

The Development of the Entrepreneurial Spirit Index: An Application of the Entrepreneurial Cognition Approach

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Abstract

Entrepreneurship has been recognized as one of the crucial mechanisms for a nation's sustainable economic development. Entrepreneurship is a key engine that propels economic growth and employment opportunity creation. The purposes of this study are: (1) to develop and validate the Thailand Entrepreneurial Spirit Index (THESI) in combination with multidimensional entrepreneurial cognition scales, by examining the attitudes, motivations, and ambitions of individuals starting businesses; and (2) to investigate the impacts of a multitude of perception factors and demographic factors on entrepreneurial intent. Based on 1,180 samples of the Thai population collected via a telephone survey in 2021, the results of tetrachoric correlation and factor analysis showed that the THESI index can be formulated and explained by six variables: entrepreneurial intent ($b = 0.690$), opportunity recognition ($b = 0.711$), self-skill perception ($b = 0.935$), entrepreneurial networking ($b = 0.743$), perceived ease of doing business ($b = 0.470$), and fear of failure ($b = -0.118$). The results of binary logistic regression analysis revealed that opportunity recognition, self-skill perception, entrepreneurial networking, perceived ease of doing business, and fear of failure have significant effects on entrepreneurial intent. Interestingly, females are 36.6% less likely than males to declare entrepreneurial intent. Older adults over age 61 indicate significantly lower entrepreneurial intent, at 76.8%, compared with younger people 18 to 30 years old. The amount of formal education a person possesses has a considerable negative impact on their desire to start a business. The group of respondents holding above a bachelor's degree sample shows 22.0% lower entrepreneurial intent than the group holding a bachelor's degree or below. Our research is among the few pioneering efforts to provide an improved idea of how to quantify an unlikely, non-measurable concept: the entrepreneurial spirit. This novel THESI index will help national entrepreneurial policymakers evaluate the degrees of entrepreneurship at a societal level. The value of this THESI index relies upon applied simpler metrics to portray a key issue related to the interpretation of entrepreneurship at the societal level.

Keywords:

Entrepreneurial Spirit;
Entrepreneurial Cognition;
Cognition Approach;
Economic Growth;
Thailand.

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1- Introduction

Entrepreneurship is widely recognised as a critical economic driver that contributes to a country's economic growth, particularly in the context of sustainability. Sustainability is approached from a variety of perspectives, including environmental, social, economic, and human sustainability points of view [1]. Entrepreneurship can be defined as the process by which individuals pursue opportunities without regard to the resources they currently control [2]. Entrepreneurship involves the creation of an organisation to pursue a discontinuous opportunity [3]. An entrepreneur, however, might be defined as someone who recognises a business opportunity and forms a company to pursue it [4] and specialises in making judgement choices regarding the allocation of limited resources [5]. Although in recent decades,

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entrepreneurship has emerged as a new field of business and economic research, there remains no agreement regarding how to define and conceptualise it; entrepreneurship concepts, according to Ács et al. (2014), include a framework, activities, and output measures. Nevertheless, a minimal consensus has emerged regarding entrepreneurship as a multidimensional concept [6, 7]. The Global Entrepreneurship Monitor (GEM) was created to assess individuals' entrepreneurial capabilities, motivations, and attitudes. The Global Entrepreneurship Index (GEI) adds ecosystem dimensions to the GEM's individual-level dimensions [8]. As a result, the GEI takes into account all stages of transition, at both the macro and personal levels. The demand has grown for analytical tools that are capable of assessing the efficacy of entrepreneurial policies [9]; in this regard, the GEI stands out as a valuable benchmarking tool for policymakers. Since 2009, GEI has been analysing the complex relationships between institutional context and entrepreneurs, with an emphasis on the connections between economic growth and entrepreneurship.

Nevertheless, international rankings based on the GEI index frequently provide erroneous insights, arising from a linear conception of inventive processes, and such rankings seldom take national differences into consideration [10]. While useful, these techniques mistakenly assume that higher levels of aggregate input and output indicate better performance. Moreover, this method ignores the intrinsic linkages between institutional context and entrepreneurs when measuring systemic efficiency, such as the simple productivity measurement that comprises the ratio of outputs to inputs. Based on this critique, the authors plan to develop an easy-to-use index to measure the degree of entrepreneurship at the societal level, which will aid countries' entrepreneurial policymakers in improving their understanding of citizens' entrepreneurial attitudes and motivations and of the ambitions of individuals who are starting businesses. The researchers also seek to examine whether there are any correlations between entrepreneurial intent, and a variety of perceptions and demographic characteristics.

