

# CONCEPTUALIZING THE ENTREPRENEURIAL SPIRIT INDEX (ESI): A FRAMEWORK FOR ASSESSING ENTREPRENEURIAL POTENTIAL

Yongplut YEING-ARAMKUL<sup>1</sup>, Kwanrat SUANPONG<sup>2</sup>, Kritchanan YOOCHAYANTEE<sup>3</sup>  
and Suchart TRIPOPSAKUL<sup>1\*</sup>

1 School of Entrepreneurship and Management, Bangkok University, Thailand;  
yongplut.y@bu.ac.th (Y. Y.); suchart.t@bu.ac.th (S. T.) (Corresponding author)

2 Chulalongkorn Business School, Chulalongkorn University, Thailand;  
kwanrat@cbs.chula.ac.th

3 Chouxbury Business, Thailand; ukritchanan@gmail.com

## ARTICLE HISTORY

**Received:** 6 January 2025

**Revised:** 20 January 2025

**Published:** 6 February 2025

## ABSTRACT

An entrepreneurial spirit drives economic innovation and societal progress, yet its conceptualization and measurement remain underexplored. This paper introduces the Entrepreneurial Spirit Index (ESI) as a formative second-order construct that encapsulates five dimensions: risk propensity, opportunity recognition, innovation attitude, entrepreneurial knowledge, and motivation. Anchored in the Theory of Planned Behavior, the conceptual framework investigates the relationships among ESI, attitude toward entrepreneurship, and entrepreneurial intention, emphasizing the mediating role of attitude. The proposed methodology involves a quantitative survey targeting diverse populations to validate the model and establish the theoretical linkages. By providing a comprehensive model, this paper aims to contribute to entrepreneurship research and inform policy and education strategies to foster entrepreneurial potential.

**Keywords:** Entrepreneurial Spirit Index, Attitude Toward Entrepreneurship, Entrepreneurial Intention, Conceptual Framework

**CITATION INFORMATION:** Yeing-Aramkul, Y., Suanpong, K., Yoochayantee, K., & Tripopsakul, S. (2025). Conceptualizing the Entrepreneurial Spirit Index (ESI): A framework for assessing entrepreneurial potential. *Procedia of Multidisciplinary Research*, 3(2), 4.

## INTRODUCTION

Entrepreneurship is widely recognized as a pivotal driver of economic growth, innovation, and societal advancement (Acs & Audretsch, 2010; Zahra & Wright, 2011). In the context of accelerating technological advancements and global economic shifts, understanding the factors that foster entrepreneurial intentions has become imperative for scholars and policymakers (GEM, 2021). Central to entrepreneurial intention is the concept of entrepreneurial spirit—a multidimensional construct encompassing a mix of psychological traits, motivational forces, and attitudinal predispositions that collectively inspire individuals to pursue entrepreneurial ventures (Shapero & Sokol, 1982; Liñán & Fayolle, 2015). Despite its acknowledged importance, measuring entrepreneurial spirit comprehensively remains challenging in entrepreneurship research.

To address this complexity, we introduce the Entrepreneurial Spirit Index (ESI), conceptualized as a formative second-order construct that encapsulates key dimensions foundational to entrepreneurial potential: risk propensity, opportunity recognition, innovation attitude, entrepreneurial knowledge, and motivation (AGER, 2015; Ipsos, 2021). Each of these dimensions represents an essential aspect of the entrepreneurial mindset. For example, risk propensity involves the willingness to engage in uncertain or high-stakes endeavors, while opportunity recognition captures the ability to identify unmet needs or unexploited markets (Douglas & Shepherd, 2002). Likewise, innovation attitude reflects openness to novel approaches and solutions, entrepreneurial knowledge embodies the practical skills essential to business creation, and motivation captures the intrinsic drive to establish and sustain a business (Shinnar et al., 2014; Shahab, Chengang, Arbizu, & Haider, 2019). These dimensions provide a comprehensive understanding of entrepreneurial spirit, offering a robust framework for examining the influences that encourage individuals to pursue entrepreneurial activities.

