





ENTREPRENEURIAL INTENTION OF STUDENTS IN HIGHER EDUCATION INSTITUTIONS WITHIN THE NETWORK OF THE UPPER CENTRAL REGION OF THAILAND

 Ampol Navavongsathian¹⁺
 Pattarada Rungruang²

^{1,2} Southeast Bangkok College, Thailand.

¹ Email: n_ampol@yahoo.com Tel: 00-6686-326-6617

² Email: pattarada@southeast.ac.th Tel: 00-6681-901-5151



(+ Corresponding author)

ABSTRACT

Article History

Received: 3 August 2020

Revised: 8 September 2020

Accepted: 28 September 2020

Published: 6 October 2020

Keywords

Factors affecting

Intention

Entrepreneurship

Entrepreneurial intention

Higher education institutions

Thailand.

This research aimed to analyze factors affecting students' entrepreneurial intention in higher education institutions within the network of the upper central region of Thailand. The primary data was collected by online questionnaire sent to 400 samples, obtained by a random sampling method that selected students from both public and private institutions. The structural equation model was applied for the analysis. The results showed that knowledge and skills in entrepreneurship, motivation, success, and determination all affect the entrepreneurial intention of students. The model is consistent with the empirical data, with statistical results as: $\chi^2 = 537.54$, $df = 289$, $\chi^2/df = 1.860$, $p\text{-value} = .060$, $CMIN/DF = 1.860$, $GFI = .950$, $TLI = .990$, $AGFI = .996$, $CFI = .991$, $RMSEA = .042$, at the level of .05 statistical significance.

Contribution/Originality: This study will be used in policy decision-making for the management of the teaching-learning process in Thai higher education institutions, including business incubation centers, to produce graduates with entrepreneurial character who are aware of societal and global changes and can become successful in the business world.

1. INTRODUCTION

The National Education Plan 2017–2036 and the National Education Standards 2018 focus on the development of Thai people and Thai society as a whole, as a strong foundation for the country. The acquisition of physical, mental and intellectual skills demonstrates readiness for the twenty-first century, while morality, ethics, law obedience, leadership, values, and an awareness of both Thai and international contexts all contribute to the lifelong education of citizens. The aim is to cement an innovative learned society, developing Thai quality of life and culture (National Education Plan, 2017). Furthermore, the Notification of the Ministry of Education on Higher Education Standards B.E. 2561 has stated that higher education institutions are required to manage education so that graduates possess characteristics consistent with the national strategy and become a vital force in steering Thailand towards stability, prosperity, and sustainability, as per Article 4. The higher education standards consist of five principles: learning outcomes; research; innovation in academic services; art, culture and “Thainess”; and administration (Office of the Higher Education Commission, 2018).

Regarding the first principle, learning outcomes, higher education institutions are committed to producing graduates who possess preferable qualifications: 1) graduates who are knowledgeable and capable in various fields and can achieve career stability and quality of life for themselves, their families, their community and society as a whole, as well as achieving lifelong learning through the virtues of perseverance, determination, and adherence to professional ethics; 2) graduates who are innovators with twenty-first-century skills and the ability to integrate various sciences to advance society or solve social problems, who have entrepreneurial qualities, and an awareness of social and global changes, in order to create opportunities and add value to themselves, their community, society and the country as a whole; and 3) graduates who are active citizens with ethical courage who adhere to what is right, understand the importance of and preserve Thai culture, and promote the development of sustainability and peace at the familial, community, social, and global levels (Office of the Higher Education Commission, 2018).

On the second qualification, specifically entrepreneurial qualities, the Ministry of Education aims to encourage higher education institutions to produce graduates with these qualifications. Consequently, the learning-teaching process and the educational management of higher education institutions need to respond to the context of both internal and external environments and the personal and psychological factors that affect students.

In terms of international research on the topic, most studies identify that successful entrepreneurs have a strong motivation for entrepreneurship (Stefanovic, Prokic, & Rankovic, 2010). They also have a personal desire and willingness to develop entrepreneurship while studying in higher education institutions. They are within a learning environment that fosters their entrepreneurship, with consultants and mentors who can advise them on starting a business (Aziz, Friedman, Bopieva, & Keles, 2013) and the importance of being self-employed (Kumar & Kalyani, 2011).

This research involves exploring key factors affecting the entrepreneurial intent of students in higher education institutions in the upper central region. Both institutions that have established incubators and institutions that have not established incubators to achieve a wide range of sampling represent Populations with different contextual characteristics.

This research involved the exploration of critical factors that affect students' entrepreneurial intention in higher education institutions within the network of the upper central region. Both institutions that have established incubators and institutions that have not established incubators to obtain a diverse sampling, representing populations with different contextual characteristics.

2. THE OBJECTIVE OF THIS STUDY

To study and analyze factors affecting the entrepreneurial intention of students in higher education institutions within the network of the upper central region of Thailand, under the jurisdiction of the Higher Education Commission, Thailand.

