International Journal of Analysis and Applications

# Social Norms, Attitudes, Self-Efficacy, and Entrepreneurial Intentions: Moderating Roles of Education, Risk Tolerance, and Innovation Orientation

**Suchart Tripopsakul***

*School of Entrepreneurship and Management, Bangkok University, Pathumthani 12120, Thailand*

**Corresponding author:* suchart.t@bu.ac.th

ABSTRACT. Young people play an increasingly prominent role in economic activity, yet limited research investigates the factors shaping their entrepreneurial intentions, particularly in emerging economies. This study examines the relationships among perceived social norms (PSN), attitudes toward entrepreneurship (ATE), and self-efficacy (SNR) in influencing entrepreneurial intentions (EI) among youth. It also explores the moderating roles of entrepreneurial education (EE), risk tolerance (RT), and innovation orientation (IO) in these relationships. A quantitative research methodology was employed, utilizing an online questionnaire to collect data from 211 Thai university students. Findings reveal that PSN, ATE, and SNR significantly influence EI, with ATE emerging as the most critical factor, demonstrating the role of positive perceptions of entrepreneurship as a viable career path in enhancing intentions. Moderation analyses indicate that entrepreneurial education strengthens the relationship between PSN and EI, and risk tolerance amplifies the impact of SNR on EI. However, the moderating effect of innovation orientation on the relationship between ATE and EI was not supported. These findings highlight the importance of education and individual characteristics, such as risk tolerance, in shaping entrepreneurial intentions while indicating limits to innovation orientation's role in this context. This study provides actionable insights for educators, policymakers, and practitioners seeking to foster entrepreneurial activity among youth in emerging economies, emphasizing the need for targeted educational initiatives and supportive environments to cultivate entrepreneurial skills, confidence, and attitudes.

## 1. Introduction

Entrepreneurship is widely recognized as a cornerstone of economic growth, innovation, and job creation, playing a pivotal role in addressing socio-economic challenges and fostering sustainable development. Policymakers worldwide have significantly emphasized cultivating entrepreneurial ecosystems, particularly in emerging economies where entrepreneurial activity

Received Jan. 11, 2025

*2020 Mathematics Subject Classification.* 62P25, 91E45.

*Key words and phrases.* entrepreneurial intentions; entrepreneurial education; risk tolerance; innovation orientation.

https://doi.org/10.28924/2291-8639-23-2025-74



ISSN: 2291-8639

can be a powerful driver of transformation. Thailand's rapidly growing economy exemplifies this context, with its government prioritizing initiatives to develop an entrepreneurial mindset among its youth. Understanding the factors influencing entrepreneurial intentions among young people is critical for designing effective policies and programs that unlock their potential as key contributors to economic transformation [1].

Youth entrepreneurship is uniquely positioned as a catalyst for innovation, societal progress, and economic resilience. Due to their adaptability, creativity, and openness to change, young individuals are well-suited to address emerging market demands and develop innovative solutions to societal challenges [2]. This demographic's role becomes even more critical when considering global projections: the youth population (ages 15–24) is expected to increase by 16% to reach 1.4 billion by 2050. In Asia, where youth unemployment rates remain alarmingly high at approximately 30% [3], fostering entrepreneurial activity among young people is a strategic priority and an urgent necessity. Youth entrepreneurship has been shown to reduce unemployment, create jobs, and stimulate local economies [4-5].

As part of the ASEAN region, Thailand is uniquely positioned to capitalize on the benefits of youth entrepreneurship. The country's youth, characterized by their innovative potential and technological savviness, represent a valuable strategic resource for fostering economic modernization. Young entrepreneurs are often more willing to explore untapped markets, embrace digital transformation, and adopt sustainable practices, aligning with global trends toward digitalization and green economies [6]. However, despite these opportunities, the path to entrepreneurship for young people is fraught with challenges, including limited access to resources, inadequate entrepreneurial education, and cultural attitudes that may discourage risk-taking [7]. Addressing these barriers requires an in-depth understanding of the psychological, social, and contextual factors influencing entrepreneurial intentions.