Previous research has shown that entrepreneurial intentions are shaped by individual traits and attitudes toward entrepreneurship, influencing perceptions of entrepreneurship as a viable and attractive career path (Ajzen, 1991; Liñán & Chen, 2009). According to the Theory of Planned Behavior (TPB), attitudes, subjective norms, and perceived behavioral control shape an individual's intentions (Ajzen, 1991). A positive attitude toward entrepreneurship is a mediating factor within the entrepreneurial domain, translating entrepreneurial spirit into a tangible intention to engage in entrepreneurial actions (Obschonka et al., 2010). This mediating role highlights the importance of fostering favorable entrepreneurial attitudes, influenced by individual personality traits and external support structures, to amplify entrepreneurial intentions (Ipsos, 2021).

Education and social environments are crucial in shaping entrepreneurial spirit. For instance, the AGER (2015) report indicates that younger generations possess high entrepreneurial potential but often face significant barriers, such as fear of failure and insufficient societal or institutional support. Similarly, recent findings underscore the impact of social and governmental support on entrepreneurial aspirations, especially amid economic crises like the COVID-19 pandemic, which has driven many toward entrepreneurship as a means of economic resilience (Ipsos, 2021). Research further suggests that traditional management education may not fully cultivate entrepreneurial traits, as it often emphasizes functional skills over creativity and adaptability, which are essential for entrepreneurial success (Shepherd & Douglas, 1997). This study proposes to validate the Entrepreneurial Spirit Index (ESI) as a formative second-order construct. It explores its potential influence on entrepreneurial intention, focusing on the mediating role of attitudes toward entrepreneurship. It is hypothesized that each dimension of the ESI—risk propensity, opportunity recognition, innovation attitude, entrepreneurial knowledge, and motivation—significantly contributes to the overall construct. Additionally, the ESI is theorized to positively influence attitudes toward entrepreneurship, mediating its effect on entrepreneurial intention. By conceptualizing these relationships, this study aims to advance the literature on entrepreneurial intentions and behaviors, offering a structured framework to understand how entrepreneurial traits may shape intentions. The proposed model

is intended to provide valuable insights for educators, policymakers, and practitioners to design interventions that nurture entrepreneurial potential across diverse populations.

The remainder of this paper is structured as follows: Section 2 presents the literature review, covering the theoretical foundations of entrepreneurial spirit, attitudes, and intentions while highlighting gaps in current research. Section 3 outlines the research methodology, including the proposed conceptual model, measurement tools, and the analytical approach. Section 4 discusses the model's potential implications, emphasizing its theoretical contributions and practical applications. Section 5 concludes the paper by summarizing key insights, addressing limitations, and offering directions for future research.

## LITERATURE REVIEWS

### Entrepreneurial Spirit and Intentions

An entrepreneurial spirit is regarded as a driving force behind entrepreneurial intentions, serving as a critical precursor to entrepreneurial activity. It represents a composite of traits, skills, and attitudes that enable individuals to recognize opportunities, innovate, and take calculated risks. Research indicates that entrepreneurial spirit is foundational to the entrepreneurial process and significantly influences the likelihood of venture creation and success (GEM, 2021; Liñán & Fayolle, 2015).

As defined by Ajzen (1991), entrepreneurial intentions refer to an individual's commitment to starting a business in the future. These intentions are influenced by various psychological and contextual factors, with entrepreneurial spirit playing a pivotal role. For instance, individuals with high-risk propensity and opportunity recognition are likely to develop strong intentions to pursue entrepreneurial ventures (Shane & Venkataraman, 2000). Moreover, studies highlight the interplay between entrepreneurial attitudes and intentions, underscoring the importance of fostering a positive entrepreneurial mindset (Obschonka et al., 2010).

The relationship between entrepreneurial spirit and intentions is particularly significant in emerging economies, where individuals often face systemic barriers such as limited access to capital and institutional support (Ipsos, 2021). By understanding the dimensions of entrepreneurial spirit, policymakers and educators can better design interventions to nurture entrepreneurial potential across diverse populations.

### Theory of Planned Behavior (TPB)

The Theory of Planned Behavior (TPB; Ajzen, 1991) provides a robust framework for understanding how attitudes, subjective norms, and perceived behavioral control influence entrepreneurial intentions. According to TPB, intentions are the immediate antecedents of behavior, with attitudes playing a central role in shaping these intentions. In the entrepreneurial context, attitudes toward entrepreneurship reflect an individual's evaluation of entrepreneurship as a desirable and viable career path.