3. LITERATURE REVIEW

Entrepreneurship requires talent, willingness, inspiration and motivation and refers to the activity of starting a business and managing it by raising funds and finding business co-founders, while being ready to accept the risks involved and aiming to manage a profitable business (Audretsch, 2012). It includes the ability to find and use opportunities for transforming/applying innovation, creative ideas, and new technologies, supporting the creation of new businesses through innovative new concepts and technologies for commercial use (Scott & Shane, 2000).

An entrepreneur is an independent occupation and a popular choice among students and graduates in the 4.0 era, according to the NIDA poll entitled "Thai children in Thailand 4.0 era." The survey was conducted between January 8 and January 10 2018 and included citizens from across the country, a total of 1,250 samples, with diverse careers and educational backgrounds. The survey gained its samples from the NIDA poll master sample database,

using stratified random sampling according to different geographical regions and areas. The data was collected via telephone interview, having a confidence value of 95% and a standard error (SE) of less than 1.4%. The question relating to participants' intended careers returned interesting results, the following being the top five responses: 20.62% for private/independent job, 11.34% for teacher/education personnel, 9.28% for doctor, nurse, military service personnel, engineer, architect and designer, 7.22% for police and business person, and 5.15% for civil servant (unspecified post), accountant, finance staff, bank staff, and marketing personnel (Nida, 2018). This demonstrates that the most sought-after career is one that is private/independent, meaning that the participant would like to be his or her own boss, in other words, an entrepreneur. Determining the factors that encourage Thai children in the 4.0 era to want to become entrepreneurs was, however, challenging.

3.1. Knowledge and Skills Factors

Many universities teach information on new technologies, including planning and marketing skills and management and actual action in law and finance management, which is beneficial for graduates embarking on startups, helping to boost their creativity when designing business models (Rubin, Aas, & Stead, 2015). Promoting and developing knowledge and experiences for students, especially in terms of artificial intelligence (AI) and the provision of profound experiences, has an effect on entrepreneurial intent and, consequently, business startups (Ferrary & Granovetter, 2009). Frenkel, Maital, Leck, and Israel (2015) identified that aside from knowledge and skills influencing an individual's intention to become a successful entrepreneur, the ecosystem, including the use of various technologies, also promotes creativity and the desire to start a new business. To enable the formal/informal exchange of knowledge effectively within the ecosystem, it is important that students who are determined to be entrepreneurs and start new businesses learn entrepreneurial skills and the psychology of entrepreneurship at incubation (Padilla-Melendez, Aguila-Obra, & Garrido-Moreno, 2013).

3.2. Motivation Factors

The study of Kuratko, Hornsby, and Naffziger (1997), which examined the relationship between graduates and entrepreneurs, found that the most crucial motivational factors, followed by "getting results" and "dedication to one's own business," were "very dedicated" and "very rewarding." This was followed by independence and privacy. Swierczek and Ha (2003) have studied the startup businesses of a new generation of Vietnamese entrepreneurs and found that the issues, challenges, and achievements associated with entrepreneurship are strong incentives that have more influence than factors such as necessity and job security. On the factors affecting entrepreneurship, according to Bewayo (1995) on entrepreneurship in Uganda, the principal motivation for new-generation entrepreneurs is making money.

3.3. Success Factors

In addition to motivational factors, a crucial variable encouraging students and young people to enter the entrepreneurial field is success. A study by Stewart and Roth (2007); Collins, Hanges, and Locke (2004); Begley and Boyd (1987); Ahmed (1985) suggested that having excellent entrepreneurial skills and the right personality can ensure that an individual gets support from the government in terms of being able to access funding. The skills they refer to concern marketing, accounting and production management, commitment to hard work, interaction with customers, handling of reputation, and the ability to make money.

3.4. Determination Factors

Entrepreneurs who enter and start new businesses possess the determination and perseverance needed to create success for themselves and their businesses. Attitude, motivation, and entrepreneurship add to their success

(Ajzen, 1991). Moreover, the pursuit of essential knowledge and skills is vital to the success of entrepreneurs, (Liñán, 2004) and their attitude (Krueger, Reilly, & Carsrud, 2000) and awareness, society's attitude towards entrepreneurship (Shapero & Sokol, 1982), the possibility of entering entrepreneurship, and confidence in the fact they will be successful (Krueger et al., 2000; Liñán, 2004; Shapero & Sokol, 1982) all play a part in an entrepreneur's success.

3.5. Intention Factors

Intention refers to an individual's attempt to exhibit behavior in a particular form with explicit conduct (Ajzen, 1991). An individual's intention is considered the strongest predictor of correct behavior. Understanding the behavior of a person is essential to understanding the intention that led to an expression of action, which many researchers have focused on. Studying an individual triggers his or her willingness to exhibit certain behaviors in certain regions (Herbst, Hannah, & Allan, 2013; Mandan, Hossein, & Furuzandeh, 2013; Mohamad, Lim, Yusof, & Soon, 2015).