This study integrates constructs from the Theory of Planned Behavior (TPB), a widely used framework for understanding intention-driven behaviors, to examine entrepreneurial intentions (EI). The TPB posits that intentions are shaped by three cognitive antecedents: perceived social norms (PSN), attitudes toward entrepreneurship (ATE), and self-efficacy (SNR) [8]. Perceived social norms reflect the influence of societal and familial expectations on entrepreneurial behavior. At the same time, attitudes toward entrepreneurship capture an individual’s positive or negative appraisal of entrepreneurship as a career option. Self-efficacy, derived from social cognitive theory, measures an individual’s confidence in their ability to perform entrepreneurial tasks successfully [9]. These constructs collectively provide a robust theoretical foundation for understanding the formation of entrepreneurial intentions [10-11]. Beyond these primary predictors, this study incorporates three moderating factors—entrepreneurial education (EE), risk tolerance (RT), and innovation orientation (IO)—to capture

the contextual and individual-specific influences that shape entrepreneurial intentions. Entrepreneurial education has enhanced entrepreneurial self-efficacy, fostered positive attitudes toward entrepreneurship, and reinforced the perceived feasibility of entrepreneurial endeavors [12-13]. Risk tolerance, reflecting an individual's willingness to engage in uncertain situations, plays a crucial role in entrepreneurial decision-making, as entrepreneurship inherently involves risk and uncertainty [14-15]. Innovation orientation, defined as an individual's propensity to pursue novelty and creativity, aligns with Schumpeterian perspectives on entrepreneurship as a driver of creative destruction and market disruption [16]. By examining these moderators, this study seeks to provide nuanced insights into how educational, psychological, and contextual factors influence entrepreneurial intentions. The relevance of this research is underscored by the need to cultivate an entrepreneurial culture among university students, who represent the next generation of entrepreneurs. University students, often characterized by their exposure to advanced knowledge and network access, are an ideal population for studying entrepreneurial intentions [17]. Higher education shapes entrepreneurial aspirations through specialized programs, experiential learning, and mentorship opportunities [1]. However, the effectiveness of these initiatives depends on a thorough understanding of the factors that drive entrepreneurial intentions, including how they interact with individual characteristics and societal influences.

This study contributes to the literature by proposing and testing a comprehensive model of entrepreneurial intentions that integrates TPB constructs with moderating factors of entrepreneurial education, risk tolerance, and innovation orientation. By focusing on university students in Thailand, the research aims to generate actionable insights for educators, policymakers, and practitioners seeking to foster entrepreneurial potential in emerging economies. The findings are expected to inform the development of targeted interventions that enhance entrepreneurial skills, reduce barriers to entrepreneurship, and promote innovation-driven economic growth. The structure of this paper is as follows: the next section provides a detailed review of the relevant literature and presents the study's hypotheses. This is followed by a description of the research methodology, a discussion of key findings, and a conclusion that highlights theoretical and practical implications, acknowledges limitations, and offers directions for future research.

## 2. Literature Review and Hypothesis Development

Entrepreneurial intentions (EI) are foundational to understanding the decision-making processes that lead individuals to pursue entrepreneurial ventures. The Theory of Planned Behavior (TPB) offers a comprehensive framework for examining these intentions by focusing on the cognitive antecedents that influence them. According to TPB, intentions mediate the relationships between behavior, attitudes, subjective norms, and perceived control, ultimately

shaping an individual's motivation to engage in specific activities [8]. TPB posits three pivotal components: attitudes toward the behavior, subjective norms, and perceived behavioral control. Attitudes reflect an individual's positive or negative evaluation of the behavior, subjective norms capture the social acceptance or rejection of the behavior by reference groups such as family and friends, and perceived behavioral control encompasses the perceived ease or difficulty of performing the behavior [18]. These antecedents collectively form a robust theoretical basis for predicting entrepreneurial intentions, and their utility has been demonstrated across various fields, including entrepreneurship, health behaviors, and consumer decision-making [10-11].

Perceived social norms represent the extent to which individuals perceive social support or pressure to engage in entrepreneurship. These norms significantly influence entrepreneurial intentions, particularly in collectivist cultures where social reinforcement is critical in shaping individual behaviors [18]. Familial and societal expectations are deeply rooted, and perceived social norms are likely to influence entrepreneurial aspirations strongly. Empirical studies highlight that positive reinforcement from family, friends, and peers enhances entrepreneurial motivation, strengthening intentions to engage in entrepreneurial activities [19]. Moreover, aligning perceived social norms with cultural values and societal expectations can amplify their impact on entrepreneurial intentions, as evidenced in studies from other Asian contexts [3, 20]. Therefore, this study hypothesizes:

Hypothesis 1: Perceived social norms positively influence entrepreneurial intentions.

Attitudes toward entrepreneurship (ATE) reflect an individual's favorability toward pursuing entrepreneurship as a career option. Positive attitudes are instrumental in shaping entrepreneurial intentions, enhancing motivation and readiness to engage in entrepreneurial activities. According to TPB, attitudes are shaped by beliefs about the perceived outcomes of entrepreneurial behavior, such as financial independence, personal satisfaction, and societal contributions [8]. Research consistently demonstrates that individuals with a favorable evaluation of entrepreneurship are likelier to act on their aspirations, viewing entrepreneurship as feasible and desirable [12, 18]. Additionally, attitudes mediate translating intrinsic and extrinsic motivations into entrepreneurial intentions, highlighting their centrality in decision-making [21]. Thus, this study posits:

Hypothesis 2: Attitudes toward entrepreneurship positively influence entrepreneurial intentions.