The remainder of this paper is structured as follows: The second section summarises the key findings from prior empirical and theoretical research on entrepreneurial spirit and the principles of the entrepreneurial cognitive approach. Section 3 outlines the THESI index's conceptual foundation and explores the research hypotheses. The fourth section describes the essential coordinates in study design, sample, and chosen variables. Section 5 covers empirical analysis of the data and discusses the results and implications. Section 6 provides the conclusion, including the study's shortcomings, and Section 7 discusses future research possibilities.

2- Literature Review

2-1- Entrepreneurial Spirit

Research indicates that the entrepreneurial spirit has an important impact on launching and growing new businesses [11]. Cultivating an entrepreneurial spirit may increase an individual's productivity, leading to positive economic contributions. Entrepreneurial spirit comprises a set of psychological qualities: risk-taking, creativity, invention, internal control, self-sufficiency, and advancement motivation [12]. Dawkins (2007) defined entrepreneurial spirit as the combination of the following concepts: uniqueness (originality); creativity (the procedure for attaining uniqueness); risk-taking (capability of assessing the risk associated with a situation before proceeding; not rash); business savvy (profit-driven attitude); developing potential (capacity to see and use opportunity potential); adaptability (rapid resolution of issues); and ultimately, destructive (due to the consistent requirement for creativity in times of change) [13]. Kelley et al. (2012) divided entrepreneurial spirit into two dimensions: entrepreneurial attitudes and activities [14]. Singer et al. (2015) indicated that entrepreneurial spirit is widely regarded as an effective mechanism for a country's social, cultural, and political development [15]. Meanwhile, the entrepreneurial spirit's inner process is determined by entrepreneurial attitudes, behaviours, and aspirations. Entrepreneurial awareness, perception of an entrepreneurial opportunity, and entrepreneurial self-efficacy are the three elements of entrepreneurial spirit with the greatest effects [16]. The first, entrepreneurial awareness, is a strong internal motivator for people to pursue entrepreneurial endeavors. The second, entrepreneurial opportunity perception, examines how individuals subjectively perceive entrepreneurial opportunities in their immediate environments. Finally, entrepreneurial self-efficacy is a measure of an individual's confidence in their ability to succeed as an entrepreneur. Entrepreneurial activities are classified as nascent (such as start-ups), new, or established. Entrepreneurial activities that are nascent or new can be grouped together as a type: total early entrepreneurial activities (TEA).

2-2- Entrepreneurial Cognition Approach

Increasing numbers of scholars are interested in examining entrepreneurship from the perspective of cognitive theory [17]. Entrepreneurial cognition research has evolved as an alternative to trait orientation because, while trait orientation has yielded important discoveries, many findings have obviously conflicted, causing researchers to shift their focus to other personal qualities of individuals [18]. Sánchez et al. (2011) argued that the study of cognitive social categories should be the emphasis of future entrepreneurship research [19], and Mitchell et al. (2002) believed that cognitive theory views can separate entrepreneurs from non-entrepreneurs [20]. These cognition approach viewpoints have contributed to a better understanding of the factors that influence people's perceptions and behaviours. Mental processes, such as

inspiration, perceptions, and attitudes, influence every aspect of human activity [21]. The knowledge frameworks that enable individuals to make assessments, judgement, and decisions regarding opportunities, venture developments, and growth are known as entrepreneurial cognition [22]. The ranges of entrepreneurial cognition methodology constructs can be used to explain an individual's tendency to start a business [23]; several academics have claimed that entrepreneurial cognition influences the decision to start a new business [24]. Nonetheless, the factors vary among prior studies [25]. Entrepreneurial cognition is defined in the current study as describing the ranges of perception regarding individual, economic (entrepreneurial) opportunities, and socio-cultural aspects. The entrepreneurial cognition elements considered in this study are as follows:

Opportunity recognition: According to the theory of planned behaviour, people's attitudes influence their behaviours [26]. All behaviour is the product of both intuitive and logical processes [27]. Entrepreneurship is described as the creation of a new organization to explore a business opportunity [28], and this creation is the consequence of entrepreneurs' intuitive and rational processes. Entrepreneurs are distinguished by their ability to spot and seize possibilities that others might overlook [29].

