

Extending social cognitive career theory: a study of entrepreneurial intentions among university students in Central and Eastern Europe

Central European
Management
Journal

Julita Eleonora Wasilczuk

*Faculty of Management and Economics, Gdańsk University of Technology,
Gdańsk, Poland*

Received 1 July 2025
Revised 11 January 2026
22 March 2026
25 May 2026
Accepted 17 August 2026

Abstract

Purpose – This study aims to examine the formation of entrepreneurial intentions (EI) among university students by extending Social Cognitive Career Theory (SCCT) with Individual Entrepreneurial Orientation (IEO) and a differentiated model of perceived entrepreneurial support, and by testing this framework in the institutional and cultural context of Central and Eastern Europe (CEE).

Design/methodology/approach – Using survey data from four CEE countries, the study applies structural equation modelling to examine direct and indirect relationships between individual inputs, perceived support, entrepreneurial self-efficacy (ESE), outcome expectations, and EI.

Findings – The results indicate that IEO is the strongest predictor of EI, with both direct effects and indirect effects mediated by ESE and outcome expectations. Perceived educational and structural support do not directly affect intentions; educational support operates indirectly through self-efficacy, while relational support shows a direct influence.

Research limitations/implications – Entrepreneurship education and policy should prioritize developing IEO and self-efficacy, with universities playing a key role through experiential learning and relational support. The cross-sectional design warrants cautious interpretation and highlights the need for longitudinal research.

Originality/value – This study presents a context-sensitive perspective on SCCT showing that its mechanisms may operate selectively rather than universally in post-transition economies in CEE. The findings also point to the potential use of IEO as a proxy for personal inputs, while adopting a more differentiated model of entrepreneurial support. In this way, the study offers an exploratory extension of SCCT within this still underexamined context.

Keywords Entrepreneurial intentions, Individual entrepreneurial orientation, Social cognitive career theory, Central and Eastern European countries

Paper type Research article

Introduction

Despite many efforts to encourage the entrepreneurial spirit, especially among the youth, many university graduates are not interested in becoming entrepreneurs. Promoting entrepreneurship as a feasible option and understanding the drivers of entrepreneurial intentions (EI) is vital to supporting and encouraging those who show potential and interest in this path. This is because entrepreneurship is considered a complex process that includes entrepreneurial cognition and action. Moreover, entrepreneurship is assumed to be an intentional behavior, it is, therefore, essential to study people's EI.

Studying EI offers vital insights into creating a venture, such as identifying the precursors to starting a business and understanding their impact (Hirschi & Fischer, 2013). Understanding EI is essential for comprehending entrepreneurial behavior (Esfandiar, Sharifi-Tehrani, Pratt,



© Julita Eleonora Wasilczuk. Published in *Central European Management Journal*. Published by Emerald Publishing Limited. This article is published under the Creative Commons Attribution (CC BY 4.0) license. Anyone may reproduce, distribute, translate and create derivative works of this article (for both commercial and non-commercial purposes), subject to full attribution to the original publication and authors. The full terms of this license may be seen at <http://creativecommons.org/licences/by/4.0/>

Central European Management Journal
Emerald Publishing Limited
e-ISSN: 2658-2430
p-ISSN: 2658-0845
DOI 10.1108/CEMJ-07-2025-0179

& Altinay, 2019; Krueger, Reilly, & Carsrud, 2000) because, without intentions, there is no reason to expect actions (Ajzen, 1991; Armstrong, 2014).

Entrepreneurial intention, like entrepreneurship itself, lacks a universally accepted definition (Fayolle & Liñán, 2014). Over time, many scholars have sought to define it and have proposed models for investigating this phenomenon (Batista-Canino, Santana-Hernández, & Medina-Brito, 2024). Shapero and Sokol (1982) pioneered research in this area with their Entrepreneurial Event Model (EEM), which, though not initially intended as a theory of entrepreneurial intention, laid the groundwork for its study. Ajzen (1991) contributed significantly with his theory of planned behavior.

Despite many years of empirical research and developed theoretical models (Bird, 1988; Krueger & Carsrud, 1993; Gartner, Shaver, Gatewood, & Katz, 1994; Batista-Canino *et al.*, 2024), there is still no clarity regarding the antecedents of EI. Moreover, the primary interest of researchers studying EI has focused on countries with stable market economies (Valliere, 2017), and Asian countries (Korpysa & Waluyohadi, 2022). However, an increasing number of studies examine the situation in developing countries, relatively few reports on this topic come from Central and Eastern Europe (CEE) (Wach & Wojciechowski, 2016; Nowiński, Haddoud, Lančarič, Egerová, & Czeglédi, 2017; Głodowska & Wach, 2022). These are countries that have experienced a planned economic system in the past, which left little room for entrepreneurship.

Following the trend of investigating EI, we proposed an enriched version of the Social Cognitive Career Theory (SCCT) (Liguori, Bendickson, & McDowell, 2018) and tested it on selected Central and Eastern European countries. Through this research, we aim to make three significant contributions to the study of young people's EI.

First, this study extends SCCT to the entrepreneurial context, demonstrating its relevance beyond traditional career development research. In doing so, it introduces a novel operationalization of SCCT personal inputs in the form of Individual Entrepreneurial Orientation (IEO), encompassing innovativeness, proactiveness, and risk-taking, as well as an expanded conceptualization of environmental and background inputs through a comprehensive Perceived Entrepreneurial Support Model. The model distinguishes three complementary dimensions of perceived support: perceived educational support (PES), PSS, and perceived relational support (PRS). To the best of our knowledge, such an integrated model, simultaneously incorporating IEO as a personal input and three distinct dimensions of perceived support (educational, relational, and structural), has neither been theoretically discussed nor empirically tested to date.

Second, the study examines this comprehensive framework within the underexplored socioeconomic and cultural context of post-transition CEE, assessing whether constructs validated in other regions operate in a comparable manner in CEE countries.

Third, we proved the significance of IEO in shaping EI, both directly and indirectly through entrepreneurial self-efficacy (ESE). We also showed that PES and PSS do not play a significant role in shaping young people's EI, as previous research suggested. However, PES influences EI indirectly through ESE. We also noted the direct impact of relational support.

In the following sections, we present a CEE countries context, then a literature review related to SCCT, the Entrepreneurial Support Model, IEO, and EI. The next part is devoted to describing the research, followed by a discussion and conclusions.

Post-transition CEE countries context

EI in post-socialist economies must be interpreted in light of their specific historical and institutional context. Although institutional arrangements in CEE were largely inspired by models from established market economies, resulting in formal convergence with Western European standards, the mere presence of market institutions does not automatically translate into the internalization of pro-entrepreneurial attitudes among young people. While today's students lack direct experience of the socialist economy, intergenerational narratives continue

to shape ambivalent perceptions of entrepreneurship, emphasizing risk, instability, and informal practices. Consequently, entrepreneurial behavior in post-transition economies remains path-dependent, shaped by historically embedded formal and especially informal institutions originating from both the socialist period and the subsequent transition phase (Aidis, Estrin, & Mickiewicz, 2012; Głodowska & Wach, 2022). Despite the completion of systemic transition, Central and Eastern European countries continue to face persistent institutional instability (Anand, Aydin, Radević, & Knezović, 2025) as well as broader macroeconomic volatility (Kropiński, 2024). Heightened aversion to regulatory risk may therefore reduce the perceived predictability of entrepreneurial returns and encourage preferences for more stable career paths, despite the acknowledged role of formal institutions in economic development (Williamson & Mathers, 2011).