Self-efficacy, an individual's confidence in their ability to perform entrepreneurial tasks successfully, is another critical determinant of entrepreneurial intentions. The self-efficacy theory emphasizes the role of individuals' beliefs in their capabilities to overcome challenges and succeed in specific endeavors [9]. In the entrepreneurial context, self-efficacy influences how individuals perceive their ability to navigate uncertainties, secure resources, and manage risks.

Empirical evidence consistently supports the positive association between self-efficacy and entrepreneurial intentions, with higher self-efficacy instilling greater confidence in pursuing entrepreneurial opportunities [15, 22]. Furthermore, self-efficacy is a critical enabler of entrepreneurial resilience, fostering persistence and adaptability in the face of setbacks [23]. Therefore, this study hypothesizes:

Hypothesis 3: Self-efficacy positively influences entrepreneurial intentions.

While TPB provides a strong foundation for understanding entrepreneurial intentions, moderating factors such as entrepreneurial education (EE), risk tolerance (RT), and innovation orientation (IO) introduce critical contextual and individual-specific influences that shape these relationships. Entrepreneurial education equips individuals with the knowledge, skills, and networks to pursue entrepreneurship. It enhances practical competencies and validates entrepreneurship as a legitimate and achievable career path. Studies indicate that entrepreneurial education positively influences entrepreneurial attitudes and intentions by providing individuals with the tools and confidence to act on their aspirations [13, 17]. Specifically, education reinforces the role of perceived social norms by demonstrating the feasibility of entrepreneurial success and aligning individual goals with societal expectations. Therefore, this study posits:

Hypothesis 4a: Entrepreneurial education moderates the relationship between perceived social norms and entrepreneurial intentions, such that the relationship is stronger for individuals with entrepreneurial education.

Risk tolerance reflects an individual's willingness to accept potential failures in uncertain situations. High-risk tolerance allows individuals to act on their self-efficacy beliefs, enabling them to translate confidence into action despite uncertainties. Research suggests that individuals with higher risk tolerance are better positioned to embrace the risks inherent in entrepreneurial ventures, enhancing the relationship between self-efficacy and entrepreneurial intentions [14, 24]. Risk tolerance is a critical enabler of entrepreneurial activity in emerging economies like Thailand, where entrepreneurship often involves navigating volatile market conditions [4]. Accordingly, this study hypothesizes:

Hypothesis 4b: Risk tolerance moderates the relationship between self-efficacy and entrepreneurial intentions, such that the relationship is stronger for individuals with higher risk tolerance.

Innovation orientation, defined as an individual's propensity to pursue novelty and creativity, further enriches the understanding of entrepreneurial intentions. According to Schumpeterian innovation theory, individuals with a strong orientation toward innovation view entrepreneurship as a means of implementing creative ideas and disrupting traditional markets [2, 16]. This innovative outlook enhances the impact of positive attitudes toward entrepreneurship, increasing the likelihood of entrepreneurial intentions. Moreover, fostering an

innovation-oriented mindset among young people in dynamic economies such as Thailand is vital for building a competitive entrepreneurial ecosystem (OECD, 2021). Thus, this study posits:

Hypothesis 4c: Innovation orientation moderates the relationship between attitudes toward entrepreneurship and entrepreneurial intentions, such that the relationship is stronger for individuals with a higher orientation toward innovation.

The summary of hypotheses for this study is shown in Figure 1.