Empirical studies have consistently supported the relevance of TPB in explaining entrepreneurial intentions. For example, Liñán and Chen (2009) found that positive attitudes toward entrepreneurship significantly enhance the likelihood of entrepreneurial intentions. Subjective norms, such as societal and familial support, further reinforce these intentions, particularly in cultures that value entrepreneurial endeavors (Shinnar et al., 2014). Perceived behavioral control, which encompasses self-efficacy and resource accessibility, is critical in determining whether individuals translate their intentions into action.

Incorporating TPB into the study of entrepreneurial spirit allows for a nuanced understanding of how multidimensional traits and attitudes interact to influence entrepreneurial intentions. This approach underscores the mediating role of attitudes in translating entrepreneurial spirit into actionable intentions.

### Dimensions of the Entrepreneurial Spirit Index (ESI)

The Entrepreneurial Spirit Index (ESI) is a formative second-order construct that encapsulates five interrelated dimensions: risk propensity, opportunity recognition, innovation attitude, entrepreneurial knowledge, and motivation. These dimensions collectively define the

entrepreneurial spirit, providing a comprehensive framework for examining entrepreneurial potential. The multidimensional nature of ESI highlights how diverse yet interconnected traits and abilities combine to foster entrepreneurial potential, making it a critical construct for understanding entrepreneurial behavior.

Risk propensity reflects an individual's willingness to engage in uncertain or high-stakes endeavors. This trait is integral to entrepreneurial decision-making, enabling individuals to seize opportunities despite potential risks (Douglas & Shepherd, 2002). Entrepreneurs often operate in unpredictable environments where decisions involve financial, social, or operational uncertainties. High levels of risk propensity are associated with a greater likelihood of exploring uncharted markets, experimenting with novel business models, and pursuing innovative ventures. When calculated and informed, risk-taking is a hallmark of entrepreneurial behavior and a key driver of competitive advantage in dynamic industries.

Opportunity recognition captures the ability to identify market gaps and unmet needs. This dimension is fundamental to entrepreneurship, as it facilitates the identification of viable business ideas and innovations (Shane & Venkataraman, 2000). Entrepreneurs with heightened opportunity recognition possess a keen sense of environmental scanning, enabling them to detect emerging trends, consumer demands, and inefficiencies in existing markets. This skill often distinguishes successful entrepreneurs from others, as it involves identifying opportunities and evaluating their feasibility and potential for long-term impact. Opportunity recognition is particularly critical in industries characterized by rapid technological advancements or shifting consumer preferences.

An innovation attitude represents an openness to creative and unconventional approaches. Entrepreneurs often rely on innovative solutions to address complex market challenges, making this dimension crucial for entrepreneurial success (Schumpeter, 1934 cited in Croitoru, 2012). An innovation-driven mindset fosters adaptability and encourages the exploration of disruptive ideas that challenge traditional norms. Entrepreneurs with a substantial innovation attitude are likelier to adopt cutting-edge technologies, design unique value propositions, and create products or services that redefine market standards. This dimension is vital in fostering resilience, as innovation often provides pathways to overcome market obstacles and sustain competitive positioning.

