefore, want to do my own business."

An analysis with the SEE model found all 3 components of a business start-up, namely, 1) perceived desirability, 2) perceived feasibility, and 3) the propensity to act. Mr Phanuwat Promsiri showed the perceived desirability by the statement, "...I want to see the mindset changing in the society. We used to be the employees, the one who was employed. Why don't we shift from that to be the entrepreneur?" In terms of the perceived feasibility, the leadership skill was found since he was in school. He had experiences as a leader since he was young. He also had direct knowledge to develop his product because he studied in the field of electronic engineering. In addition, he used to work with his professor as an assistant researcher. Finally, the propensity to act was clearly seen from his experiences with his family business. Moreover, budgetary constraints were not an obstacle to the business due to the support of the parent company with which he works. As he said, "The parent company support me a lot. The financial aspect, the marketing, and those of accounting, which I don't know much about, the company, support all of those."

Considering the start-up support context, the spinoff approach in this case obviously demonstrated that the university support encouraged the establishment of the start-up business. The following quotation showed how the spin-out process was;

"The business started from the connection of my professor. The parent company was interested in developing the copyright protection application and then contacted my professor. The company sponsored the budget for us. We, I mean professor, I, and our team, spent a year developing the application. From that, the company appreciated our work and then decided to support us to establish the Baes Lab Company. That was how we spun out from the university to be a start-up business."

C. Mixed-Methods Research Analysis

The findings from the quantitative approach, which revealed that most students preferred to gain experiences from other works before doing start-up business, was validated by the case of Mr Phanuwat Promsiri, who used to work in a private company after his Bachelor's degree graduation. His company was spun out only when he did his Master's degree. Findings related to the SEE and support context is shown in Table IV.

Table 4. Number and Percentage of Students' decision making in Start-up business

Research Findings	Quantitative	Qualitative
SEE		
Perceived desirability	High	Very High
Perceived feasibility	High	Very High
Propensity to act	Average	Very High
Support context		
Learning /training	High	Very High

from universities		
Start-up Image	High	N/A

It can be seen in Table 4 that the three components of SEE were found in both quantitative and qualitative findings. Therefore, the findings support each other. However, the SEE in the qualitative part was more obvious and at a higher level than that from the survey. Especially in the propensity to act, students perceived that lack of experiences in business, the lack of knowledge in start-ups, and the lack of budget fulfilment were obstacles to them acting as start-up entrepreneurs. Thus, most of them did not decide to engage in start-up business after their graduation. This aligned with the findings that they prefer to gain experiences from other works before doing a start-up business.

In terms of the start-up support context, the findings from both quantitative and qualitative research support each other and indicate that facilitation from universities supports the decision of the start-up entrepreneur. However, the start-up image was not available as a factor in the key informant interview.

VI. CONCLUSION, DISCUSSION, AND SUGGESTIONS

From the findings in this study, a very small number of Thai students intend to practice start-up business, whereas most of them decided to gain experiences from working in organizations before establishing their own companies. The path to start-up entrepreneurship requires a very strong perception in the desire to be a business owner, a company with the feasibility perception such as leadership, problem-solving, initiative, and communication skills. However, those must be perceived with the readiness to act, as mentioned in the SEE. Unlike the key informant who has been successful in his business, students in this study were not ready to act because they perceived that they had no experience in doing business, did not hold much knowledge in start-ups, and most of all, considered budgetary constraints as an obstacle to them acting as start-up entrepreneurs.

The finding then aligned with Techsource (2018), which argued that not everyone might be ready to launch a start-up business. However, many scholars claimed that start-up entrepreneurs might emerge from universities (Hayter, 2015; Hayter, Lubynsky and Maroulis, 2017; Boh et al., 2016), particularly in the form of university spinoff companies (Hayter, Lubynsky and Maroulis, 2017). This study also found that Phanuwat Promsiri's company had been spinoff from the university where he studied for his Master's degree. However, this was such a rare case of success in the EEC region.

Universities in this study also conducted start-up training programs as mentioned by Clayton et al. (2018); lectures and courses for credit were, however, limited. Therefore, students perceived that

they did not hold enough knowledge to launch their own businesses.

Considering the life history of Phanuwat Promsiri, the entrepreneur's decision was mainly influenced by his family business background, which can be explained by Savickas's Career Construction Theory (Savickas, 2002), which emphasized both individual and society factors. It is also interesting to note that the classical theory of career decision-making is still applicable in explaining the present phenomenon.

The suggestion for universities at this point is to offer intensive learning programs such as entrepreneurship curriculum or credit start-up subjects. Additionally, support from lecturers and technology transfer offices is also included, as Markman (2005) suggested.

Since the students rated the propensity to act as average, this reflects that the internal locus of control of students requires to be developed. However, the development of this psychological context concerns a number of factors and is time-consuming. The university may not solely take all responsibility for this issue. It is therefore suggested that universities should categorize the potential start-up entrepreneurs and then support this group of students in a special way. For example, action learning by introducing intensive start-up courses or programs encouraging them to experience the start-up pitching competition can help to advance the entrepreneurial spirit. Business incubators and technology parks in universities should be addressed. In addition, the network is one of the key success factors in doing start-up business. Thus, creating student networking, which combines students in business management and engineering, is suggested.

Further researches require studying the entrepreneurial intention in engineering students. Factors affecting entrepreneurial intention, apart from the SEE, should be tested. Using qualitative research to explore the life experiences of students in start-up camps will benefit the insight answer of entrepreneurial intention.

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