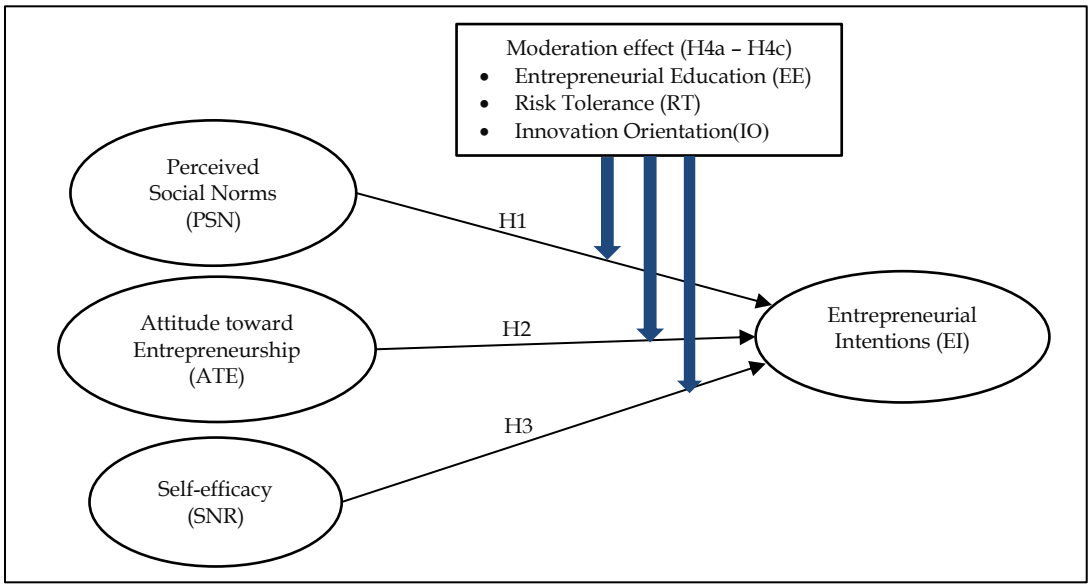


Figure 1.: The conceptual framework of this study.

## 3. Research methodology

The author collected data for this study from undergraduate students at the School of Entrepreneurship and Management, Bangkok University, to validate our proposed model and test the hypotheses. A self-administered survey method was employed. The questionnaire contained two parts. The first part is about demographic data. The second part of the questionnaire measures the constructs of the proposed model. Items related to Attitudes Toward Entrepreneurship, Perceived Social Norms, Self-Efficacy, and Entrepreneurial Intention were adapted from Lián and Chen (2009) [18]. Additionally, measurement items for Entrepreneurial Education (EE), Risk Tolerance (RT), and Innovation Orientation (IO) were conceptually grounded in prior literature. The EE items were adapted from Nabi et al. (2017), RT items from Sitkin and Weingart (1995), and IO items from Shane and Venkataraman (2000) [13, 16, 24]. Table 1 provides a detailed summary of these constructs and questionnaire items.

Table 1: Constructs and items of this study

| Constructs | Questionnaire Items |
|---|---|
| Entrepreneurial Education (EE) | I have completed at least one course or program focused on entrepreneurship. |
| | My education has provided me with practical skills for starting and managing a business. |
| | I have learned strategies for identifying and capitalizing on entrepreneurial opportunities. |
| | My education has enhanced my confidence in pursuing entrepreneurial ventures. |
| Risk Tolerance (RT) | I am willing to take calculated risks to achieve my business goals. |
| | I am comfortable with uncertainty and ambiguity in business decisions. |
| | I view challenges and risks as opportunities for growth. |
| | I am not afraid to make bold decisions, even if the outcomes are uncertain. |
| Innovation Orientation (IO) | I enjoy experimenting with new ideas and concepts in business. |
| | I actively seek out innovative solutions to business challenges. |
| | I am willing to invest time and resources in pursuing creative ideas. |
| | I consider innovation a critical factor for business success. |
| Attitude toward Entrepreneurship (ATE) | I see more advantages to becoming an entrepreneur than disadvantages. |
| | I want to pursue a career in entrepreneurship. |
| | If I had the opportunity and resources, I would like to start my own business. |
| | I would be delighted to become an entrepreneur. |
| | If I had to choose, I would opt to be an entrepreneur. |
| Perceived Social Norms (PSN) | My immediate family members believe that I should seek a career as an entrepreneur. |
| | My closest friends believe that I should pursue an entrepreneurial profession. |
| | People that matter to me believe that I should pursue an entrepreneurial career |
| | In my country, most people think starting your own business is appropriate. |
| | The culture in my nation is very supportive of entrepreneurship. |
| | In my nation, the importance of the entrepreneur to the economy is well recognized. |
| Self-efficacy (SNR) | Establishing and maintaining a business would be straightforward for me. |
| | I am prepared to initiate a prosperous business. |
| | I have control over the establishment of a new corporation. |
| | I am knowledgeable about the practical necessities of starting a firm. |
| | I excel in developing entrepreneurial projects. |
| | If I were to start a business, I would have a high likelihood of success. |
| Entrepreneurial Intention (EI) | I am determined to succeed as an entrepreneur and will do whatever it takes. |
| | My professional ambition is to launch my own business. |
| | I will do everything I can to launch and run my own business. |
| | In the future, I am committed to launching a business. |
| | I have contemplated starting a business. |
| | I am determined to start a business in the future. |