As a result, mechanisms explaining EI that are well established in Western contexts may not operate with the same strength or configuration in post-socialist settings. Differences in institutional quality, regulatory stability, social trust, and dominant career norms suggest that even well-grounded frameworks – such as SCCT – require empirical scrutiny in these environments. Rather than serving merely as a distinct institutional backdrop, the post-transition context actively shapes individual cognitive evaluations and motivational processes. Consequently, it alters the relative importance of specific pathways within entrepreneurial intention models, strengthening some mechanisms while attenuating others.

Against this background, Bulgaria, Latvia, Poland, and Ukraine provide a theoretically justified representation of CEE. These countries share a common legacy of centrally planned economies while differing in the timing and outcomes of their transitions. Poland, Bulgaria, and Latvia, as EU member states, operate within relatively stable regulatory frameworks, whereas Ukraine has faced heightened institutional uncertainty since 2014 following the outbreak of armed conflict in the Donbas region.

Theory and hypothesis development

To understand the factors shaping EI, researchers often adopt theories from other domains. One such example is Ajzen's theory of planned behavior – originally unrelated to entrepreneurship – and SCCT, derived from Bandura's *Social Cognitive Theory* (1986). SCCT explores how interpersonal, cognitive, external, and self-directed factors influence career behavior (Lent, Brown, & Hackett, 2002; Lent & Brown, 2006), integrating self-efficacy, outcome expectations, and goals as core constructs. Self-efficacy refers to belief in one's ability to perform tasks (Bandura, 1997), while outcome expectations reflect beliefs about the consequences of specific actions (Lent *et al.*, 2002). Together, these predict a stronger intention to act when individuals believe they can succeed and expect positive outcomes.

Beyond these core components, SCCT has been expanded to include personality traits and contextual factors as influences on EI (Liguori, Winkler, Vanevenhoven, Winkel, & James, 2020). As argued by Santos and Liguori (2020), these antecedents strongly relate to both self-efficacy and outcome expectations and may even directly shape EI.

Consequently, empirical studies have proposed diverse operationalisations of these inputs. Personal inputs have included psychological predispositions such as risk preference, locus of control (Liguori *et al.*, 2020), or general self-efficacy (Santos & Liguori, 2020). Contextual factors, in turn, are most often examined using the Entrepreneurial Support Model proposed by Turker and Selcuk (2009), which distinguishes three types of support – educational, relational, and structural – treated as separate determinants of EI. However, within many SCCT-based models, perceived support has typically been conceptualized in a limited or aggregated manner, typically focusing on educational and/or relational support, while structural support has received considerably less attention. As a result, the role of contextual factors remains insufficiently explained, with findings often contingent on the cultural and institutional settings in which studies are conducted.

Entrepreneurship research is inherently context-dependent (Welter, 2011), making cultural and institutional settings particularly salient for testing career-related theories (Shi, Yao, & Wu, 2020). Despite growing interest in SCCT-based models, empirical evidence from post-transition contexts remains limited and largely focused on overall model fit rather than on the relative strength of specific mechanisms (Licznarska & Ziemiański, 2022; Pfeifer, Šarlija, & Zekić Sušac, 2016). At the same time, scholars call for more context-sensitive extensions of SCCT that account for individual dispositions and differentiated forms of environmental support (Brown & Lent, 2017).

Building on these limitations, the present study addresses several important gaps in the SCCT-based entrepreneurship literature. First, it moves beyond fragmented conceptualizations of perceived support by incorporating the full Entrepreneurial Support Model and examining educational, relational, and structural support as distinct background inputs from a cognitive perspective. Second, it advances the SCCT framework by explicitly integrating IEO (Miller, 2011) as a key personal factor, encompassing innovation, proactivity, and risk-taking. Including IEO provides a deeper understanding of its role in entrepreneurial intention and its links to self-efficacy and outcome expectations. Together, these contributions offer a more comprehensive and context-sensitive understanding of entrepreneurial intention formation.

IEO and entrepreneurial intention

Entrepreneurial orientation (EO), introduced by Miller (1983, 2011) and expanded by Covin and Slevin (1991), comprises three dimensions: innovativeness, proactiveness, and risk-taking. Initially applied at the firm level, EO has been widely linked to business performance (Gupta & Gupta, 2015). Despite extensive research on EO at the firm level, IEO remains a relatively new area (Hassan, Anwar, Saleem, Islam, & Hussain, 2021). Although still underexplored, IEO has recently gained increasing scholarly attention as an important determinant of EI (Clark, Pidduck, Lumpkin, & Covin, 2024; Martins & Perez, 2025).

Research supports the link between IEO and entrepreneurial success (Bolton, 2012). Innovative individuals show higher EI, while proactive personalities predict entrepreneurial intention across various contexts (Kumar & Shukla, 2019; Prabhu, McGuire, Drost, & Kwong, 2012; Al-Mamary & Alshallaqi, 2022). Risk-takers also display stronger EI compared to risk-averse individuals (Sánchez, 2013; Zhao, Seibert, & Hills, 2005). Ibrahim and Lucky (2014) confirmed IEO's relationship with EI among Nigerian students in Malaysia, though findings remain mixed. While some studies (Martins & Perez, 2020; Robinson & Stubberud, 2014) affirm this connection, Hassan *et al.* (2021) found no significant impact among Indian university students.

Considering IEO a critical input factor, this study examines how innovation, proactivity, and risk-taking collectively influence EI. Accordingly, the following hypothesis is proposed:

H1a. IEO has a positive direct influence on EI.

Perceived entrepreneurial support and entrepreneurial intention

SCCT highlights external factors influencing career achievement (Fayolle & Gailly, 2015), yet many contextual influences on EI remain underexplored (Nikitina, Licznarska, Ozoliņa-Ozola, & Lapina, 2023). To address this gap, our study integrates the perceived entrepreneurial support construct developed by Turker and Selcuk (2009) within SCCT. This construct categorizes key support types – educational, relational, and structural – aligning with SCCT's emphasis on environmental influences on career development. Incorporating these dimensions enhances understanding of how external support mechanisms shape self-efficacy and EI.

Educational support refers to resources provided by institutions to develop entrepreneurial skills and encourage student entrepreneurship. Universities play a key role in this by offering

courses and fostering an entrepreneurial mindset (Audretsch, Lehmann, & Warning, 2017; Kurczewska, Doryń, & Wawrzyniak, 2020; Le, Doan, & Duong, 2023). Research confirms that entrepreneurship education positively influences entrepreneurial behavior (Bernal & Liñán, 2018; Galvão, Marques, Mendes, & Azevedo, 2024; Lyons, Mac an Bháird, & Lynn, 2016). However, students' perceptions of educational support matter more than the mere availability of courses, and these perceptions appear to be heterogeneous (Amani, Ismail, Makona, Changalima, & Kazungu, 2024). Thus, the hypothesis is proposed:

H1b. PES positively influences EI.

Relational support stems from social connections providing moral and practical assistance. Emotional, financial, and informational support from family, friends, and networks significantly shape entrepreneurial ambitions (Turker & Selcuk, 2009). Family background, motivation, mentorship, and connections all influence EI (Gelaidan & Abdullateef, 2017; Renzulli, Aldrich, & Moody, 2000). Social networks offer role models and trusted advice, reinforcing this impact (Keat, Selvarajah, & Meyer, 2011; Robson & Bennett, 2000). This influence is particularly pronounced in CEE, where strong social ties historically shape career choices (Polese & Rodgers, 2011). Since subjective perceptions of support impact intention formation, we propose:

H1c. PRS positively influences EI.