Self-skill perception: Perceived entrepreneurial skills reflect individuals' confidence in their ability to demonstrate an adequate level of specific entrepreneurial skills. During the process of beginning a business and effectively operating one, entrepreneurs must identify potentially profitable possibilities; gather human and financial resources; launch a new venture; manage its growth; and build a sustainable firm [30]. Due to the complexity of this set of tasks, an entrepreneur must possess a diverse set of skills [31]. An entrepreneur must be competent in a variety of areas, and be capable of filling a variety of managerial and non-management roles during the process of founding a firm [31]. Individuals' confidence in their capacity to establish a business may be bolstered if they possess these relevant skills [32].

Entrepreneurial networking: According to prior research, knowing other entrepreneurs personally should foster a positive attitude toward entrepreneurs in general [33]. Numerous studies have demonstrated that entrepreneurs consistently seek ideas and information from other entrepreneurs to learn how to identify entrepreneurial opportunities [34]; those who know other entrepreneurs may learn facts that help them create a business [35]. The notion is that good role models have a meaningful impact on development, the ability to uncover entrepreneurial possibilities, and the generation of sufficient motivation to start a new firm [36]. According to network theory, an individual can tap into support, information, and other resources by establishing and maintaining a network within an entrepreneurial society [37]. Networking contacts may thus create an improved basis on which entrepreneurs can develop their businesses, allowing them to achieve higher success than doing so via isolated efforts [38].

Fear of failure: According to the theory of planned behaviour, individuals' fear of failure results in the perception that they are incapable of controlling the behaviours necessary for business ventures [26]. As a result, such behaviours generate an unfavorable attitude. Without this fear, there would be no perception of inability to control the situation, and thus no negative attitude towards the behaviours [39]. Entrepreneurship and branching out into new areas necessitate some amount of risk [40]. Risk is defined in classical decision theory as the variation in the distribution of potential consequences, probability distributions, and related subjective values [41]. Among the primary distinctions between entrepreneurs and salaried workers are the uncertainties and risks taken on by the former [42]. Wagener et al. (2010) found that the risk-taking tendency is one of the crucial traits that distinguishes founders from non-founders [43]. In the entrepreneurship literature, entrepreneurs are often described as having a higher proclivity to take risks compared with members of other groups [44].

Ease of doing business: Previous studies have confirmed that the overall ease of doing business has a positive effect on business creation. Jalilian et al. (2007) found that business-friendly regulations are associated with increased economic growth [45]. The premise of this ease of doing business affecting degrees of business creation has also been asserted by World Bank (2012), as cited in Cristina (2014): economic activity demands regulations that raise the likelihood of economic collaborations and offer contractual partners some amount of certainty and protection against abuse [46]. Entrepreneurs' intentions and behaviours should thus also be affected by their home country's existing and expected economic and political infrastructure. Griffiths et al. (2013) argued that a country's socio-political environment can be so powerful that it can either foster or suffocate entrepreneurship [47]. Bris et al. (2014) identified the factors that influence a country's entrepreneurial performance, including the ease of doing business in the economy, the availability of venture capital for business development, political stability, and the availability of legislation that facilitates the formation of firms, the availability of funds, and the presence or absence of bureaucratic barriers to business activity [48].

Entrepreneurial intent: Entrepreneurial intent can be understood as the first step in the entrepreneurial process [49]. An individual's self-admitted conviction that they desire to start a new business endeavor and plan to do so in the future is another way to describe entrepreneurial intent [50]. Previous studies have shown positive associations of cognitive, socio-political, and institutional factors, with the propensity to become an entrepreneur [51, 52].

3- Conceptual Framework and Hypothesis Development

The goal of this research is to develop simplified index for measuring, reporting, and accompanying interactive data visualizations that present entrepreneurial phenomena related to societies, regions, or nations based on the entrepreneurial cognition approach. A range of entrepreneurial cognition elements, based on the previous literature review, is included in our conceptual framework. According to Chaudhary and Israel (2020), the process of creating an index consists of four steps: 1) choosing potential items to represent the variables of interest; 2) assessing the empirical links between the selected items; 3) assigning scores to individual items, which are then combined to form the index; and 4) verifying the index [53]. The conceptual framework of Thailand's Entrepreneurial Spirit (THESI) is represented in Figure 1.