## 4. Results

The sample predominantly consisted of males, with 52.8% identifying as female and 47.2% as male. Most participants (77.5%) were aged between 20 and 22, followed by 13.4% who were 23 or older and 9.1% under 20. Regarding family business background, 55.8% of the respondents reported coming from families that owned or operated businesses, while the remaining 44.2% did not have such exposure. Furthermore, 22.5% of the participants indicated they currently owned their businesses, whereas the majority (77.5%) were not engaged in entrepreneurial activities at the time of the study. The family income distribution among respondents revealed considerable variation. The largest group (34.7%) reported a monthly family income between 100,001 and 200,000 THB, followed by 30.7% earning between 50,001 and 100,000 THB. Additionally, 14.7% reported incomes ranging from 200,001 to 300,000 THB, and 12.1% had family incomes exceeding 300,001 THB. Only 7.8% of respondents indicated their monthly family income was below 50,000 THB. Geographically, the sample represented various regions across Thailand, ensuring diversity. Nearly half of the participants (42%) were from Bangkok and its metropolitan area, 18.6% from the northern region, 15.2% from the northeastern region, and 10.4% from the central region. The remaining 13.8% were distributed among the southern, eastern, and western areas.

The measurement model was evaluated using IBM SPSS Amos through confirmatory factor analysis, yielding results that supported its construct validity and demonstrated a well-fitting model. The measurement model exhibited satisfactory fit indices, with a normed chi-square ($X^2/df = 2.345$, below the threshold of 3), a goodness-of-fit index (GFI = 0.92, exceeding the recommended minimum of 0.8), an adjusted goodness-of-fit index (AGFI = 0.90, above the 0.8 guideline), and a root mean square residual (RMR = 0.04, within the acceptable criterion of less than 0.05) [25]. The comparative fit index (CFI = 0.93, surpassing the 0.9 standard) indicated a strong model fit. To further establish construct validity, both convergent and discriminant validity were assessed. Convergent validity was evaluated using the average variance extracted (AVE) and composite reliability (CR). The AVE values ranged from 0.57 to 0.69, while CR values ranged from 0.73 to 0.88, surpassing the recommended thresholds of 0.50 and 0.70, respectively. These findings indicate strong internal consistency and convergence among the indicators. Discriminant validity was tested by comparing the AVE for each construct with the squared correlations between constructs. Results confirmed that the AVE for each construct exceeded its shared variance with other constructs, thereby supporting the distinctiveness of each construct [26]. These results validate the measurement model's robustness and reliability, as summarized in Table 2.

Table 2: Composite reliability, average variance extracted, and shared variance

| | C.R | EE | RT | IO | ATE | PSN | SNR | EI |
|---|---|---|---|---|---|---|---|---|
| Entrepreneurial Education (EE) | 0.862 | 0.816 | | | | | | |
| Risk Tolerance (RT) | 0.821 | 0.426 | 0.798 | | | | | |
| Innovation Orientation (IO) | 0.804 | 0.492 | 0.442 | 0.792 | | | | |
| Attitude toward Entrepreneurship (ATE) | 0.811 | 0.523 | 0.511 | 0.478 | 0.804 | | | |
| Perceived Social Norms (PSN) | 0.822 | 0.487 | 0.502 | 0.495 | 0.462 | 0.810 | | |
| Self-efficacy (SNR) | 0.847 | 0.472 | 0.493 | 0.478 | 0.495 | 0.480 | 0.822 | |
| Entrepreneurial intention (EI) | 0.834 | 0.459 | 0.481 | 0.471 | 0.509 | 0.490 | 0.474 | 0.815 |

Note: Diagonal elements and off-diagonal elements represent Average Variance Extracted (AVE) and shared variance, respectively; C.R. = Composite Reliability

Concerning the structural model's adequacy, the evaluation metrics indicated a satisfactory fit between the model and the observed data. Specifically, the normed chi-square ($X^2/df$ = 2.345, below the threshold of 3), goodness-of-fit index (GFI = 0.92, exceeding the recommended minimum of 0.8), adjusted goodness-of-fit index (AGFI = 0.90, above the 0.8 guideline), root mean square residual (RMR = 0.04, within the acceptable limit of less than 0.05), and comparative fit index (CFI = 0.93, surpassing the 0.9 standard) collectively support the robustness of the structural model [25]. These indices confirm that the structural model fits the data well. The study's hypothesized dependency relationships were scrutinized following the model fit evaluation. The results from the path analysis confirm that the hypothesized relationships align with the observed data. Table 3 summarizes the structural parameter estimates, highlighting the significance of each tested hypothesis.