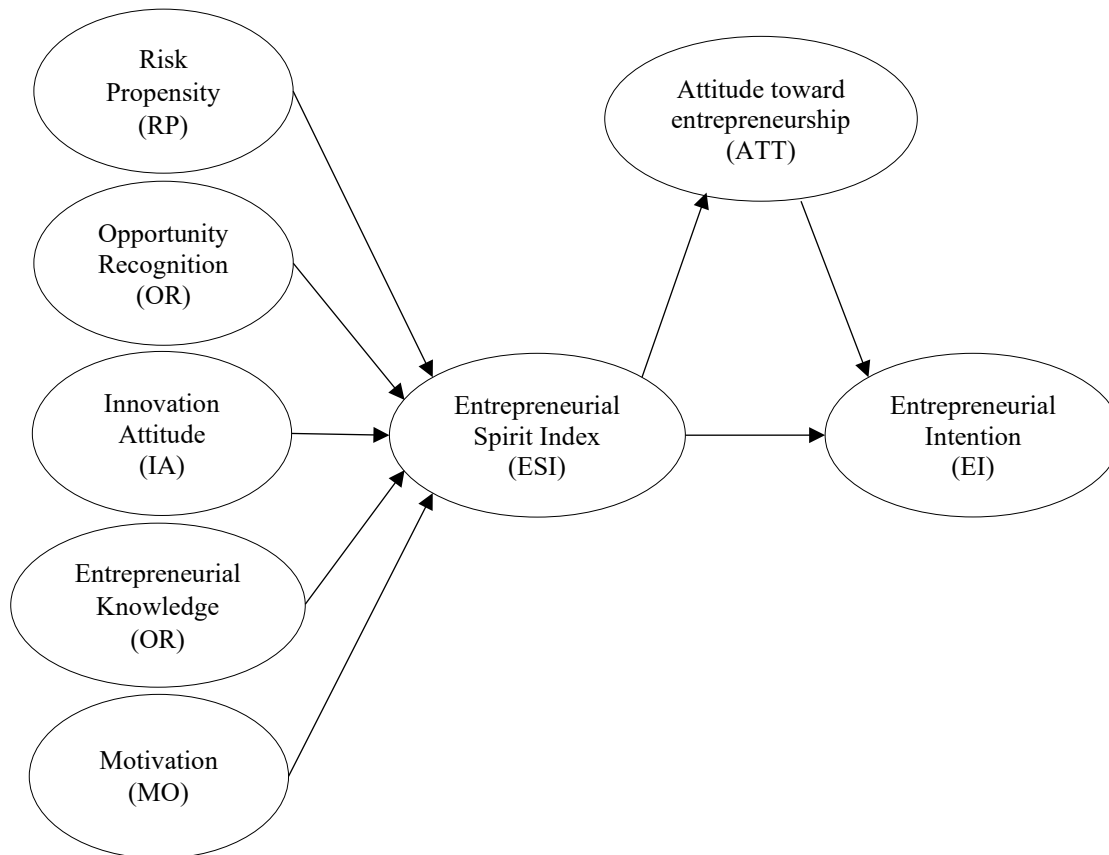
Entrepreneurial knowledge encompasses the technical and managerial skills required to start and sustain a business. This dimension includes an understanding of finance, marketing, operations, and strategic planning, which are essential for navigating the complexities of business environments (Ucbasaran et al., 2008). Entrepreneurs with robust knowledge are better equipped to mitigate risks, capitalize on opportunities, and make informed decisions. Moreover, entrepreneurial knowledge extends beyond technical expertise, including insights into legal compliance, resource management, and stakeholder engagement. The depth and breadth of entrepreneurial knowledge significantly influences an individual's confidence and ability to manage challenges effectively, ensuring the sustainability and growth of their ventures.

Motivation reflects the intrinsic drive to achieve entrepreneurial goals. Motivation is a cornerstone of entrepreneurial resilience, enabling individuals to persist through challenges and setbacks (Deci & Ryan, 2000). Intrinsic motivation often stems from a desire for autonomy, financial independence, or fulfilling a personal vision. Entrepreneurs driven by high motivation are more determined to overcome barriers, such as limited resources or market resistance, and demonstrate a sustained commitment to their ventures. Additionally, motivation influences creativity and problem-solving, as driven individuals are more likely to invest effort into innovative and value-adding initiatives.

The ESI's multidimensional nature allows for a holistic assessment of entrepreneurial spirit, emphasizing the unique contributions of each dimension to entrepreneurial potential. By integrating these dimensions into a single index, the ESI provides a robust tool for examining the pathways through which entrepreneurial traits influence attitudes and intentions. Each dimension not only stands as a critical component of entrepreneurial behavior but also interacts

synergistically with others to create a dynamic and comprehensive representation of entrepreneurial spirit. This integrative approach underscores the importance of fostering a balanced development of these dimensions, particularly in educational and policy contexts that promote entrepreneurship. Programs that target risk management, opportunity evaluation, innovative thinking, skill-building, and motivational enhancement can significantly enhance entrepreneurial outcomes and economic contributions.