Various studies on intention have focused on identifying predictors of an individual's willingness to become an entrepreneur and start a new business. They state that an individual starting a new company does not do so by chance, but that this "expression of entrepreneurship" requires a lot of attention (Wilson, Kickul, & Marlino, 2007). Therefore, choosing to start a new business can easily be defined as an individual making an intentional choice (Urban, 2010). Furthermore, Krueger et al. (2000) explain that studying entrepreneurial purpose is crucial because it explains the number of entrepreneurs with business sustainability, those who started out with determination, motivation, an aim for success, the ability to create equations and fully nurture their entrepreneurial knowledge and skills to become entrepreneurs and start a businesses (Ajzen, 1991; Liñán, 2004; Mohamad et al., 2015).

The results of the literature review contributed to the following conceptual framework for this research:

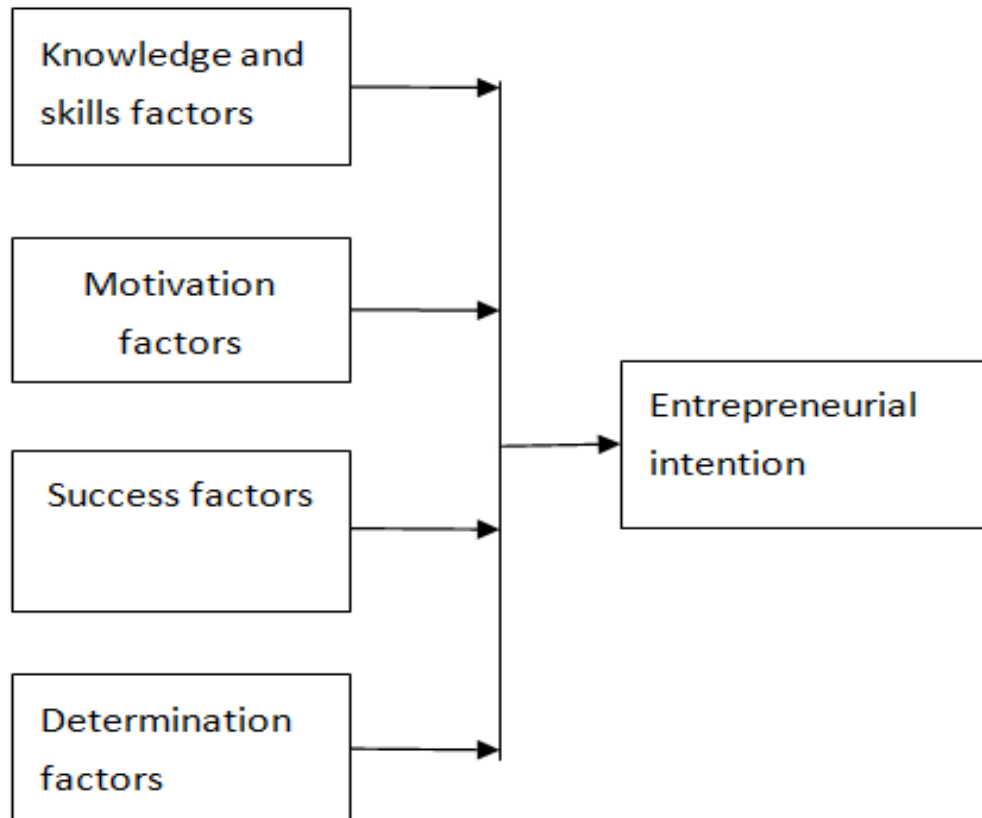


Figure-1. A conceptual framework for this research.

Source: Updated from Liñán (2004); Mohamad et al. (2015); Swierczek and Ha (2003); Krueger et al. (2000).

4. RESEARCH METHODOLOGY

Regarding the quantitative research methodology used, the survey method was applied with the creation of a questionnaire, after looking at research tools with suitable criteria for accurate measuring, possessing both validity and reliability in terms of content, approaches, and concepts.

The questionnaire used in this research has validity and reliability, regarding the criteria and its concepts. The questionnaire was meticulously designed under the guidance of three experts: academic, entrepreneur, and incubation. Before collecting the data, the questionnaire was tested to determine what needed to be measured before it was issued, including reliability testing (applying Cronbach's alpha test statistics) to check whether the liability met the criteria specified (alpha value is lower than 0.60). If it was not met, more questions were added, and some removed, and it was tested repeatedly until the questionnaire was accurate and reliable. Online surveys and postal questionnaires were sent directly to respondents from the proportion of the sample set randomized systematically. The values of the reliability coefficient of gauges were used in the research. A total of 26 questions were devised for the structured questionnaire, and it involved 40 samples from non-sample groups, including students from networks in the lower central region. Cronbach's alpha coefficient, measuring the reliability and internal consistency of the gauges, achieved a value between .735 and .816, and the 26 questions achieved a coefficient of .804, demonstrating a high level of reliability.