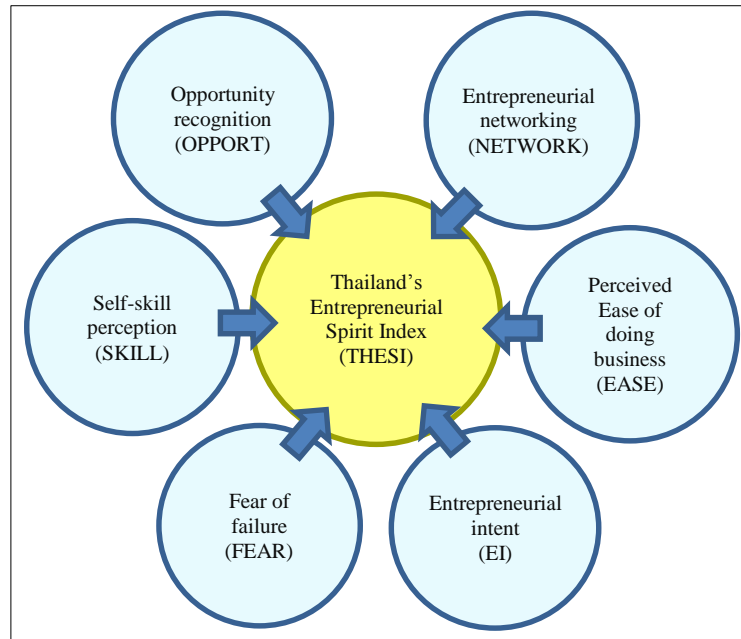


Figure 1. Conceptual Framework of Thailand's Entrepreneurial Spirit Index (THESI)

In addition to the development of the entrepreneurial spirit index, as discussed above, the authors have also investigated whether several perceptions and demographic variables have effects on an individual's entrepreneurial intent. Therefore, the following hypotheses have been developed.

Hypothesis 1: An individual's possession of a higher degree of perception regarding entrepreneurial opportunities (OPPORT) will have a favourable impact on entrepreneurial intent (EI).

Hypothesis 2: An individual's possession of a greater degree of self-skill perception (SKILL) will have a favourable impact on their entrepreneurial intent (EI).

Hypothesis 3: An individual's possession of a greater degree of entrepreneurial networking (NETWORK) will have a favourable impact on their entrepreneurial intent (EI).

Hypothesis 4: An individual's possession of a greater perception regarding ease of doing business (EASE) will have a more favourable impact on their entrepreneurial intent (EI).

Hypothesis 5: Fear of failure (FEAR) has a detrimental impact on entrepreneurial intent (EI).

Hypothesis 6: There is a significant difference between males and females in entrepreneurial intent (EI).

Hypothesis 7: Entrepreneurial intent (EI) differs significantly across generations, with younger respondents having a greater level of EI than older respondents.

Hypothesis 8: There are significant differences in entrepreneurial intent (EI) among the various formal educational degrees.

The proposed hypothesis testing model is illustrated in Figure 2.