The relationships between the dimensions of the Entrepreneurial Spirit Index (ESI), attitude toward entrepreneurship, and entrepreneurial intention are illustrated in Figure 1.



**Figure 1** Conceptual Framework

## FRAMEWORK OF ENTREPRENEURIAL SPIRIT INDEX

This study focuses on the conceptual development of the Entrepreneurial Spirit Index (ESI) as a formative second-order construct. The proposed framework is based on an extensive review of existing literature, synthesizing prior research to define the dimensions of ESI and its theoretical foundations.

### Conceptual Framework

The Entrepreneurial Spirit Index (ESI) is conceptualized as a multidimensional construct comprising five key dimensions: risk propensity, opportunity recognition, innovation attitude, entrepreneurial knowledge, and motivation. These dimensions capture various aspects of entrepreneurial potential and serve as the foundation for the proposed measurement tool.

The Entrepreneurial Spirit Index (ESI) is a formative second-order construct consisting of five first-order dimensions, each capturing a critical aspect of entrepreneurial potential.

- Risk Propensity (RP) is assessed through four items that evaluate an individual's willingness to engage in uncertain ventures and accept financial uncertainty.
- Opportunity Recognition (OR) is Measured by four items examining the ability to identify market gaps, improve existing products, and recognize business opportunities.

- Innovation Attitude (IA) is assessed through four items that capture openness to creative problem-solving, novel approaches, and unconventional business strategies.
- Entrepreneurial Knowledge (EK) is assessed through four items that evaluate technical and managerial expertise, including finance, marketing, and operations knowledge.
- Motivation (MO) is assessed through four items that reflect intrinsic entrepreneurial drive: the desire for autonomy, financial independence, and societal impact.

In addition to the dimensions of ESI, attitudes toward entrepreneurship and entrepreneurial intention are treated as reflective constructs. These constructs are measured using validated scales from prior research, ensuring high reliability. Attitude toward entrepreneurship captures participants' perceptions of entrepreneurship as a desirable and viable career path, while entrepreneurial intention reflects their commitment to pursuing entrepreneurial activities.

The details of these constructs and their corresponding measurement items are outlined in Table 1 below.

**Table 1** Dimensions and Measurement Items for the Entrepreneurial Spirit Index (ESI)

Construct	Measurement items
Risk Propensity (RP)	I am willing to take risks in pursuing new business opportunities (RP1)
	I feel comfortable making business decisions even when outcomes are uncertain (RP2)
	I believe that taking risks is essential for business success (RP3)
	I often accept financial uncertainty in ventures with potential (RP4)
Opportunity Recognition (OR)	I can identify unmet needs in the market (OR1)
	I often look for ways to improve existing products or services (OR2)
	I can quickly recognize potential business opportunities (OR3)
	I am always looking for new business ideas (OR4)
Innovation Attitude (IA)	I enjoy experimenting with new ideas in business (IA1)
	I believe that innovation is crucial for business growth (IA2)
	I look for creative ways to solve problems (IA3)
	I am open to exploring unconventional ways of doing business (IA4)
Entrepreneurial Knowledge (EK)	I have a good understanding of how to start a business (EK1)
	I am familiar with the critical skills needed to run a business (EK2)
	I possess the financial knowledge necessary for entrepreneurship (EK3)
	I understand the processes involved in managing a business (EK4)
Motivation (MO)	I am motivated to be my boss (MO1)
	Financial independence is my primary motivation (MO2)
	I want to create a business that positively impacts society (MO3)
	I am passionate about building something of my own (MO4)
Attitude Toward Entrepreneurship (ATT)	I have a positive outlook on pursuing entrepreneurship as a career.
	I believe starting my own business would be personally rewarding.
	I think entrepreneurship is beneficial for society and the economy.
	I feel capable of succeeding as an entrepreneur.
Entrepreneurial Intention (EI)	I intend to start my own business in the next few years (EI1)
	I am seriously considering starting my own business (EI2)
	I am committed to creating a business shortly (EI3)
	I am planning to enter entrepreneurship (EI4)

Note: Entrepreneurial Spirit Index (ESI) is the second higher order of 5 dimensions, which are Risk Propensity (RP), Opportunity Recognition (OR), Innovation Attitude (IA), Entrepreneurial Knowledge (EK), Motivation (MO)