Table 3: Structural parameter estimates

| Hypotheses | Relationship | Estimate (b) | Result |
|---|---|---|---|
| Hypothesis 1 | PSN → EI | 0.421*** | Supported |
| Hypothesis 2 | ATE → EI | 0.539*** | Supported |
| Hypothesis 3 | SNR → EI | 0.492*** | Supported |

Note: $R^2$ (EI) = 0.482; ***P < 0.001

The hypothesis testing results demonstrate strong support for the proposed relationships. Specifically, perceived social norms (PSN) were found to influence entrepreneurial intentions positively (EI) (H1: b = 0.421, t-value = 5.214, p < 0.001), indicating the importance of societal and familial encouragement in shaping entrepreneurial aspirations. Attitudes toward entrepreneurship (ATE) significantly impacted EI (H2: b = 0.539, t-value = 6.849, p < 0.001), reinforcing the critical role of positive perceptions of entrepreneurship as a viable career path. Self-efficacy (SNR) also exhibited a strong positive effect on EI (H3: b = 0.492, t-value = 5.542, p < 0.001), highlighting the importance of confidence in one's ability to succeed in entrepreneurial ventures.

The moderating effects of entrepreneurial education (EE), risk tolerance (RT), and innovation orientation (IO) on the relationships between perceived social norms (PSN), self-efficacy (SNR), attitudes toward entrepreneurship (ATE), and entrepreneurial intentions (EI) were analyzed using interaction terms. The results confirmed the significance of the moderating roles of entrepreneurial education and risk tolerance, while the moderating effect of innovation orientation was not supported, as summarized in Table 4.

Table 4: Moderation analysis results

| Hypotheses | Relationship | Estimate (b) | t-value | Interaction Effect | Result |
|---|---|---|---|---|---|
| Hypothesis 4a | PSN × EE → EI | 0.387*** | 4.928 | Strengthens | Supported |
| Hypothesis 4b | SNR × RT → EI | 0.428*** | 5.214 | Strengthens | Supported |
| Hypothesis 4c | ATE × IO → EI | 0.118 (n.s) | 1.932 | Not Significant | Not Supported |

Note: n.s = not significant; ***P < 0.001

Entrepreneurial education significantly moderated the relationship between perceived social norms (PSN) and entrepreneurial intentions (EI) (H4a: b = 0.387, t-value = 4.928, p < 0.001); thus, H4a is supported. Risk tolerance significantly strengthened the relationship between self-efficacy (SNR) and entrepreneurial intentions (H4b: b = 0.428, t-value = 5.214, p < 0.001). Thus, H4b is supported. Contrary to expectations, the moderating effect of innovation orientation on the relationship between attitudes toward entrepreneurship (ATE) and entrepreneurial intentions (EI) was not supported (H4c: b = 0.118, t-value = 1.932, p > 0.05). Thus, H4c is not supported.

## 5. Discussion

This study examines the factors shaping entrepreneurial intentions among young people in Thailand, with a focus on perceived social norms (PSN), attitudes toward entrepreneurship (ATE), and self-efficacy (SNR) as predictors, and entrepreneurial education (EE), risk tolerance (RT), and innovation orientation (IO) as moderating influences. Using a sample of 211 undergraduate students from Thailand, the findings provide theoretical and practical insights into entrepreneurial intention (EI) formation dynamics. The results indicate that attitudes toward entrepreneurship (ATE), perceived social norms (PSN), and self-efficacy (SNR) significantly influence entrepreneurial intentions (EI). Among these, attitudes toward entrepreneurship emerged as the most critical factor, highlighting the importance of fostering positive perceptions of entrepreneurship as a desirable career path. This aligns with existing literature that emphasizes the role of attitudes in shaping entrepreneurial behaviors [8, 12]. The study also confirms the significance of perceived social norms, indicating that societal and familial encouragement can motivate young people to pursue entrepreneurial ventures. This finding resonates with collectivist cultural contexts, such as Thailand, where social approval is crucial in decision-making processes [20]. Enhancing these supportive norms could lead to broader acceptance and encouragement of entrepreneurial careers. Self-efficacy was found to have a strong positive effect on entrepreneurial intentions, consistent with self-efficacy theory [9]. High self-efficacy equips individuals with the confidence to overcome challenges and perceive entrepreneurship as a feasible goal. Practical interventions, such as role modeling and experiential learning, can significantly enhance self-efficacy among youth.

The moderating effects of entrepreneurial education (EE), risk tolerance (RT), and innovation orientation (IO) were also examined. Entrepreneurial education strengthened the relationship between perceived social norms and entrepreneurial intentions, reinforcing the importance of structured educational programs in fostering entrepreneurial mindsets. Risk tolerance amplified the effect of self-efficacy on entrepreneurial intentions, suggesting that individuals with a higher willingness to take risks are better equipped to translate their confidence into action. However, the moderating effect of innovation orientation on the relationship between attitudes toward entrepreneurship and entrepreneurial intentions was not significant. This unexpected result may indicate that while innovation orientation is valuable, other factors, such as risk and feasibility perceptions, may play a more prominent role in entrepreneurial decision-making.