Structural support includes formal resources like infrastructure, policies, and programs promoting entrepreneurship. Economic behaviors are shaped by institutional and social contexts (Welter, 2011). However, the link between structural support and EI is debated. Some studies highlight its enabling effect (Abdullah, Manan, & Khadijah, 2011; Nowiński, Haddoud, Wach, & Schaefer, 2020), while others suggest it may constrain entrepreneurship by shaping risk perceptions (Turker & Selcuk, 2009; Teixeira, Casteleiro, Rodrigues, & Guerra, 2018). Research on this relationship remains inconclusive, particularly in CEE (Pérez-Macías, Fernández-Fernández, & Vieites, 2022; Amofah, Gameli Dziwornu, Rachwał, Saladríguez, & Agyarko, 2024) and highly depends on the context (Ben-Hafaïedh *et al.*, 2024). Given that perceptions influence EI more than objective conditions, we hypothesize:

H1d. PSS positively influences EI.

Entrepreneurial self-efficacy and entrepreneurial intention

Self-efficacy, a key construct in career and entrepreneurship studies (Anton & Mansingh, 2025), refers to belief in one's ability to achieve specific outcomes (Bandura, 1986). In entrepreneurship, this belief – ESE – reflects confidence in successfully launching a business (Wilson, Kickul, & Marlino, 2007; Zhao *et al.*, 2005).

Within SCCT, self-efficacy plays a crucial role in intention formation, as individuals are unlikely to act unless they believe in their ability to succeed (Lent *et al.*, 2002). Studies confirm its link to entrepreneurial intention (Shook & Bratianu, 2010; Zięba & Golik, 2018; Wilson *et al.*, 2007; Karyaningsih, Wibowo, Saptono, & Narmaditya, 2020). Hence, the hypothesis:

H1e. ESE positively influences EI.

Entrepreneurial outcome expectations and entrepreneurial intention

Outcome expectations – the anticipated results of entrepreneurial activities – are key predictors of EI (Liguori *et al.*, 2020). SCCT posits that individuals are more likely to pursue careers if they expect desirable outcomes (Lent, Brown, & Hackett, 1994; Williams, 2010). In entrepreneurship, positive expectations such as success, fulfillment, or social impact enhance

entrepreneurial intention (Bandura, 1997; Wilson *et al.*, 2007; Saputra, Wulandari, Wijayati Wardoyo, Soeatyo, & Listiadi, 2026).

Understanding how outcome expectations shape EI is critical, yet research on this relationship remains limited (Liguori *et al.*, 2020; Santos & Liguori, 2020; Blaese, Noemi, & Brigitte, 2021). Thus, the hypothesis is proposed:

H1f. Entrepreneurial outcome expectations positively influence EI.

The mediating role of entrepreneurial self-efficacy and entrepreneurial outcome expectations

Beyond the direct effects of personal and contextual factors emphasized by SCCT, more complex models incorporating mediation should be explored (Fitzsimmons & Douglas, 2011). SCCT highlights the importance of both direct influences and mediating mechanisms (Lent *et al.*, 1994). In this view, ESE and outcome expectations may clarify how IEO and perceived support shape EI.

ESE may mediate the link between IEO and intentions. According to SCCT, self-efficacy is key in shaping career decisions (Lent *et al.*, 1994), and confidence in entrepreneurial abilities is central to forming intentions (McGee, Peterson, Mueller, & Sequeira, 2009). Bandura (1986) emphasized its role in persistence and resilience. Empirical evidence supports its mediating role in translating traits like risk-taking or experience into intentions (Zhao *et al.*, 2005).

H2a. ESE mediates the relationship between IEO and EI.

SCCT also posits that self-efficacy mediates the impact of perceived support – educational, relational, and structural – on EI (Lent & Brown, 2006). Research confirms that support boosts self-efficacy, which in turn fosters intentions (Bandura, 1986; Zhao *et al.*, 2005; Liu, Gorgievski, Qi, & Paas, 2022; Gonzalez-Tamayo, Olarewaju, Bonomo-Odizzio, & Krauss-Delorme, 2024; Hoang, Le, Tran, & Du, 2020). For example, Nowiński *et al.* (2019), Aka and Enagogo (2025) and Yousaf, Ali, Ahmed, Usman, and Sameer (2021) found that entrepreneurial education enhances intentions via self-efficacy. Support from education, networks, and institutions also plays a reinforcing role (Kolvereid & Moen, 1997; Autio, Keeley, Klofsten, Parker, & Hay, 2001; Davidsson & Honig, 2003; Yesmin *et al.*, 2024). Boyd and Vozikis (1994), as well as Bellò, Mattana, and Loi (2018), showed that role models and family support further strengthen self-efficacy and intentions.

These findings support the hypothesis that self-efficacy mediates the relationship between perceived support and EI, integrating personal and contextual variables within a unified framework.

H2b. ESE mediates the relationship between PES and EI.

H2c. ESE mediates the relationship between PRS and EI.

H2d. ESE mediates the relationship between PSS and EI.

Beyond ESE, entrepreneurial outcome expectations (EOE) represent a key cognitive mechanism linking personal characteristics with EI (Lent *et al.*, 2002). In entrepreneurship, EOE reflect anticipated rewards such as autonomy and social recognition (Lanero, Vázquez, & Aza, 2016). Prior research shows that EOE mediates the relationship between self-efficacy and EI (Santos & Liguori, 2020), suggesting that individuals with higher entrepreneurial orientation are more likely to anticipate positive outcomes, thereby strengthening their EI (Foo, Uy, & Baron, 2009; Schlaegel & Koenig, 2014). This leads to the following hypothesis:

H3a. Entrepreneurial outcome expectations mediate the relationship between IEO and EI.

Prior research suggests that models incorporating mediation mechanisms provide a better fit than those considering only direct effects (Sheu *et al.*, 2010). While studies have primarily focused on self-efficacy as a mediator between contextual factors and intentions (Lent, Lopez, Lopez, & Sheu, 2008), the role of outcome expectations remains underexplored. However, SCCT posits that support and barriers – conceptualized as process expectations – are directly linked to EOE (Lent & Brown, 2006).

Building on SCCT's emphasis on personal cognitive factors and contextual support in shaping entrepreneurial behavior, this study explores how positive outcome expectations strengthen the link between perceived support and EI.

Educational support: Peterman and Kennedy (2003) found that exposure to entrepreneurship education enhances students' perceptions of their entrepreneurial skills and intentions by shaping their outcome expectations; however, research among Vietnamese students does not support this mediating relation (Duong, Tran, & St-Jean, 2024).

Relational support: Encouragement from family and mentors improves individuals' perceptions of entrepreneurial success, thereby influencing intentions (Hieu & Loan, 2022; Santos & Liguori, 2020), as well as providing emotional encouragement (Haque, Kour, & Mahin, 2025).

Structural support: Favorable socio-economic and policy environments foster entrepreneurial activity by enhancing individuals' outcome expectations and, consequently, their EI (Acs, Autio, & Szerb, 2014).

This integrated approach highlights the significance of entrepreneurial outcome expectations in bridging the relationship between personal and contextual factors and entrepreneurial intention:

- H3b. Entrepreneurial outcome expectations mediate the relationship between PES and EI.
- H3c. Entrepreneurial outcome expectations mediate the relationship between PRS and EI.
- H3d. Entrepreneurial outcome expectations mediate the relationship between PSS and EI.

The sequential mediation role of entrepreneurial self-efficacy and entrepreneurial outcome expectations

Research into EI using structural equation modelling (SEM) enables the analysis of complex relationships between constructs, including sequential mediating roles. This approach is also applied in research based on the SCCT and has been increasingly employed in recent empirical studies (Uansa-ard, Wannamakok, 2022; Pham, Phan, Le, & Bui Ngoc Tuan, 2024). It posits the existence of multiple interrelated pathways between personal factors, contextual factors and cognitive mechanisms shaping an individual's career decisions and intentions. The literature on this subject has devoted particular attention to analyzing sequential mediations between entrepreneurial education and EI. In this context, the mediating effects of ESE and EOE have been tested, amongst other things (Duong, Nguyen *et al.*, 2024), as well as the mediating effects of ESE and entrepreneurial attitude (Yousaf *et al.*, 2021). The results of these studies indicate the relevance of incorporating more complex mediating mechanisms into models explaining the formation of EI. In line with this trend, we also explore the potential role of sequential mediation, in which ESE and EOE are treated as sequential mediators in the relationship between IEO, perceived support, and EI.