## DISCUSSION

The Entrepreneurial Spirit Index (ESI) introduced in this study provides a novel framework for understanding the multidimensional nature of entrepreneurial potential. By conceptualizing ESI as a formative second-order construct, this framework integrates five critical dimensions—risk propensity, opportunity recognition, innovation attitude, entrepreneurial knowledge, and motivation. These dimensions collectively encapsulate the traits and skills that drive entrepreneurial intentions. This conceptualization addresses a significant gap in entrepreneurship research, offering a comprehensive approach to assess entrepreneurial potential and its influence on entrepreneurial attitudes and intentions. A key strength of the ESI framework lies in its alignment with the Theory of Planned Behavior (TPB). Including attitude toward entrepreneurship as a mediating variable bridges the gap between entrepreneurial traits and intentions, providing insights into how entrepreneurial spirit translates into actionable behaviors. The hypothesized relationships suggest that while entrepreneurial spirit fosters a readiness for entrepreneurial activities, the positive attitude toward entrepreneurship solidifies this readiness into intention. This nuanced understanding reinforces the importance of promoting entrepreneurial attitudes as essential in nurturing entrepreneurial outcomes.

The findings are expected to contribute significantly to both theory and practice. Theoretically, the ESI framework advances the field by integrating diverse but interconnected dimensions into a unified construct. It challenges traditional approaches that isolate entrepreneurial traits, emphasizing these traits' interplay in shaping entrepreneurial behaviors. Practically, the framework offers actionable insights for educators, policymakers, and practitioners. For instance, entrepreneurship education programs can leverage the ESI dimensions to design targeted interventions that build risk management skills, foster innovative thinking, and enhance entrepreneurial motivation. Similarly, policymakers can develop initiatives that address systemic barriers, such as limited access to resources or societal support, to cultivate entrepreneurial potential in diverse populations.

## CONCLUSION

This study introduces the Entrepreneurial Spirit Index (ESI) as a formative second-order construct, offering a comprehensive framework to assess entrepreneurial potential. The ESI captures the multifaceted nature of entrepreneurial spirit by integrating five dimensions—risk propensity, opportunity recognition, innovation attitude, entrepreneurial knowledge, and motivation. Anchored in the Theory of Planned Behavior, the framework emphasizes the mediating role of attitude toward entrepreneurship in translating entrepreneurial traits into intentions. The proposed methodology, involving a quantitative survey and Partial Least Squares Structural Equation Modeling (PLS-SEM), aims to validate the ESI and its relationships with entrepreneurial outcomes. This approach provides a rigorous foundation for advancing theoretical understanding and practical applications of entrepreneurial spirit. The findings are expected to inform the design of entrepreneurship education programs and policy initiatives, addressing critical gaps in fostering entrepreneurial potential.

Despite its strengths, the proposed framework has limitations. The reliance on self-reported data in future validation studies may introduce biases, such as social desirability bias, which could affect the accuracy of responses. Additionally, while the study targets a diverse sample within Thailand, cultural and contextual differences may limit the generalizability of the findings to other regions. Future research should consider cross-cultural validations of the ESI framework to ensure its robustness across different contexts. Future research should focus on

empirical validation of the ESI framework, exploring its applicability across diverse cultural and economic contexts. By doing so, the ESI can be a robust tool for assessing and enhancing entrepreneurial potential, contributing to the broader goals of economic growth, innovation, and societal progress. Through continued refinement and validation, this framework has the potential to transform our understanding of what drives entrepreneurial success and how to nurture it effectively.

## ACKNOWLEDGEMENTS

This research project was funded by Thailand Science Research and Innovation(TSRI) for the fiscal year 2025, project number 4779494.