4.1. Population and Sample

The population included students from higher education institutions in both the public and private sectors within the 44-upper-central region network, with Chulalongkorn University being the host institution. Higher education institutions, and members of the higher education network development group are classified as such by the Higher Education Commission (Office of the Higher Education Commission, 2018).

4.2. Sample

4.2.1. Sample Size

The research involved sampling higher education students from both public and private institutions within the stated network, obtaining a total sample size of 400. The appropriate number of samples determined the level of alpha coefficient, where the acceptable error value was 0.05 and the fair error value was 5%, which is considered a suitable amount (Krejcie & Morgan, 1970) because the specific population number was not known. Therefore, the proportion of people set at 20% confidence level of 95% with the error set at 5%, using the Cochran (1977), was 384. However, 400 samples were used. It was advantageous to have a larger sample set when considering the reliability within a population.

4.2.2. Techniques for Sampling

The method used for selecting samples was based on probability principles (non-probability sampling) and involved the purposive sampling of final-year students from higher education institutions in both the public and private sectors, without any selection rules, totaling 400.

5. RESEARCH RESULT

To answer the questions posed by the study, an analysis of the factors that affect the entrepreneurial intention of students in higher education institutions within the network of the upper central region of the Office of the Higher Education Commission was conducted.

For the exploratory factor analysis (EFA), a common factor analysis, the principal axis factoring (PAF) method was applied.

Table-1. Kaiser-Meyer-Olkin (KMO) and Barlett's Test of Sphericity.

Kaiser-Meyer-Olkin (KMO)	0.991
Bartlett's Test of Sphericity	
Approximate Chi-Square	537.54
df	289
Significant	.000

From [Table 1](#): Kaiser-Meyer-Olkin (KMO) and Barlett's Test of Sphericity. KMO is 0.991 and Sig = .000 < 0.05, where $0 \leq \text{KMO} \leq 1$ was close to 1, meaning all variables were related to factors used in further analysis. The common elements could explain the relationship between variables at a reasonable level ([Wanichbuncha, 2013](#)).

Table-2. Statistical values for evaluating the structural validity of the empirical model.

Index value	Benchmark	Statistical values obtained from the analysis
p-value	Greater than or equal to 0.05 (Schumacker & Lomax, 2010)	.060
$\chi^2 = 537.54$ df. = 289 $\chi^2/\text{df} = 1.860$	Should not exceed 2.0 (Schumacker & Lomax, 2010)	1.860
CMIN/DF	Less than 2.0 (Schumacker & Lomax, 2010)	1.860
GFI	More than 0.95 (Kelloway, 2015)	.950
TLI	More than 0.95 (Kelloway, 2015)	.990
AGFI	More than 0.95 (Kelloway, 2015)	.996
CFI	More than 0.95 (Kelloway, 2015)	.991
RMSEA	Less than 0.05 (Kelloway, 2015)	.042

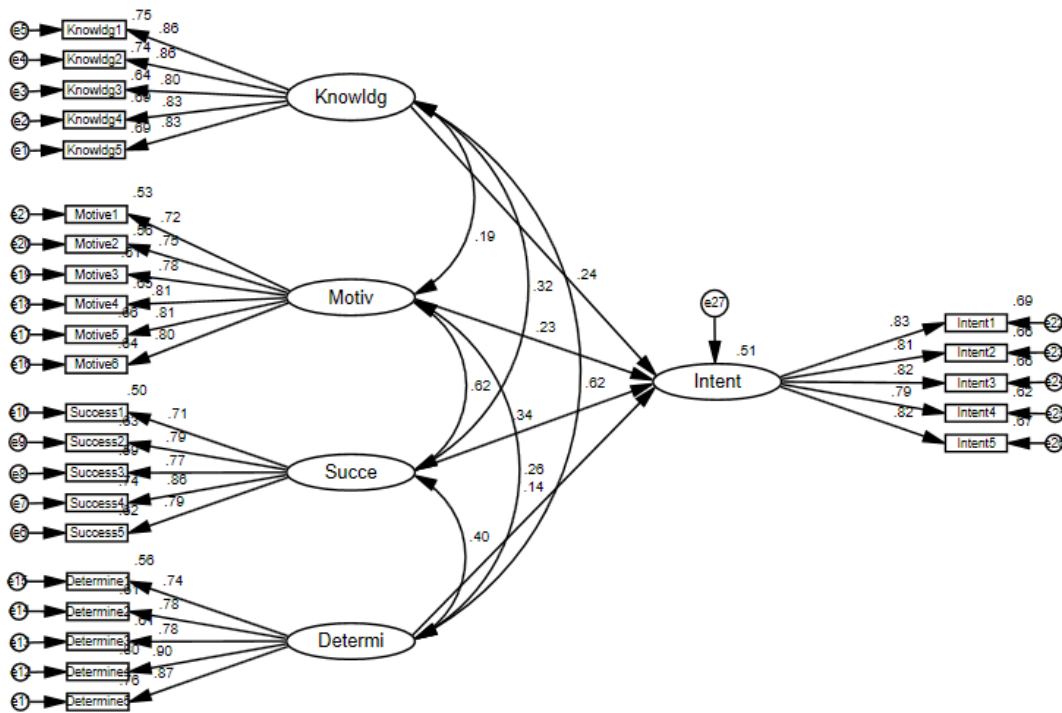
From [Table 2](#), the values $\chi^2 = 537.54$ df. = 289, the values of $\chi^2/\text{df} = 1.860$, p-value = .060 and CMIN / DF = 1.860, less than 2.0, have a good level of consistency ([Schumacker & Lomax, 2010](#)), meaning the structural equation model is in harmony with the empirical data. In addition, GFI = .950, TLI = .990, AGFI = .996 and CFI = .991 are greater than 0.95. All values demonstrate a good level of consistency ([Kelloway, 2015](#)) and reveal that RMSEA = .042 and PCLOSE or p-value = 0.000. The assumption was that RMSEA was less than 0.05 ([Kelloway, 2015](#)). In conclusion, the index values reveal that the consistency between the model and the empirical data meets the standard criteria at a good level of conformity.