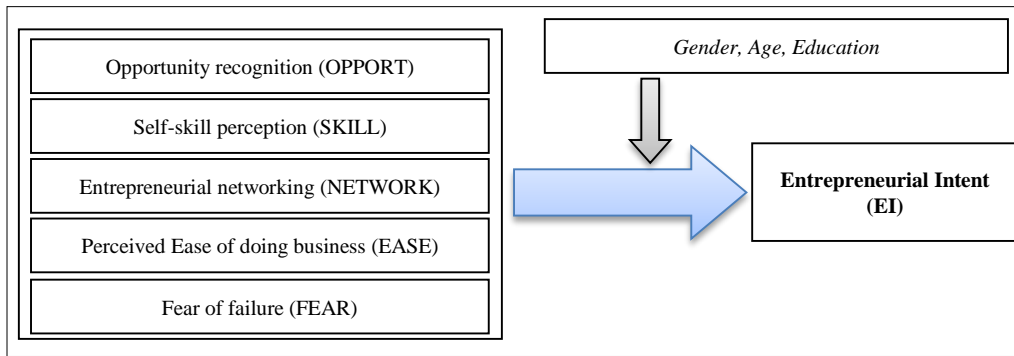


Figure 2. The Proposed Hypothesis Testing Model

4- Research Methodology and Questionnaire Development

4-1- Research Design and Data Collection

To develop the simplified entrepreneurial measurement index for visualizing and presenting entrepreneurial phenomena in societies based on the entrepreneurial cognition approach, the authors have used a quantitative approach, by conducting a telephone survey. The survey questions asked respondents to convey their perceptions of the previously discussed aspects of entrepreneurial. The data sample comprised 1,180 members of the Thai population. All respondents were randomly selected from the sampling framework of Thai citizens provided by Bangkok University Research Center (Bangkok Poll). Figure 3 illustrates the research procedure.

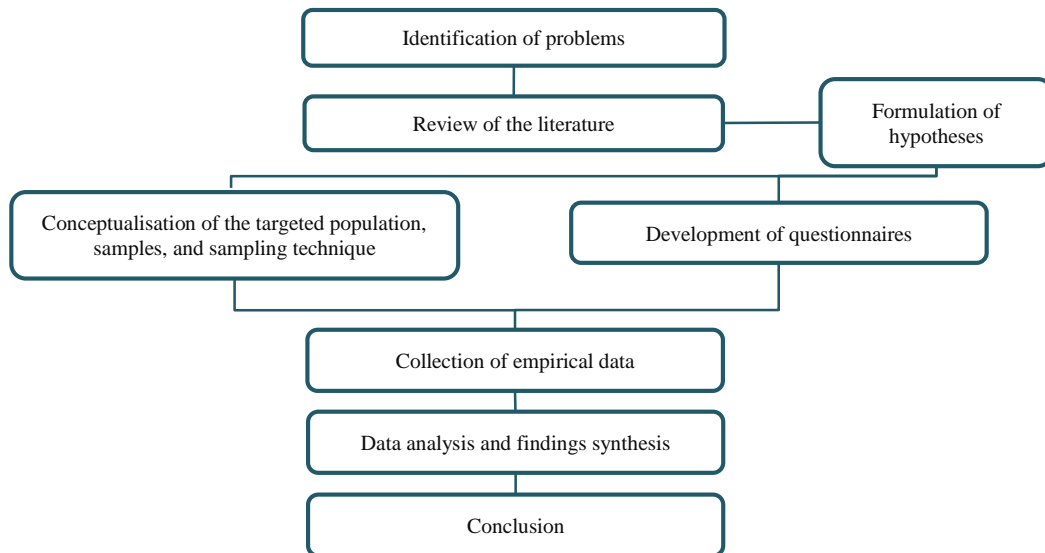


Figure 3. Flowchart of the Research Methodology

4-2- Questionnaire Development

The questionnaire consisted of three sections: 1) information related to respondents' behavioural and demographic aspects; 2) the entrepreneurial cognition measurement items; and 3) a multiple-choice question concerning the reasons a respondent might not dare to start their own business. Table 1 illustrates the entrepreneurial cognition measurement constructs and operational questions.

Table 1. Questionnaire Constructs and Variables

Type	Constructs	Operational terms in the questionnaires
Binary variables (0 = No, 1 = Yes)	EI	Do you intend to start a business in the near future?
	OPPORT	Would good opportunities to start a business exist in the area where you live?
	SKILL	Do you believe you have the required skill and knowledge to start a business?
	NETWORK	Do you know an entrepreneur or network that can support you in your business initiatives?
	EASE	Do you think starting a new business is easy in the current circumstances?
	FEAR	Would fear of failure prevent you from setting up a business?

5- Result and Discussion

The descriptive statistics analysis revealed that a slight majority of respondents in terms of gender, 50.6%, were males; in terms of age, 27.5% of respondents were 51 to 60 years old. Most respondents, 59.0%, possessed lower bachelor's degrees. Respondents in self-employed occupations comprised 39.3%. Approximately one-fifth, 21.9%, resided in the north-eastern area of Thailand. Respondents also were asked for reasons that prevent them for starting their own business; the top three reasons were "not having enough financial capital", at 15.9%; "fear of doing it will lead to unforeseen situations such as epidemics, natural disasters", at 15.4%; and "fear of failure/fear of loss", at 12.6%. Table 2 provides the detailed demographic profiles for the sample population.