## REFERENCES

- Acs, Z. J., & Audretsch, D. B. (2010). *Handbook of entrepreneurship research: An interdisciplinary survey and introduction* (2nd ed.). Springer.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Amorós, J. E., Bosma, N., & Levie, J. (2013). Ten years of global entrepreneurship monitor: Accomplishments and prospects. *International Journal of Entrepreneurial Venturing*, 5(2), 120–152. <https://doi.org/10.1504/IJEV.2013.055291>
- Becker, J. M., Klein, K., & Wetzels, M. (2012). Hierarchical latent variable models in PLS-SEM: Guidelines for using reflective-formative type models. *Long Range Planning*, 45(5–6), 359–394. <https://doi.org/10.1016/j.lrp.2012.10.001>
- Croitoru, A. (2012). Schumpeter, J.A., 1934 (2008), *The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest and the Business Cycle*, translated from the German by Redvers Opie, New Brunswick (U.S.A) and London (U.K.): Transaction Publishers. *Journal of Comparative Research in Anthropology and Sociology*, 3(2), Winter 2012. Available at SSRN: <https://ssrn.com/abstract=4499769>
- Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227–268. [https://doi.org/10.1207/S15327965PLI1104\\_01](https://doi.org/10.1207/S15327965PLI1104_01)
- Douglas, E. J., & Shepherd, D. A. (2002). Self-employment as a career choice: Attitudes, entrepreneurial intentions, and utility maximization. *Entrepreneurial Theory and Practice*, 26(3), 81–90. <https://doi.org/10.1177/104225870202600305>
- GEM (Global Entrepreneurship Monitor). (2021). *Global entrepreneurship monitor 2020/2021 global report*. <https://www.gemconsortium.org/report/gem-20202021-global-report>
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis* (8th ed.). Cengage Learning.
- Ipsos. (2021). Entrepreneurialism alive and well in the time of the pandemic. Retrived from <https://www.ipsos.com/en/entrepreneurialism-time-pandemic>
- Liñán, F., & Chen, Y.-W. (2009). Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions. *Entrepreneurship Theory and Practice*, 33(3), 593–617. <https://doi.org/10.1111/j.1540-6520.2009.00318.x>
- Liñán, F., & Fayolle, A. (2015). A systematic literature review on entrepreneurial intentions: Citation, thematic analyses, and research agenda. *International Entrepreneurship and Management Journal*, 11(4), 907–933. <https://doi.org/10.1007/s11365-015-0356-5>
- Obschonka, M., Silbereisen, R. K., & Schmitt-Rodermund, E. (2010). Entrepreneurial intention as a developmental outcome. *Journal of Economic Psychology*, 31(5), 775–784. <https://doi.org/10.1016/j.jvb.2010.02.008>



- Shapero, A., & Sokol, L. (1982). *The social dimensions of entrepreneurship*. University of Illinois at Urbana-Champaign's Academy for Entrepreneurial Leadership Historical Research Reference in Entrepreneurship. <https://ssrn.com/abstract=1497759>
- Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review*, 25(1), 217–226. <https://doi.org/10.5465/amr.2000.2791611>
- Shepherd, D. A., & Douglas, E. J. (1997). Is management education developing or killing the entrepreneurial spirit? *Entrepreneurship Theory and Practice*, 21(3), 83–91. <https://doi.org/10.1177/104225879702100306>
- Shinnar, R. S., Hsu, D. K., & Powell, B. C. (2014). Self-efficacy, entrepreneurship, and intention: Implications for the entrepreneurial education. *Academy of Management Proceedings*, 2014(1), 13203. <https://doi.org/10.1016/j.ijme.2014.09.005>
- Shahab, Y., Chengang, Y., Arbizu, A. D., & Haider, M. J. (2019). Entrepreneurial self-efficacy and intention: Do entrepreneurial creativity and education matter? *International Journal of Entrepreneurial Behavior & Research*, 25(2), 259–280. <https://doi.org/10.1108/IJEER-12-2017-0522>
- Ucbasaran, D., Westhead, P., & Wright, M. (2008). Opportunity identification and pursuit: Does an entrepreneur's human capital matter? *Small Business Economics*, 30(2), 153–173. <https://doi.org/10.1007/s11187-006-9020-3>
- Zahra, S. A., & Wright, M. (2011). Entrepreneurship's next act. *Academy of Management Perspectives*, 25(4), 67–83. <https://doi.org/10.5465/amp.2010.0149>

**Data Availability Statement:** The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

**Conflicts of Interest:** The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

**Publisher's Note:** All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.



**Copyright:** © 2025 by the authors. This is a fully open-access article distributed under the terms of the Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0).