Given the limited and inconsistent empirical evidence regarding these relationships, the following hypotheses are proposed strictly in an exploratory manner, without assuming their generalizability across contexts:

- H4a. ESE and entrepreneurial outcome expectations sequentially mediate the relationship between IEO and EI.

- H4b. ESE and entrepreneurial outcome expectations sequentially mediate the relationship between PES and EI.
- H4c. ESE and entrepreneurial outcome expectations sequentially mediate the relationship between PRS and EI.
- H4d. ESE and entrepreneurial outcome expectations sequentially mediate the relationship between PSS and EI.

Accordingly, the model was specified a priori based on theoretical assumptions and analyzed in its full form. This exploratory extension of the SCCT framework highlights the complex interplay between personal characteristics, contextual support, and entrepreneurial cognition, offering a more nuanced understanding of how EI are shaped.

As the relationships postulated above may appear complex or unclear, the authors decided to present them graphically (Figure 1) as well as in the table (Table 1).

Research methodology and measurement instruments

The study employed a quantitative research design, using a survey-based methodology to generate reliable, replicable data. A structured questionnaire was designed to empirically verify the developed hypotheses. Responses were collected using a five-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree), with some questions also providing a simple yes/no option.

SEM was employed to test the hypothesized relationships among entrepreneurial orientation, self-efficacy, perceived support, outcome expectations, and EI. Given that these constructs are latent and interrelated, SEM provides an appropriate analytical framework that allows for the simultaneous estimation of measurement and structural components, while accounting for measurement error. This approach enables a rigorous examination of both direct and indirect effects proposed by the SCCT model of entrepreneurial intention formation.

The questionnaire was designed in accordance with the requirements of SEM, ensuring that each construct was measured using multi-item scales. Its development was informed by

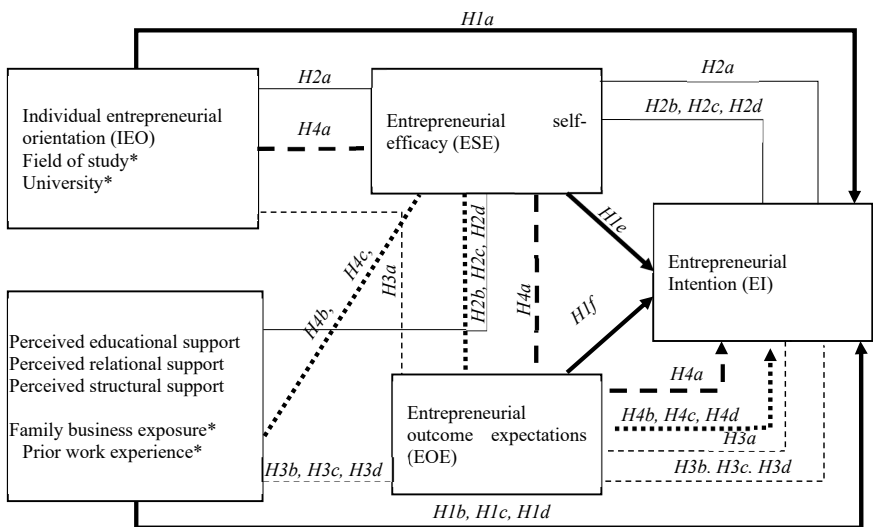


Figure 1. Hypotheses and sub-hypotheses. Note: The sub-hypotheses of **H1** marked with thick, strait lines, **H2** (moderated ESE effect) with strait lines, **H3** (moderated EOE effect) with thin, dashed line and **H4** (sequence moderated effect) thick, dashed line. Source: Author’s elaboration

Table 1. A summary of the research objectives and hypotheses

Corresponding hypotheses	Corresponding abbreviations
<i>H1: Individual entrepreneurial orientation and perceived support, along with self-efficacy and outcome expectations, have a direct and positive impact on students' entrepreneurial intentions</i>	
H1a: Individual entrepreneurial orientation has a positive direct influence on entrepreneurial intentions	IEO → EI
H1b: Perceived educational support has a positive direct influence entrepreneurial intentions	PES → EI
H1c: Perceived relational support has a positive direct influence entrepreneurial intentions	PRS → EI
H1d: Perceived structural support has a positive direct influence entrepreneurial intentions	PSS → EI
H1e: Entrepreneurial self-efficacy has a direct positive influence on entrepreneurial intentions	ESE → EI
H1f: Entrepreneurial outcome expectations has a direct positive influence on entrepreneurial intentions	EOE → EI
<i>H2: Entrepreneurial self-efficacy mediates the impact of individual and background factors on entrepreneurial intentions</i>	
H2a: Entrepreneurial self-efficacy mediates the relationship between individual entrepreneurial orientation and entrepreneurial intentions	IEO → ESE → EI
H2b: Entrepreneurial self-efficacy mediates the relationship between perceived educational support and entrepreneurial intentions	PES → ESE → EI
H2c: Entrepreneurial self-efficacy mediates the relationship between perceived relational support and entrepreneurial intentions	PRS → ESE → EI
H2d: Entrepreneurial self-efficacy mediates the relationship between perceived structural support and entrepreneurial intentions	PSS → ESE → EI
<i>H3: Entrepreneurial outcome expectations mediates the impact of individual and background factors on entrepreneurial intentions</i>	
H3a: Entrepreneurial outcome expectations mediates the relationship between individual entrepreneurial orientation and entrepreneurial intentions	IEO → EOE → EI
H3b: Entrepreneurial outcome expectations mediates the relationship between perceived educational support and entrepreneurial intentions	PES → EOE → EI
H3c: Entrepreneurial outcome expectations mediates the relationship between perceived relational support and entrepreneurial intentions	PRS → EOE → EI
H3d: Entrepreneurial outcome expectations mediates the relationship between perceived structural support and entrepreneurial intentions	PSS → EOE → EI
<i>H4: Entrepreneurial self-efficacy and entrepreneurial outcome expectations have a sequential mediation role in the relationship between individual and background factors and entrepreneurial intentions</i>	
H4a: Entrepreneurial self-efficacy and entrepreneurial outcome expectations have a sequential mediation role in the relationship between individual entrepreneurial orientation and entrepreneurial intentions	IEO → ESE → EOE → EI
H4b: Entrepreneurial self-efficacy and entrepreneurial outcome expectations have a sequential mediation in the relationship between perceived educational support and entrepreneurial intentions	PES → ESE → EOE → EI
H4c: Entrepreneurial self-efficacy and entrepreneurial outcome expectations have a sequential mediation in the relationship between perceived relational support and entrepreneurial intentions	PRS → ESE → EOE → EI
H4d: Entrepreneurial self-efficacy and entrepreneurial outcome expectations have a sequential mediation in the relationship between perceived structural support and entrepreneurial intentions	PSS → ESE → EOE → EI
Source(s): Author's elaboration	

previously validated instruments (Table 2), which were adapted to the specific context of Central and Eastern European countries.