Table-3. HOELTER.

Model	HOELTER 0.5	HOELTER 0.1
Default model	213	219

From [Table 3](#), the HOELTER 0.5 value is at 213, more than 200, indicating that the sample set for this study was well-suited.

The regression weights show regression coefficients. From the hypothesis testing of every correlation coefficient, all p-values = P = ***, which is less than 0.05 when studying all factor weights. Regarding the weighting factors, every factor is non-zero, and every CR value is greater than 1.96, on checking the statistical values from [Table 2](#) and [Table 3](#) together with the analysis of the factor weight. In conclusion, the model in [Figure 2](#) is in harmony with the empirical data, at the significance level of 0.05.



$\chi^2 = 537.54$ df. =289, $\chi^2/df = .1.860$, p-value . =060, CMIN/DF =1.860, GFI . =950, TLI . =990, AGFI= .996, CFI . =991, RMSEA . =042, at the significance level .05.

Figure-2. The structural equation model of factors affecting the entrepreneurial intention of students in higher education institutions under the network of the upper central region in Thailand.

The confirmatory component analysis of the measurement model based on the standardized regression weights shows the following:

The weight of the standard factors in [Figure 2](#) reveals that the weighting factors include knowledge and skills, motivation, success, and determination. From highest to lowest, success factors are at the most senior level at .338, followed by knowledge and skills (.243), motivation (.230), and determination (.140), simultaneously.

1. The weight of knowledge and skills factors of the variables can be observed in five categories (from highest to lowest) as follows: knowledge (.864), skills (.860), experience enhancement (.832), promotion of ideas and creativity (.830), and practical implementation (.802).
2. The weight of motivation factors of the variables can be observed in five categories (from highest to lowest) as follows: life stability (.813), work performance results (.808), challenges (.802), income (.780), job security (.780), and compensation (.725).
3. The weight of success factors of the variables can be observed in five categories (from highest to lowest) as follows: the ability to access funding (.858) a personality suited to entrepreneurship (.792), skills in management and marketing (.789), government support (.771), and entrepreneurial skills (.705).
4. The weight of confidence factors of the variables can be observed in five categories (from highest to lowest) as follows: the possibility of entering a new business (.895), confidence in success (.870), awareness and norms (.784), personal attitude (.784), and perseverance (.705).

The causal relationship between students' entrepreneurial intention and the effects, on checking the consistency of the model and the empirical data is inharmonious with the data, as shown in [Table 4](#).

Table-4. Test results for the path coefficient of the entrepreneurial intention of students in higher education institutions within the network of the upper central region in Thailand and checking the consistency of the model and the empirical data.

Cause variable	Effect variable	Estimate	S.E.	Z-test	p	R ²
X 1= Knowledge and skills	Y = Entrepreneurial intention	.203	.047	4.322	.000	.51
X 2= Motivation		.227	.056	4.029	.000	
X 3= Success		.394	.076	5.402	.010	
X 4= Determination		.102	.042	2.410	.015	

The results of the coefficient testing of the entrepreneurial intention of students:

1. The path coefficient is between .102 and .394, with the highest being success (.394), followed by motivation (.227), while the least path coefficient was determination (.102)

2. When considering the R² value from Table 4, it found that success, motivation, knowledge and skills and determination could predict entrepreneurial intention at 51%.