This study offers several practical implications for fostering entrepreneurial intentions among youth in Thailand. First, educational institutions should prioritize developing positive attitudes toward entrepreneurship by integrating entrepreneurship into curricula, hosting workshops, and inviting successful entrepreneurs to share their experiences. These initiatives can

inspire young people to view entrepreneurship as a rewarding and attainable career path. Second, creating a supportive social environment is critical. Policymakers and educators should work together to establish networks, mentorship programs, and platforms that celebrate entrepreneurial achievements, thereby reinforcing positive social norms. Third, enhancing self-efficacy through experiential learning, such as business simulations, internships, and startup projects, can build the confidence necessary for young people to pursue entrepreneurial ventures. Exposure to entrepreneurial role models can further strengthen their belief in their capabilities. Fourth, the importance of risk tolerance underscores the need for programs that teach young people to manage uncertainty and embrace calculated risks. Providing financial literacy and strategic decision-making training can prepare them for the inherent uncertainties of entrepreneurial endeavors. Finally, while innovation orientation did not show a significant moderating effect, fostering creativity and problem-solving skills remains essential for equipping young people with the tools to innovate within their ventures. Future research should explore the interplay between innovation and other psychological factors in shaping entrepreneurial behavior.

## 6. Conclusion Limitations and Future Research

This study examined factors influencing entrepreneurial intentions (EI) among Thai youth, integrating the Theory of Planned Behavior (TPB) with moderating constructs such as entrepreneurial education (EE), risk tolerance (RT), and innovation orientation (IO). Attitudes toward entrepreneurship (ATE) emerged as the most significant predictor, alongside perceived social norms (PSN) and self-efficacy (SNR). EE and RT strengthened key TPB relationships, while IO did not show a significant moderating effect. The findings offer theoretical insights by extending the TPB framework with individual and contextual moderators and practical implications for fostering entrepreneurial intentions. Educators and policymakers should build positive attitudes, leverage supportive social norms, and enhance self-efficacy through targeted education, mentorship programs, and experiential learning. These strategies can cultivate entrepreneurial mindsets and empower youth to pursue entrepreneurial ventures in emerging economies.

This study has certain limitations that warrant consideration. The sample was drawn from a single institution, which may limit the generalizability of the findings. Future studies should include a more diverse and geographically dispersed sample to capture broader perspectives on entrepreneurial intentions. The cross-sectional design of the study restricts the ability to infer causality. Longitudinal or experimental approaches would provide more robust evidence for understanding how entrepreneurial intentions develop over time. Lastly, future research could investigate additional moderating factors, such as cultural values, access to financial resources,

and digital literacy, to provide a more comprehensive understanding of the contextual factors influencing entrepreneurial intentions.

**Acknowledgments:** The Ethics Committee for Human Research at Bangkok University reviewed and approved this study according to the Declaration of Helsinki.

**Conflicts of Interest:** The author declares that there are no conflicts of interest regarding the publication of this paper.

## References

[1] Global Entrepreneurship Monitor, GEM 2021/2022 Global Report: Opportunity Amid Disruption, Global Entrepreneurship Research Association (2022). https://www.gemconsortium.org/report/gem-20212022-global-report-opportunity-amid-disruption.

[2] J.A. Schumpeter, The Theory of Economic Development, Harvard University Press, Cambridge, MA, 1934.

[3] U. Guelich, Global Entrepreneurship Monitor Thailand Report 2019/2020, Global Entrepreneurship Research Association, (2020). https://www.gemconsortium.org/report/gem-thailand-report-201920.

[4] D. Urbano, D. Audretsch, S. Aparicio, M. Noguera, Does Entrepreneurial Activity Matter for Economic Growth in Developing Countries? The Role of the Institutional Environment, Int. Entrep. Manag. J. 16 (2020), 1065–1099. https://doi.org/10.1007/s11365-019-00621-5.

[5] N. Wathanakom, J. Khlaisang, N. Songkram, A Journey to Enhance Youth in Entrepreneurship: Investigation of Entrepreneurial Competencies and Development Needs, J. Educ. Innov. 23 (2021), 64–78.

[6] World Economic Forum, The Future of Jobs Report 2023, Geneva, 2023. https://www.weforum.org/publications/the-future-of-jobs-report-2023.

[7] OECD, Entrepreneurship Policies through a Gender Lens, OECD Publishing, Paris, 2021.

[8] I. Ajzen, The Theory of Planned Behavior, Organ. Behav. Hum. Decis. Process. 50 (1991), 179–211. https://doi.org/10.1016/0749-5978(91)90020-T.