Table 2. Numbers of items of latent variables in the questionnaire

Construct	Sub-construct	Number of items
Entrepreneurial intentions (EI), (Linen and Chen (2009)	–	5
Individual entrepreneurial orientation (IEO), (Bolton & Lane, 2012; Koe, 2016)	Innovativeness	5
	Proactiveness	7
	Risk-taking	5
Perceived entrepreneurial support (Turker & Selcuk, 2009)	Perceived educational support (PES)	3
	Perceived relational support (PRS)	2
	Perceived structural support (PSS)	4
Entrepreneurial self-efficacy (ESE), (Karlsson & Moberg, 2013)	–	10
Entrepreneurial outcome expectations (EOE), (Krueger <i>et al.</i> , 2000; Lanero <i>et al.</i> , 2016)	–	9
Total		50
Source(s): Author’s elaboration		

These adaptations were pilot-tested with 438 students to verify their appropriateness and to ensure that the questionnaire would accurately capture the data needed for SEM analysis. Construct validity and reliability were confirmed through confirmatory factor analysis (CFA), with factor loadings exceeding 0.6, AVE values above 0.5, and Cronbach’s alpha coefficients above 0.7 for all constructs. The survey was translated into Bulgarian, Latvian, Polish, and Ukrainian using a standard back-translation procedure to ensure equivalence with the original English items.

Based on SCCT, several factors have been identified as potential influencers of EI. Accordingly, the study incorporated the following control variables:

- (1) Country of Origin (Sheu & Bordon, 2017) – Recognized as an important factor influencing career intentions.
- (2) Business Exposure (Carr & Sequeira, 2007) – Prior exposure to business environments may shape entrepreneurial aspirations.
- (3) Work Experience (Liñán & Chen, 2009) – Practical experience in the workforce can impact EI.
- (4) Although age is theoretically relevant, it was not included as a control variable due to minimal variation among the study population.

Additionally, since the study involved four technical universities, each of which has a business and economics department (considered less technical), the field of study was incorporated as an additional control variable. It was categorized into:

- (1) Science, Technology, Engineering, and Mathematics (STEM) fields
- (2) Non-STEM fields (Business, Economics, and other disciplines)

The questionnaire was distributed among all first-year undergraduate students from the above-mentioned faculties at four universities in 2019. In total, 2,269 questionnaires were returned, yielding a response rate of 35%. After removing inconsistent responses, outliers, questionnaires with flat response patterns (SD = 0), and those with more than 10% missing data, a final sample of 2,136 valid questionnaires was retained for analysis.

The characteristics of the sample are presented at Table 3.

Table 3. Sample characteristics

Demographic variable	Frequency (<i>n</i> = 2,136)	Percentage
<i>University</i>		
GUT	978	45.8
LPNU	661	30.9
RTU	328	15.4
TUS	169	7.9
<i>Field of study</i>		
STEM	1,685	78.9
NON-STEM	451	21.1
<i>Gender^a</i>		
Female	995	46.6
Male	1,130	52.9
<i>Business exposure^a</i>		
No	1,427	66.8
Yes	703	32.9
<i>Work experience</i>		
No	531	24.9
Yes	1,605	75.1

Note(s) ^a Not all students answered this question
Source(s): Author's elaboration

Results

After data preparation and demographic analysis, a combined exploratory factor analysis and CFA approach was used to test the construct validity of the study ([Supplementary_material_appendix_1](#)).

Hypothesis testing and mediation analysis

Testing hypothesis H1. The results of testing [hypothesis 1](#) with its sub-hypotheses are summarised in [Table 4](#), together with their interpretation.

In order to determine the most influential factors, beta (a standardised estimate) was used. IEO $\beta = 0.431$, ESE beliefs $\beta = 0.224$, entrepreneurial outcome expectations $\beta = 0.071$ and PRS $\beta = 0.056$ were found to be the most influential factors on students' EI, respectively. This suggests that individuals with higher confidence in their entrepreneurial abilities are more likely to have strong intentions to engage in entrepreneurship.

Testing hypothesis H2. To test the mediation effect, bootstrapping is used in this study. [Table 5](#) shows the mediation effects of ESE from [hypothesis 2](#).

The analysis confirms that both the direct and indirect paths from IEO to EI are statistically significant ($b = 0.640$, $p = 0.001$). This indicates partial mediation, as the ESE transmits part of the effect from IEO to EI, while IEO still maintains a significant direct effect on EI ([Table 5](#)).

The effect of PES on EI is fully mediated by ESE, because the direct effect is not significant. The effect is small ($\beta = 0.019$), but its statistical significance ($p = 0.004$) indicates that PES has a positive effect on ESE, which in turn increases EI. This means that educational support can strengthen people's beliefs about their entrepreneurial abilities, which is beneficial for developing EI.

Testing hypothesis H3. The mediation effect of entrepreneurial outcome expectations for sub-hypotheses ([H3a](#), [H3b](#), [H3c](#), [H3d](#)) is shown in [Table 6](#).

Table 4. Testing of hypothesis H1

Tag	Hypothesis	β -value	t-value	p-value	Sig	Result	Interpretation
H1a	IEO → EI	0.431	9.798	0.000	*	H1a supported	Entrepreneurial intentions are significantly impacted by individual entrepreneurial orientation
H1b	PES→EI	0.040	1.614	0.130	*	H1b rejected	Entrepreneurial intentions are not significantly impacted by perceived educational support
H1c	PRS→EI	0.056	2.124	0.034	*	H1c supported	Entrepreneurial intentions are significantly impacted by perceived relational support
H1d	PSS→EI	0.024	1.054	0.292	*	H1d rejected	Entrepreneurial intentions are not significantly impacted by perceived structural support
H1e	ESE → EI	0.224	6.020	0.000	*	H1e supported	Entrepreneurial intentions are significantly impacted by entrepreneurial self-efficacy
H1f	EOE → EI	0.071	2.744	0.006	*	H1f supported	Entrepreneurial intentions are significantly impacted by entrepreneurial outcome expectations

Note(s): * = If p-value <0.05; t-value>1.96, H accepted at a significance level of 0.05

Source(s): Author’s elaboration

The mediation analysis confirms that EOE partially mediates the relationship between IEO and EI ($\beta = 0.030, p = 0.006$), supporting H3a. However, the mediation analysis for PES → EOE → EI is not statistically significant, leading to the rejection of this hypothesis. Further, findings indicate that individuals with higher levels of PRS tend to report greater EOE, which subsequently increases their EI. This supports H3c, confirming that PRS indirectly enhances EI through EOE. Conversely, the mediation analysis for PSS → EOE → EI is not statistically significant ($p = 0.116$), resulting in the rejection of H3d.

Testing hypothesis H4. The final mediation analysis explores IEO, PES, PRS, and PSS, using both ESE and EOE as serial mediators (Table 7). However, results indicate statistically insignificant beta coefficients across all hypothesized pathways, with p-values exceeding 0.05. Thus, H4 is rejected, suggesting that ESE and EOE do not significantly mediate the relationships between the antecedents and EI. The lack of support for the sequential mediation hypotheses does not invalidate the inclusion of these paths in the model but rather indicates that such mechanisms may be context-dependent and weaker than theoretically anticipated.

Discussion

To interpret the empirical findings, it is necessary to consider both the theoretical assumptions of SCCT and the specific institutional conditions characterizing post-transition economies. The findings indicate that SCCT retains partial explanatory validity in Central and Eastern European countries; however, its classical sequential logic requires contextualisation. While the key SCCT constructs, ESE and entrepreneurial outcome expectations (EOE), remain significant predictors of EI, they do not form a stable, linear chain, suggesting limits to the universal applicability of SCCT assumptions in post-transition contexts (Welter, 2011; Carsrud & Brännback, 2011).