Table 2. Demographic Profiles of the Sample Population

Item	Description	Frequency	Percentages
Gender	Male	597	50.6%
	Female	583	49.4%
Age	18–30	103	8.7%
	31–40	170	14.4%
	41–50	290	24.6%
	51–60	324	27.5%
	More than 60	293	24.8%
Education	Below undergraduate	696	59.0%
	Undergraduate	371	31.4%
	Postgraduate	113	9.6%
Occupation	Government employee	146	12.4%
	Private company employee	234	19.8%
	Trading/self-employed/farmer	464	39.3%
	Business owner/employer	80	6.8%
	Family work	1	.1%
	Butler/housekeeper/in retirement	201	17.0%
	Student	21	1.8%
	Unemployed/waiting for season	33	2.8%
Domicile	Bangkok	199	16.9%
	Metropolitan area	98	8.3%
	Central region	219	18.6%
	Eastern region	87	7.4%
	Northern region	140	11.9%
	North-eastern region	259	21.9%
	Southern region	178	15.1%
The reason you are afraid to start your own business. (Multiple response question)	I don't have enough financial capital.	530	15.9%
	I think it's too late to start over.	217	6.5%
	I'm afraid that I won't be able to start.	136	4.1%
	Fear of failure, fear of loss.	419	12.6%
	Lack of knowledge, expertise in doing business.	350	10.5%
	Thinking that current job is secured. I can feed myself.	405	12.2%
	Not knowing what business to do well.	250	7.5%
	Fear of doing it will lead to unforeseen situations such as epidemics.	512	15.4%
	If unsuccessful, fearing that the family will be in trouble bearing the burden of debt.	363	10.9%
	Others	149	4.5%

In order to develop THESI, the authors initially investigated the most suitable statistical technique for examining the previously discussed constructs via the questionnaire. The tetrachoric correlation [54] is a measure of association dating to before the era of computers that was designed expressly for the types of variables shown above. The dichotomies whose relationship is to be analysed are initially produced by dichotomising continuous variables that are not observed.

As a result, the tetrachoric correlation is an estimate of the product–moment correlation that would have been achieved if the underlying continuous variables had a bivariate, normal joint distribution.

The factor analysis technique was employed to combine all six variables into one certain, targeted factor: THESI. The FACTOR program [55] was used to conduct this analysis. Polychoric correlation was calculated utilising normalised varimax rotation and a fixed number of factors for extraction in the factor analysis. The prerequisite result of the Kaiser-Meyer-Olkin (KMO) test, as Table 4 shows, indicated that the factor analysis was adequate. The results of the tetrachoric correlations between variables and the adequacy of the tetrachoric correlation matrix are illustrated in Tables 3 and 4.

Table 3. Tetrachoric Correlations between Entrepreneurial Cognition Variables

	Frequency	EN	OPPORT	SKILL	NETWORK	EASE	FEAR
EN	Yes (43.8%), No (56.2%)	1					
OPPORT	Yes (50.9%), No (49.1%)	0.546	1				
SKILL	Yes (47.7%), No (52.3%)	0.639	0.637	1			
NETWORK	Yes (42.7%), No (57.3%)	0.454	0.538	0.736	1		
EASE	Yes (11.6%), No (88.4%)	0.365	0.311	0.421	0.328	1	
FEAR	Yes (59.7%), No (40.3%)	-0.009	0.001	-0.115	-0.121	-0.226	1

Table 4. Adequacy of the Tetrachoric Correlation Matrix

Analytical Method	Result
Determinant of the matrix	= 0.110974624389960
Bartlett’s statistic	= 2587.9 (<i>df</i> = 15; <i>P</i> = 0.000000)
Kaiser-Meyer-Olkin (KMO) test	= 0.79152 (fair)
Bootstrap 95% confidence interval of KMO	= (0.736 0.818)

After considering the factor loading of all six entrepreneurial cognition aspects in Table 5, five of the variables—entrepreneurial intent (*b* = 0.690), opportunity recognition (*b* = 0.711), self-skill perception (*b* = 0.935), entrepreneurial networking (*b* = 0.743), and perceived ease of doing business (*b* = 0.470)—show positive factor loading scores. Fear of failure, however, showed a negative factor loading score (*b* = -0.118). Therefore, the unidimensional nature of THESI can be calculated by obtaining the sum of the factor-loading values for the first five items (EN, OPPORT, SKILL, NETWORK, and EASE), and then subtracting the FEAR value.