[9] A. Bandura, Self-Efficacy: Toward a Unifying Theory of Behavioral Change, Psychol. Rev. 84 (1977), 191–215. https://doi.org/10.1037/0033-295X.84.2.191.

[10] T. Kautonen, M. Van Gelderen, M. Fink, Robustness of the Theory of Planned Behavior in Predicting Entrepreneurial Intentions and Actions, Entrep. Theory Pract. 39 (2015), 655–674. https://doi.org/10.1111/etap.12056.

[11] F. Liñán, A. Fayolle, A Systematic Literature Review on Entrepreneurial Intentions: Citation, Thematic Analyses, and Research Agenda, Int. Entrep. Manag. J. 11 (2015), 907–933. https://doi.org/10.1007/s11365-015-0356-5.

[12] V. Souitaris, S. Zerbinati, A. Al-Laham, Do Entrepreneurship Programmes Raise Entrepreneurial Intention of Science and Engineering Students? The Effect of Learning, Inspiration and Resources, J. Bus. Venturing 22 (2007), 566–591. https://doi.org/10.1016/j.jbusvent.2006.05.002.

[13] G. Nabi, F. Liñán, A. Fayolle, N. Krueger, A. Walmsley, The Impact of Entrepreneurship Education in Higher Education: A Systematic Review and Research Agenda, Acad. Manag. Learn. Educ. 16 (2017), 277–299. https://doi.org/10.5465/amle.2015.0026.

[14] D. Kahneman, A. Tversky, Prospect Theory: An Analysis of Decision under Risk, Econometrica 47 (1979), 263. https://doi.org/10.2307/1914185.

[15] H. Zhao, S.E. Seibert, G.E. Hills, The Mediating Role of Self-Efficacy in the Development of Entrepreneurial Intentions., J. Appl. Psychol. 90 (2005), 1265–1272. https://doi.org/10.1037/0021-9010.90.6.1265.

[16] S. Shane, S. Venkataraman, The Promise of Entrepreneurship as a Field of Research, Acad. Manag. Rev. 25 (2000), 217–226. https://doi.org/10.5465/amr.2000.2791611.

[17] A. Fayolle, B. Gailly, The Impact of Entrepreneurship Education on Entrepreneurial Attitudes and Intention: Hysteresis and Persistence, J. Small Bus. Manag. 53 (2015), 75–93. https://doi.org/10.1111/jsbm.12065.

[18] F. Liñán, Y. Chen, Development and Cross–Cultural Application of a Specific Instrument to Measure Entrepreneurial Intentions, Entrep. Theory Pract. 33 (2009), 593–617. https://doi.org/10.1111/j.1540-6520.2009.00318.x.

[19] J.R. Anderson, The Role of Subjective Norms in Developing Entrepreneurial Intentions in University Students, J. Strategy Manag. 16 (2023), 643–653. https://doi.org/10.1108/JSMA-10-2022-0190.

[20] G. Hofstede, Culture's Consequences: Comparing Values, Behaviors, Institutions, and Organizations Across Nations, Sage Publications, Thousand Oaks, 2001.

[21] R.M. Ryan, E.L. Deci, Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Well-Being., Amer. Psychol. 55 (2000), 68–78. https://doi.org/10.1037/0003-066X.55.1.68.

[22] F. Wilson, J. Kickul, D. Marlino, Gender, Entrepreneurial Self–Efficacy, and Entrepreneurial Career Intentions: Implications for Entrepreneurship Education, Entrep. Theory Pract. 31 (2007), 387–406. https://doi.org/10.1111/j.1540-6520.2007.00179.x.

[23] A. Newman, M. Obschonka, S. Schwarz, M. Cohen, I. Nielsen, Entrepreneurial Self-Efficacy: A Systematic Review of the Literature on Its Theoretical Foundations, Measurement, Antecedents, and Outcomes, and an Agenda for Future Research, J. Vocat. Behav. 110 (2019), 403–419. https://doi.org/10.1016/j.jvb.2018.05.012.

[24] S.B. Sitkin, L.R. Weingart, Determinants of Risky Decision-Making Behavior: A Test of the Mediating Role of Risk Perceptions and Propensity, Acad. Manag. J. 38 (1995), 1573–1592. https://doi.org/10.2307/256844.

[25] J.F. Hair, W.C. Black, B.J. Babin, R.E. Anderson, Multivariate Data Analysis, Pearson, New York, 2010.

[26] C. Fornell, D.F. Larcker, Evaluating Structural Equation Models with Unobservable Variables and Measurement Error, J. Mark. Res. 18 (1981), 39–50. https://doi.org/10.1177/002224378101800104.