IEO emerged as the strongest determinant of EI, contrasting with studies identifying ESE as the primary driver of EI (Pérez-Macías et al., 2022) and with claims questioning the relevance of IEO for intentions (Hassan et al., 2021). Instead, the results align with prior evidence

Table 5. Testing of hypothesis [H2](#)

Tag	Hyp	X	M	Y	Direct effect	Indirect β	95% CI	Total effect	Result	Mediation status
H2a	IEO-EI mediated by ESE	IEO	ESE	EI	0.431*	0.151*	0.110–0.192	0.610*	H21a supported	Partial mediation
H2b	PES-EI mediated by ESE	PES	ESE	EI	0.040n.s	0.019*	0.008–0.030	0.054*	H2b supported	Full mediation
H2c	PRS-EI mediated by ESE	PRS	ESE	EI	0.056*	–0.004n.s	–0.013–0.005	0.068*	H2c not supported	No mediation
H2d	PSS-EI mediated by ESE	PSS	ESE	EI	0.024n.s	0.006n.s	–0.003–0.015	0.025n.s	H2d not supported	No mediation

Note(s): X = Predictor variable; M = Meditational variable; Y=Outcome variable; * p-value<0.05

Source(s): Author's elaboration

Table 6. Testing of hypothesis [H3](#)

Tag	Hypothesis	X	M	Y	Direct effect	Indirect β	95% CI	Total effect	Result	Mediation status
H3a	IEO-EI mediated by EOE	IEO	EOE	EI	0.431*	0.030*	0.012–0.048	0.610*	H3a supported	Partial mediation
H3b	PES-EI mediated by EOE	PES	EOE	EI	0.040n.s	–0.005*	–0.009–0.000	0.054*	H3b not supported	No mediation
H3c	PRS-EI mediated by EOE	PRS	EOE	EI	0.056*	0.016*	0.006–0.026	0.068*	H3c supported	Partial mediation
H3d	PSS-EI mediated by EOE	PSS	EOE	EI	0.024n.s	–0.004n.s	–0.009–0.000	0.025n.s	H3d not supported	No mediation

Note(s): X = Predictor variable; M = Meditational variable; Y=Outcome variable; * p-value<0.05

Source(s): Author's elaboration

Table 7. Testing of hypothesis [H4](#)

Tag	Hypothesis	X	M	Y	Direct effect	Indirect β	95% CI	Total effect	Result	Mediation status
H4a	IEO-EI mediated by ESE and EOE	IEO	ESE,EOE	EI	0.431*	-0.002 ^{n.s}	-0.006-0.001	0.610*	H4a not supported	No chain mediation
H4b	PES-EI mediated by ESE and EOE	PES	ESE,EOE	EI	0.040 ^{n.s}	0.000 ^{n.s}	-0.001-0.000	0.054*	H4b not supported	No chain mediation
H4c	PRS-EI mediated by ESE and EOE	PRS	ESE,EOE	EI	0.056*	0.000 ^{n.s}	0.000-0.000	0.068*	H4c not supported	No chain mediation
H4d	PSS-EI mediated by ESE and EOE	PSS	ESE,EOE	EI	0.024 ^{n.s}	0.000 ^{n.s}	0.000-0.000	0.025n.s	H4b not supported	No chain mediation

Note(s): X = Predictor variable; M = Meditational variable; Y=Outcome variable; * p -value<0.05

Source(s): Author's elaboration

demonstrating that innovativeness, proactiveness, and risk-taking significantly shape EI (Koe, 2016; Sahoo & Panda, 2019) and support calls for greater recognition of IEO as a core personal input in individual-level entrepreneurship research (Clark *et al.*, 2024).

IEO also exerted significant indirect effects on EI through both ESE and EOE, consistent with SCCT's proposition that personal traits influence career intentions via cognitive mechanisms (Lent & Brown, 2019; Lent *et al.*, 2022) and with prior entrepreneurship research (Hsu *et al.*, 2019; Newman, Schwarz, Nielsen, & Cohen, 2019). However, the absence of sequential mediation indicates that higher self-efficacy does not automatically translate into more positive outcome expectations, reflecting heightened institutional uncertainty and skepticism regarding entrepreneurial returns (Hsu *et al.*, 2019), which is clearly evident in CEE countries.

ESE remained a strong direct and indirect predictor of EI, supporting extensive prior evidence on its central role in entrepreneurial decision-making (Bandura, 1986; Zhao *et al.*, 2005; Cassar & Friedman, 2009; Anton & Mansingh, 2025). Nevertheless, its secondary position relative to IEO suggests that dispositional entrepreneurial orientation may play a more prominent role than cognitive self-beliefs in shaping EI in the studied context.

The effects of perceived entrepreneurial support were heterogeneous. PES did not exert a direct effect on EI, in line with Maheshwari and Kha (2022), Duong, Tran, *et al.* (2024) but contrary to the canonical entrepreneurial support model proposed by Turker and Selcuk (2009). Recent studies likewise report mixed effects of university support, depending on whether it is limited to knowledge transmission or extends to fostering an entrepreneurial culture (Sharma & Sahoo, 2025). Although PES did not directly translate into intentions, it indirectly influenced EI through ESE, confirming SCCT's assumption that contextual inputs primarily operate by strengthening perceived competence (Nabi, Liñán, Fayolle, Krueger, & Walmsley, 2017). The lack of mediation via EOE suggests that educational support alone may be insufficient to generate credible expectations of entrepreneurial rewards under conditions of institutional instability.

In contrast, PRS exerted a significant direct effect on EI and was mediated by EOE, underscoring the importance of family and social networks in CEE countries, where informal ties provide not only resources but also interpretive frameworks for evaluating the desirability and legitimacy of entrepreneurship (Aidis, Estrin, & Mickiewicz, 2008; Welter, 2011; Haque *et al.*, 2025).

PSS was statistically insignificant, aligning with prior findings (Yurtkoru, Kuşcu, & Doğanay, 2014; Ambad & Damit, 2016) and reinforcing evidence that formal support mechanisms in CEE contexts are often perceived as ineffective or inaccessible (Estrin & Mickiewicz, 2011; Rajh *et al.*, 2018). Under such conditions, structural support fails to activate either self-efficacy or positive outcome expectations.

Finally, although entrepreneurial outcome expectations were statistically significant, their effect on EI was weaker than anticipated, echoing mixed prior findings (Lanero *et al.*, 2016; Belchior & Lyons, 2021; Romero-Galisteo *et al.*, 2022). While EOE theoretically shape cost-benefit evaluations (Carsrud & Brännback, 2011; Estay, Durrieu, & Akhter, 2013), their motivational power diminishes when expected returns are perceived as uncertain or disproportionate to risk (Urbano, Orozco, & Turro, 2024). This pattern appears particularly salient in CEE countries, where heightened risk aversion and limited institutional trust persist due to ongoing institutional volatility (Kropiński, 2024; Anand *et al.*, 2025).

Research contributions

This study contributes to the entrepreneurship and SCCT literature in three ways. First, it tests the applicability of the SCCT framework in the context of post-transition economies, thereby addressing a setting that remains underexplored in prior research. While SCCT has been validated in stable, developed environments, our findings demonstrate that its assumed linear and universal mechanisms do not fully capture EI in Central and Eastern European (CEE)

countries. The selective support for the hypothesized relationships delineates the empirical boundaries of the model in this context. It also highlights the need for more flexible, context-sensitive approaches that account for institutional uncertainty, historical legacies, and heterogeneous perceptions of entrepreneurial risk and rewards.

Second, the study builds on the SCCT framework by incorporating IEO as a personal input, thereby operationalizing individual dispositions toward entrepreneurship beyond the traditionally examined demographic factors – a dimension rarely considered in SCCT-based intention models. By demonstrating the significant impact of IEO on EI, both directly and indirectly, the study provides additional insight into the role of individual dispositions in shaping entrepreneurial motivation.

Third, the study incorporates a comprehensive Entrepreneurial Support Model, which captures educational, relational, and structural support. This offers a more integrated perspective compared to prior research, which has typically focused on isolated forms of support, most often limited to one, mainly educational contexts.