3. When considering the harmonization of empirical data, it found that the ratio between R square and the degrees of freedom was 1.860, less than 2; the index of harmony (CFI) was .991, which was higher than 0.95 indexes. The suitability measurement (TLI) was .990, which was higher than 0.95. The revised Harmony Index (AGFI) was .996, which was higher than .95, and the Estimation Index of Estimates parameter value (RMSEA) was .042, which was less than 0.05 (Wanichbuncha, 2013).

Therefore, it could be concluded that the causal relationship model of the factors that influence students' entrepreneurial intention was consistent with the empirical data.

Table-5. The influence coefficient of the causal relationship model, and the results related to the intention of being an entrepreneur.

Cause variable	Effect variable	
	Y =Entrepreneurial intention	
	Direct Effect	Total Effect
X 1= Knowledge and skills	.243	.243
X 2= Motivation	.230	.230
X 3= Success	.338	.338
X 4= Determination	.140	.140
Prediction coefficient (R ²)	R ² = 0.51	

The examination of direct influence, indirect influence and combined factors influencing the results of the direct impact, the indirect effect and the elements of the influencing factors of entrepreneurial intention revealed that:

1. Success factors had the most direct influence on the entrepreneurial intention with the influence size of .338, which was by the research hypothesis.
2. Factors for knowledge and skills directly influenced the entrepreneurial intention with the influence size of .243, which was by the research hypothesis.
3. Motivation factors had a direct influence on the entrepreneurial intention with the influence size of .230, which was by the research hypothesis.
4. The lowest significance factor that directly influenced the entrepreneurial intention was at the influence size of .140, which was by the research hypothesis.

6. DISCUSSION AND FINDINGS

The study of factors affecting the entrepreneurial intention of students in higher education institutions within the network of the upper central region of the Office of Higher Education Commission in Thailand found that knowledge and skills in entrepreneurship, motivation, success, and determination all affected the entrepreneurial intention of students.

Knowledge and skills in entrepreneurship was the main factor that influenced students' entrepreneurial intention. It was found in the research by Rubin et al. (2015) that several universities provided information on new technologies, including the practice of planning and marketing skills. Actual action, including legal and financial management, prepares students to become entrepreneurs after graduation. The results show that if students and graduates who want to start a new business (startup) nurture their knowledge and skills in entrepreneurship, it will significantly affect their commitment to entrepreneurship.

It was also consistent with the results of the study by Ferrary and Granovetter (2009) that states that promoting creative thinking in terms of business model design and promoting and developing knowledge and experiences for students, especially in the field of artificial intelligence and allowing for profound experiences that students can take with them, can all affect entrepreneurial intentions and, consequently, startups. Frenkel et al. (2015) saw that in addition to experience and skills, psychological factors and thriving ecosystems, including the use of various technologies, also promoted creativity. To start a new business and strengthen entrepreneurial skills, graduates should learn the psychology of entrepreneurship at incubation, and this is essential (Padilla-Melendez et al., 2013).

Regarding the findings on entrepreneurial motivation, factors that influenced students' entrepreneurial intention in higher education institutions were consistent with those in the study of Kuratko et al. (1997). The motivation factors were of most importance. The essential motivation factor for entrepreneurial intention was dedication, in line with the study of Swierczek and Ha (2003), indicating that the challenges and the successes of entrepreneurship are significant incentives that influence entrepreneurial intent. Also, Bewayo (1995) found that the most motivating factor for young people to be entrepreneurs was generating a large amount of income.

Success factors influenced the entrepreneurial intention of students in higher education institutions, in line with the findings of Stewart and Roth (2007), Collins et al. (2004), Begley and Boyd (1987), and Ahmed (1985). The future of entrepreneurship looks bright, owing to the following factors: excellent entrepreneurial skills, personality, government support, funding access, marketing skills, accounting and production management, dedication to hard work, interaction skills (including with customers), reputation, and the ability to make money.

The study results also revealed that the determinant factors influenced students' entrepreneurial intention in higher education institutions. This is in line with Ajzen (1991), which found that entrepreneurs entering and starting new businesses are required to have a high level of commitment and perseverance to create success for themselves and the business. Attitude, inspiration, motivation, and entrepreneurship are determining factors in entrepreneurial success. This is in line with that determined by Liñán (2004): that students need to acquire the essential knowledge and skills necessary to be successful entrepreneurs. It is considered essential in influencing entrepreneurial intention. There are also studies by other researchers that reveal similar findings (Krueger et al., 2000; Liñán, 2004; Shapero & Sokol, 1982).