Table 5. Unidimensional Solution Based on the Tetrachoric Correlation Matrix

Variable	Factor Loading	Bias-corrected and Accelerated Confidence Interval (95%)	Explained Variance (%)
EI	0.690	(0.634 0.747)	
OPPORT	0.711	(0.641 0.776)	
SKILL	0.935	(0.873 0.981)	
NETWORK	0.743	(0.688 0.796)	2.641
EASE	0.470	(0.357 0.566)	
FEAR	-0.118	(-0.211 0.041)	

The THESI formula can thus be illustrated as:

$$THESI = 0.690EN + 0.711OPPORT + 0.935SKILL + 0.743NETWORK + 0.470EASE - 0.118FEAR \tag{1}$$

To test the proposed hypotheses, a multicollinearity problem was evaluated as a requirement by examining the Variance Inflation Factor (VIF) to explore the influences of the previously discussed cognition variables and demographic characteristics on entrepreneurial intent (EI). The VIF of the variables in this study ranges from 1.045 to 1.186, which is less than 2.5; as a result, there is no difficulty with multicollinearity, and the data is suitable for further investigation [56]. The hypothesised hypotheses were tested using binary logistic regression analysis. In Model 1, only control factors (gender, age, and education) were examined, whereas in Model 2, controls variables were combined with all cognition variables (OPPORT, SKILL, NETWORK, EASE, and FEAR). Table 6 shows the findings of this analysis.

Table 6. Logistic Regression for Entrepreneurial Intent

	Model 1		Model 2	
	B	EXP(B)	B	EXP(B)
Constant	0.434*	1.543	-0.406	0.666
Gender	-0.456***	0.634	-0.363**	0.695
Age (18–30 years)				
Age (31–40 years)	0.016	1.016	-0.138	0.871
Age (41–50 years)	-0.056	0.946	-0.284*	0.753
Age (51–60 years)	-0.315*	0.730	-0.474**	0.623
Age (Above 61 years)	-1.463***	0.232	-1.499***	0.223
Education (Less than bachelor's degree)				
Education (Bachelor's Degree)	-0.031	0.970	-0.340*	0.712
Education (Above bachelor's degree)	-0.248*	0.780	-0.495*	0.610
OPPORT			0.889***	2.432
SKILL			1.386***	3.998
NETWORK			0.271*	1.311
EASE			0.684**	1.982
FEAR			-0.426*	0.695
Omnibus Tests of Model Coefficients (Sig. level)	0.000		0.000	
Nagelkerke pseudo R ²	0.157		0.356	
Percentage corrects	60.2		74.5	

Note: Significance levels based on Wald statistics; * Significant *p* value less than 0.05; ** Significant *p* value less than 0.01; *** Significant *p* value less than 0.001. The reference categories are males, ages 18–30, and education, below a bachelor's degree

In Table 6, Omnibus tests of model coefficients are significant, which confirms the causal relationship of the proposed model. The Nagelkerke pseudo R² reveals how well the independent variables in the model explain the dependent variable. When variables are added to the model, the Nagelkerke pseudo R² improves, and the proportion of accurate predictions varies from 60.2 to 74.5. Model 1 is a basic model with only control variables (gender, age, and education). The result shows that, regarding gender, females are 36.6% less likely than males to declare entrepreneurial intent, according to the odds ratio value. Thus, H6 is supported. Age also significantly contributes to explaining EI. Older adults appear to have a lower level of EI than younger adults. In terms of EI, the group older than 61 scores 76.8% lower than the group aged 18–30. Thus, H7 is supported. Regarding formal education level, respondents with a higher level of formal education appear to have a lower level of EI. The group with education beyond a bachelor's degree is 22% less likely to declare EI than the group with a bachelor's degree or below. Thus, H8 is supported. Model 2's odd ratio result shows that all cognition factors have a significant influence on EI. Therefore, H1–H5 are supported. Respondents with greater amounts of opportunity recognition, self-skill perception, entrepreneurial networking, and perceived ease of doing business are more likely to have EI. The negative factor loading of the FEAR variable suggests that those who have a larger fear of failure are less likely to have EI.