Practical implications

The findings underline the central role of IEO and ESE in shaping EI, suggesting that both educators and policymakers should focus on strengthening entrepreneurial attributes alongside individuals' confidence in their own capabilities. In line with SCCT, individuals are more likely to pursue career paths in which they perceive themselves as competent, making self-efficacy a key leverage point for entrepreneurship-related interventions. Educational programs should therefore emphasize mastery experiences, coping strategies, and observational learning to enhance students' confidence (Marshall, Meek, Swab, & Markin, 2020).

Although PES does not directly translate into EI, it exerts an indirect influence through ESE. This confirms the pivotal role of universities in shaping both ESE and elements of IEO through appropriately designed courses and learning environments (Le *et al.*, 2023). Higher education institutions should move beyond predominantly knowledge-based entrepreneurship education and intentionally foster innovativeness, proactiveness, and risk-taking, as these traits constitute the key mechanisms through which education translates into EI (Ndofirepi, 2020; Shi *et al.*, 2020). Enhancing the visibility, accessibility, and experiential nature of entrepreneurial support – through incubators, live business projects, and mentorship programs – can further strengthen EI, particularly in Central and Eastern European (CEE) countries, where perceived support remains uneven.

More broadly, fostering entrepreneurial mindsets requires innovative teaching approaches that go beyond formal entrepreneurship courses (Krueger & Sussan, 2017; Hägg, 2021). Universities can optimize curricula and resources by diagnosing students' entrepreneurial orientations and designing targeted interventions, particularly for individuals with lower levels of innovativeness, proactiveness, or risk-taking (Taatila & Down, 2012; Perez, Martins, Aparicio, Lopez, & Urbano, 2026). These interventions should also be sensitive to cultural, gender, and disciplinary differences, addressing the specific needs of diverse student groups, including those in non-business and STEM fields (Maresch, Harms, Kailer, & Wimmer-Wurm, 2016; Nabi *et al.*, 2017).

Importantly, support for the development of entrepreneurial orientation and self-efficacy should begin well before higher education. Early education that emphasizes creativity, problem-solving, and project-based learning can strengthen general and creative self-efficacy (Vincent-Lancrin *et al.*, 2019), which in turn supports the long-term development of ESE (Puozzo & Audrin, 2021). Parental awareness is also crucial: child-rearing practices that promote autonomy, responsibility, and openness to challenges contribute indirectly to the formation of entrepreneurial attitudes and intentions later in life, even in families without an entrepreneurial background (Moussa & Kerkeni, 2021).

From a public policy perspective, the findings suggest that strengthening entrepreneurship in post-transition economies requires a shift away from institution-centered policies toward perception- and trust-oriented interventions. The weak impact of PSS highlights the importance of regulatory stability and predictability rather than the sheer availability of policy instruments (D'Andrea, 2023). Policies focused exclusively on financial incentives, incubators, or regulatory reforms may therefore have limited effectiveness if they are not accompanied by efforts to enhance trust, social legitimacy, and perceived accessibility of support mechanisms (Brown & Mawson, 2019; Riaz, Leitão, & Cantner, 2022).

Given the strong role of relational support identified in the model, entrepreneurship policy should actively leverage social capital and network-based mechanisms (Hernández-Carrión, Camarero-Izquierdo, & Gutiérrez-Cillán, 2020; Chowdhary *et al.*, 2025). An ecosystem-oriented approach that strengthens informal institutions – such as mentorship networks, visible role models, family business support, and community-based initiatives – may be particularly effective in the CEE context, where institutional path dependence and regulatory uncertainty persist. Finally, involving a broader range of societal actors and promoting coherent public narratives that legitimize entrepreneurial careers (Laguía & Moriano, 2021; Hudik & Dvouletý, 2025) can create more conducive conditions for transition entrepreneurial potential into sustainable entrepreneurial activity across the region.

Limitations and future research

This study has several limitations. EI may evolve over time due to factors like experience. Future research should use longitudinal designs to capture changes, surveying students at different stages of their academic and professional journeys (Belchior & Lyons, 2021; Liñán, Jaén, & Rodríguez, 2024). Cognitive processes alone do not fully explain how EI are formed, and our model does not encompass all potentially relevant factors, such as skills, resources, or opportunities. Although it incorporates a broad set of variables theoretically linked to EI, it still cannot capture the full range of influences shaping this complex phenomenon. Future research could examine IEO as a mediator or investigate additional moderators, as well as incorporate contextual, cultural, or institutional variables (Hmieleski & Baron, 2009; Liñán & Fayolle, 2015) that may further deepen our understanding of EI. These limitations should be considered when interpreting and generalizing the findings.

The data were collected in 2019, prior to the COVID-19 pandemic and the full-scale war in Ukraine, and were intended to examine relationships between constructs rather than their absolute levels under stable economic conditions. Consequently, the findings do not account for the profound and context-dependent distortions introduced by these extraordinary events, which may alter the strength and nature of the relationships and limit the model's explanatory power when applied to crisis-affected contexts.

As the study focuses on students in Bulgaria, Latvia, Poland, and Ukraine, the findings cannot be readily generalized to other contexts but provide a solid basis for future comparative research, also covering other CEE countries. Extending the analysis through cross-country comparisons would allow for a deeper examination of how cultural and institutional differences shape EI (Bogatyreva *et al.*, 1999; Mustafa, Chin, Wegner, & Nungsari, 2025). Moreover, in light of the ongoing military conflict in Ukraine and the post COVID-19 reality, it would be particularly valuable to examine how heightened perceptions of political and economic instability influence young people's entrepreneurial attitudes. This applies not only within Ukraine but also in neighbouring countries exposed to the spillover effects of this uncertainty.

Conclusion

This study demonstrates that SCCT offers valuable but incomplete explanations of entrepreneurial intention formation in post-transition economies. While ESE and outcome

expectations remain important cognitive mechanisms, their role is contingent on broader dispositional and contextual factors.

By introducing IEO as a personal input, the study shows that EI are shaped not only by perceived competence but also by proactive, innovative, and risk-oriented dispositions. The findings further reveal that contextual support mechanisms operate unevenly: relational support plays a direct motivational role, whereas educational and structural support influence intentions primarily through cognitive pathways or remain ineffective when perceived as inaccessible or unreliable.

Overall, the results indicate that the linear and universal logic often attributed to SCCT requires contextual adaptation. Entrepreneurial intention formation in post-transition settings appears to be driven by a complex interplay of individual dispositions, cognitive evaluations, and socially embedded perceptions of opportunity and risk. These insights underscore the need for more flexible, context-sensitive applications of SCCT and open avenues for future research integrating institutional uncertainty, cultural norms, and entrepreneurial identity processes. Rather than challenging the relevance of SCCT, these findings point to the need for more context-sensitive and flexible applications of the theory, where model complexity reflects theoretical completeness but empirical validation remains necessarily selective.

Acknowledgments

We would like to express our deepest gratitude to Magdalena Licznerska, a young and promising researcher who played an essential role in this study. Her intellectual input and dedication to the research process were invaluable. Sadly, Magdalena passed away before the completion of the paper. This work stands in part as a tribute to her memory, curiosity, and commitment to scientific inquiry.

Supplementary material

The supplementary material for this article can be found online.