7. RECOMMENDATION

The research shows that factors affecting the entrepreneurial intention of students in higher education institutions are knowledge and skills in entrepreneurship, motivation, success, and determination towards the purposes of entrepreneurship. Success is the factor influencing entrepreneurial intention at the highest level, followed by motivation, while commitment has the least influence. The study results led to the following suggestions:

1. Regarding factors relating to knowledge and skills in entrepreneurship, educational institutions should nurture students' knowledge and entrepreneurial skills concerning new technologies, as well as practice planning and marketing management skills. The real actions, including legal and financial management to prepare students to graduate, are all necessary. As a result, graduates can become entrepreneurs with the ability to organize

activities. Promoting creativity in the designing of business models encourages and develops the knowledge and experience needed in startups, especially in the fields of artificial intelligence and providing profound experiences concerning education and transferrable skills. Moreover, there are a number of factors that can help boost an entrepreneur's success: the promotion of knowledge and skills to enhance psychological motive, the creation of an ecosystem with the use of various technologies to enhance creativity, having a business plan, and the consolidation of entrepreneurial skills and psychological development during the incubation period.

2. In terms of motivational factors, educational institutions should nurture students by encouraging them to see that the result of their hard work and dedication to their business are “very dedicated and advantageous” and advise students that being an entrepreneur is an independent occupation. Institutions can nurture stability in students’ lives—an introduction to the issues, concerns, and challenges they will face in the future. The success associated with entrepreneurship is a significant incentive and the new generation is encouraged by the possibility of making money quickly.

3. Due to the factors concerning success, higher educational institutions should advise students on excellent entrepreneurial skills, entrepreneurial personality, and the guidelines for seeking and accessing support from the government and other funding sources. Moreover, the cultivation of expertise in management, marketing, accounting, and dedication to hard work are essential elements. Besides the factors previously mentioned, interaction skills—dealing with people, customers, and problems—and learning the processes involved in making money cannot be neglected by those who want a successful business.

4. Owing to the determination factors, institutions should produce students who are committed to entrepreneurship. These students should be able to demonstrate the ability and talent to create new businesses and possess additional characteristics, including determination and perseverance, as well as be hardworking and have a marketing strategy and a positive attitude towards business. Other factors influencing success include inspiration, motivation, and entrepreneurship, all of which can successfully boost a business. Meanwhile, the lifelong acquisition of knowledge and essential skills, personal attitude, the attitudes of society towards entrepreneurship, the possibility of entering entrepreneurship, confidence, and determination all are considerations for an entrepreneur-to-be.

Funding: This study received no specific financial support.

Competing Interests: The authors declare that they have no competing interests.

Acknowledgement: Both authors contributed equally to the conception and design of the study.

REFERENCES

- Ahmed, S. (1985). NAch, risk-taking propensity, locus of control and entrepreneurship. *Personality and Individual Differences*, 6(6), 781-782. Available at: [https://doi.org/10.1016/0191-8869\(85\)90092-3](https://doi.org/10.1016/0191-8869(85)90092-3).
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211. Available at: [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T).
- Audretsch, D. (2012). Entrepreneurship research. *Management Decision*, 50(5), 755-764.
- Aziz, N., Friedman, B. A., Bopieva, A., & Keles, I. (2013). Entrepreneurial motives and perceived problems: An empirical study of entrepreneurs in Kyrgyzstan. *International Journal of Business*, 18(2), 163-176.
- Begley, T. M., & Boyd, D. P. (1987). Psychological characteristics associated with performance in entrepreneurial firms and smaller businesses. *Journal of Business Venturing*, 2(1), 79-93. Available at: [https://doi.org/10.1016/0883-9026\(87\)90020-6](https://doi.org/10.1016/0883-9026(87)90020-6).
- Bewayo, E. D. (1995). Uganda entrepreneurs: Why are they in business. *Journal of Small Business Strategy*, 6(1), 67-78.
- Cochran, W. G. (1977). *Sampling techniques* (3rd ed.). New York: John Wiley & Sons.