In accordance with the hypothesis testing, our findings are in line with the previous study by Fernández et al. (2009), which found that elements of the entrepreneurial cognition approach can be utilised to explain an individual's inclination to start a business [57]. Gender difference plays an important role in explaining entrepreneurial intent. This result is consistent with the previous study by Koellinger et al. (2013), which indicated that lower EI among females is linked to a lower degree of confidence in their entrepreneurial ability, features of their social networks, and a higher level of fear of failure [58]. The other issue is the elusive quality of credibility, which female entrepreneurs have brought to light in terms of the need to be taken seriously [59]. Older adults in our study possessed significantly lower EI than younger adults. This finding is in line with Hatak et al. (2015), who found that although older people are more capable of straying from typical business practices due to having more financial capital and opportunities, they are significantly less likely than younger people to participate in entrepreneurial behavior [60]. A further age-related impact on entrepreneurial intent is due to the opportunity costs of time. Older people are less likely to dedicate time to activities that have a long or unclear payoff period. The degree of formal education also has a detrimental impact on entrepreneurial intent in our study's results: the better educated a person is, the less likely they are to start their own business. The principle of push and pull motivation helps explain why people react differently to formal education levels [61]. Entrepreneurship is a choice for pull entrepreneurs, but it is a requirement for push entrepreneurs; people in Thailand may be forced to become entrepreneurs to survive. Furthermore, educated people might be apprehensive about risks due to the time and money they have invested in education. Working on their own business may entail long hours and poor money at first, so starting a business is not always enticing when compared to employment at an existing firm that is directly related to their degree [62].

6- Conclusion

The two purposes of this study were to develop a Thailand-specific entrepreneurial spirit index based on the entrepreneurial cognition approach, which is one of the well-known theories explaining entrepreneurial attitudes and intention, and to investigate the impacts on entrepreneurial intent of several perception factors and demographic factors. Thailand's Entrepreneurial Spirit Index (THESI), developed in this study, provides a new alternative index to measure citizens' attitudes towards the entrepreneurship climate. THESI combines multidimensional entrepreneurial cognition scales by examining a variety of perceptions and ambitions of individuals starting businesses. The parsimonious THESI index contains six variables: entrepreneurial intent, opportunity recognition, self-skill perception, entrepreneurial networking, perceived ease of doing business, and fear of failure. For measurement purposes, each construct can be treated as a dichotomous variable. Moreover, our findings have revealed that opportunity recognition, self-skill perception, entrepreneurial networking, perceived ease of doing business, and fear of failure help to explain entrepreneurial intent. These findings thus provide insights for all academics, practitioners, and policymakers, by suggesting that the successful enhancement of entrepreneurial society also depends significantly on multidimensional elements of cognition. By understanding and employing our proposed THESI index, policymakers can improve their understanding of people's attitudes, perceptions, and inclinations to start businesses. Furthermore, policymakers can more accurately design entrepreneurial ecosystem elements that effectively strengthen individuals' inspirations for starting businesses.

6-1- Limitations and Future Research

This study involves some limitations. First, although entrepreneurial intent is a powerful predictor, it is not synonymous with actual entrepreneurial behaviour. Intentionality does not necessarily imply real behavior, which practitioners and policymakers should keep in mind. Second, all cognition factors were quantified in this study using a binary scale. Finally, this study relied solely on data gathered in Thailand. As a result, the findings should be applied with caution to other nations. Future research should build on this line of research by reproducing THESI for other nations, resulting in a more complete theoretical framework within and across cultural settings.

7- Declarations

7-1- Author Contributions

Conceptualization, S.T., T.M., and W.P.; methodology, S.T., T.M., and W.P.; formal analysis, S.T., T.M., and W.P.; data curation, S.T., T.M., and W.P.; writing—original draft preparation, S.T., T.M., and W.P.; writing—review and editing, S.T., T.M., and W.P. All authors have read and agreed to the published version of the manuscript.

7-2- Data Availability Statement

The data are not publicly available due to the nature of this research; participants in this study did not agree for their data to be shared publicly.

7-3- Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

7-4- Conflicts of Interest

The authors declare that there is no conflict of interests regarding the publication of this manuscript. In addition, the ethical issues, including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, and redundancies have been completely observed by the authors.

8- References

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