- Collins, C. J., Hanges, P. J., & Locke, E. A. (2004). The relationship of achievement motivation to entrepreneurial behavior: A meta-analysis. *Human Performance*, 17(1), 95-117.
- Ferrary, M., & Granovetter, M. (2009). The role of venture capital firms in Silicon Valley's complex innovation network. *Economy and Society*, 38(2), 326-359. Available at: <https://doi.org/10.1080/03085140902786827>.
- Frenkel, A., Maital, S., Leck, E., & Israel, E. (2015). Demand-driven innovation: An integrative systems-based review of the literature. *International Journal of Innovation and Technology Management*, 12(2), 1550008. Available at: <https://doi.org/10.1142/s021987701550008x>.
- Herbst, K. C., Hannah, S. T., & Allan, D. (2013). Advertisement disclaimer speed and corporate social responsibility: "Costs" to consumer comprehension and effects on brand trust and purchase intention. *Journal of Business Ethics*, 117(2), 297-311. Available at: <https://doi.org/10.1007/s10551-012-1499-8>.
- Kelloway, E. K. (2015). *Using mplus for structural equation modeling: A researcher's guide*. CA: Sage Publications.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607-610. Available at: <https://doi.org/10.1177/001316447003000308>.
- Krueger, J. N. F., Reilly, M. D., & Carsrud, A. L. (2000). Competing models of entrepreneurial intentions. *Journal of Business Venturing*, 15(5-6), 411-432. Available at: [https://doi.org/10.1016/s0883-9026\(98\)00033-0](https://doi.org/10.1016/s0883-9026(98)00033-0).
- Kumar, D., & Kalyani, B. (2011). Motivational factors, entrepreneurship and education: Study with reference to women in SMEs. *Far East Journal of Psychology and Business*, 3(2), 14-35.
- Kuratko, D. F., Hornsby, J. S., & Naffziger, D. W. (1997). An examination of owner's goals in sustaining entrepreneurship. *Journal of Small Business Management*, 35(1), 24-33.
- Liñán, F. (2004). Intention-based models of entrepreneurship education. *Piccola Impresa/Small Business*, 3(1), 11-35.
- Mandan, M., Hossein, S., & Furuzandeh, A. (2013). Investigating the impact of advertising on customers behavioural intentions: A case of agriculture bank. *Business and Economics Research*, 33(1), 1-20.
- Mohamad, N., Lim, H.-E., Yusof, N., & Soon, J.-J. (2015). Estimating the effect of entrepreneur education on graduates intention to be entrepreneurs. *Education & Training*, 57(8/9), 874-890.
- National Education Plan. (2017). Retrieved from <http://www.lampang.go.th/public60/EducationPlan2.pdf>.
- Nida, P. (2018). Public opinion survey on thai children and youth in the digital age. Retrieved from: https://nidapoll.nida.ac.th/survey_detail?survey_id=132.
- Office of the Higher Education Commission. (2018). National educational standards 2018. (Online). Available from: <http://www.ratchakitcha.soc.go.th/DATA/PDF/2561/E/199/T19.PDF>. (March 20, 2019).
- Padilla-Melendez, A., Aguila-Obra, A. R., & Garrido-Moreno, A. (2013). Perceived playfulness, gender differences and technology acceptance model in a blended learning scenario. *Comput. Edu*, 63, 306-317. Available at: <https://doi.org/10.1016/j.compedu.2012.12.014>.
- Rubin, T. H., Aas, T. H., & Stead, A. (2015). Knowledge flow in technological business incubators: Evidence from Australia and Israel. *Technovation*, 41, 11-24. Available at: <https://doi.org/10.1016/j.technovation.2015.03.002>.
- Schumacker, R. E., & Lomax, R. G. (2010). *A beginner's guide to structural equation modeling* (3rd ed.). New Jersey: Lawrence Erlbaum Associates.
- Scott, V., & Shane, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review*, 25(1), 217-226.
- Shapiro, A., & Sokol, L. (1982). *Social dimensions of entrepreneurship*. In Kent, C.A., Sexton, D.L. y Vesper, K.H. (Eds.), *Encyclopaedia of entrepreneurship*. Englewood Cliffs(NJ): Prentice Hall.
- Stefanovic, I., Prokic, S., & Rankovic, L. (2010). Motivational and success factors of entrepreneurs: The evidence from a developing country. *Proceedings of the Faculty of Economics in Rijeka: Journal of Economics and Business*, 28(2), 251-269.

- Stewart, W. H., & Roth, P. L. (2007). A meta-analysis of achievement motivation differences between entrepreneurs and managers. *Journal of Small Business Management*, 45(4), 401-421. Available at: <https://doi.org/10.1111/j.1540-627x.2007.00220.x>.
- Swierczek, F., & Ha, T. T. (2003). Motivation, entrepreneurship, and performance of SMEs in Vietnam. *Journal of Enterprise Culture*, 11(1), 47-68. Available at: <https://doi.org/10.1142/s0218495803000044>.
- Urban, B. (2010). A gender perspective on career preferences and entrepreneurial self-efficacy. *SA Journal of Human Resource Management*, 8(1), 1-8. Available at: <https://doi.org/10.4102/sajhrm.v8i1.293>.
- Wanichbuncha, K. (2013). *Structure equation model analysis*. Bangkok: Samlada Printing.
- Wilson, F., Kickul, J., & Marlino, D. (2007). Gender, entrepreneurial self-efficacy, and entrepreneurial career intentions: Implications for entrepreneurship education. *Entrepreneurship Theory and Practice*, 31(3), 387-406. Available at: <https://doi.org/10.1111/j.1540-6520.2007.00179.x>.

Views and opinions expressed in this article are the views and opinions of the author(s), Humanities and Social Sciences Letters shall not be responsible or answerable for any loss, damage or liability etc. caused in relation to/arising out of the use of the content.