References

- Abdullah, M. A., Manan, S. K. A., & Khadijah, S. (2011). Small and medium enterprises and their financing patterns: Evidence from Malaysia. *Journal of Economic Cooperation and Development*, 32(2), 1–18.
- Acs, Z. J., Autio, E., & Szerb, L. (2014). National systems of entrepreneurship: Measurement issues and policy implications. *Research Policy*, 43(3), 476–494. doi: [10.1016/j.respol.2013.08.016](https://doi.org/10.1016/j.respol.2013.08.016).
- Aidis, R., Estrin, S., & Mickiewicz, T. (2008). Institutions and entrepreneurship development in Russia: A comparative perspective. *Journal of Business Venturing*, 23(6), 656–672. doi: [10.1016/j.jbusvent.2008.01.005](https://doi.org/10.1016/j.jbusvent.2008.01.005).
- Aidis, R., Estrin, S., & Mickiewicz, T. M. (2012). Size matters: Entrepreneurial entry and government. *Small Business Economics*, 39(1), 119–139. doi: [10.1007/s11187-010-9299-y](https://doi.org/10.1007/s11187-010-9299-y).
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. doi: [10.1016/0749-5978\(91\)90020-t](https://doi.org/10.1016/0749-5978(91)90020-t).
- Aka, K. G., & Enagogo, C. A. (2025). University support and entrepreneurial intention: Does a dedicated entrepreneurship course matter?. *The International Journal of Management Education*, 23(3), 101273. doi: [10.1016/j.ijme.2025.101273](https://doi.org/10.1016/j.ijme.2025.101273).
- Al-Mamary, Y. H., & Alshallaqi, M. (2022). Impact of autonomy, innovativeness, risk-taking, proactiveness, and competitive aggressiveness on students' intention to start a new venture. *Journal of Innovation and Knowledge*, 7(4), 100239. doi: [10.1016/j.jik.2022.100239](https://doi.org/10.1016/j.jik.2022.100239).
- Amani, D., Ismail, I. J., Makona, A., Chagalima, I. A., & Kazungu, I. (2024). Extending the mediation role of entrepreneurial self-efficacy on enhancing students' entrepreneurial intentions: A moderated mediation model. *The International Journal of Management Education*, 22(1), 100915. doi: [10.1016/j.ijme.2023.100915](https://doi.org/10.1016/j.ijme.2023.100915).

- Ambad, S. N. A., & Damit, D. H. D. A. (2016). Determinants of entrepreneurial intention among undergraduate students in Malaysia. *Procedia Economics and Finance*, 37, 108–114. doi: [10.1016/S2212-5671\(16\)30100-9](https://doi.org/10.1016/S2212-5671(16)30100-9).
- Amofah, K., Gameli Dziwornu, M., Rachwał, T., Saladrighes, R., & Agyarko, F. F. (2024). Environmental support and entrepreneurial intentions: Exploring the mediating role of attitude and behavioural control and moderating effect of family background. *Entrepreneurial Business and Economics Review*, 12(1), 195–213. doi: [10.15678/EBER.2024.120111](https://doi.org/10.15678/EBER.2024.120111).
- Anand, A., Aydin, S., Radević, I., & Knezović, E. (2025). Entrepreneurial uncertainty in central and Eastern Europe—a synthesis and agenda. *Vezetéstudomány-Budapest Management Review*, 56(12), 5–17. doi: [10.14267/veztud.2025.12.01](https://doi.org/10.14267/veztud.2025.12.01).
- Anton, S., & Mansingh, P. (2025). Entrepreneurial self-efficacy among students: A bibliometric mapping and topic modelling approach. *Entrepreneurship Education*, 8(2), 177–203. doi: [10.1007/s41959-025-00138-9](https://doi.org/10.1007/s41959-025-00138-9).
- Armstrong, C. (2014). I meant to do that! Manipulating entrepreneurial intentions through the power of simple plans. *Journal of Small Business and Enterprise Development*, 21(4), 638–652. doi: [10.1108/jsbed-10-2011-0016](https://doi.org/10.1108/jsbed-10-2011-0016).
- Audretsch, D. B., Lehmann, E. E., & Warning, S. (2017). University spillovers and new firm location. In *Universities and the Entrepreneurial Ecosystem* (pp. 87–96). Edward Elgar Publishing. doi: [10.1016/j.respol.2005.05.009](https://doi.org/10.1016/j.respol.2005.05.009).
- Autio, E., Keeley, R. H., Klofsten, M., Parker, G. C., & Hay, M. (2001). Entrepreneurial intent among students in Scandinavia and in the USA. *Enterprise and Innovation Management Studies*, 2(2), 145–160. doi: [10.1080/14632440110094632](https://doi.org/10.1080/14632440110094632).
- Bandura, A. (1986). The explanatory and predictive scope of self-efficacy theory. *Journal of Social and Clinical Psychology*, 4(3), 359–373. doi: [10.1521/jscp.1986.4.3.359](https://doi.org/10.1521/jscp.1986.4.3.359).
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. Freeman.
- Batista-Canino, R. M., Santana-Hernández, L., & Medina-Brito, M. P. (2024). A holistic literature review on entrepreneurial intention: A scientometric approach. *Journal of Business Research*, 168, 114480. doi: [10.1016/j.jbusres.2023.114480](https://doi.org/10.1016/j.jbusres.2023.114480).
- Belchior, R. F., & Lyons, R. (2021). Explaining entrepreneurial intentions, nascent entrepreneurial behavior and new business creation with social cognitive career theory—a 5-year longitudinal analysis. *International Entrepreneurship and Management Journal*, 17(4), 1945–1972. doi: [10.1007/s11365-021-00745-7](https://doi.org/10.1007/s11365-021-00745-7).
- Bellò, B., Mattana, V., & Loi, M. (2018). The power of peers: A new look at the impact of creativity, social context and self-efficacy on entrepreneurial intentions. *International Journal of Entrepreneurial Behavior and Research*, 24(1), 214–233. doi: [10.1108/IJEBR-07-2016-0205](https://doi.org/10.1108/IJEBR-07-2016-0205).
- Ben-Hafaïedh, C., Xheneti, M., Stenholm, P., Blackburn, R., Welter, F., & Urbano, D. (2024). The interplay of context and entrepreneurship: The new frontier for contextualisation research. *Small Business Economics*, 62(2), 571–582. doi: [10.1007/s11187-023-00770-6](https://doi.org/10.1007/s11187-023-00770-6).
- Bernal, A., & Linen, F. (2018). The personal dimension of an entrepreneurial competence: An approach from the Spanish basic education context. In *A research agenda for entrepreneurship education* (pp. 262–280). Edward Elgar Publishing. doi: [10.4337/9781786432919.00020](https://doi.org/10.4337/9781786432919.00020).
- Bird, B. (1988). Implementing entrepreneurial ideas: The case for intention. *Academy of Management Review*, 13(3), 442–453. doi: [10.2307/258091](https://doi.org/10.2307/258091).
- Blaese, R., Noemi, S., & Brigitte, L. (2021). Should I stay, or should I go? Job satisfaction as a moderating factor between outcome expectations and entrepreneurial intention among academics. *International Entrepreneurship and Management Journal*, 17(3), 1357–1386. doi: [10.1007/s11365-021-00744-8](https://doi.org/10.1007/s11365-021-00744-8).
- Bogatyreva, K., Edelman, L. F., Manolova, T. S., Osiyevskyy, O., & Shirokova, G. (2019). When do entrepreneurial intentions lead to actions? The role of national culture. *Journal of Business Research*, 96, 309–321. doi: [10.1016/j.jbusres.2018.11.034](https://doi.org/10.1016/j.jbusres.2018.11.034).

- Bolton, D. L. (2012). Individual entrepreneurial orientation: Further investigation of a measurement instrument. *Academy of Entrepreneurship Journal*, 18(1), 91–98. doi: [10.1108/00400911211210314](https://doi.org/10.1108/00400911211210314).
- Bolton, D. L., & Lane, M. D. (2012). Individual entrepreneurial orientation: Development of a measurement instrument. *Education + Training*, 54(2/3), 219–233. doi: [10.1108/00400911211210314](https://doi.org/10.1108/00400911211210314).
- Boyd, N. G., & Vozikis, G. S. (1994). The influence of self-efficacy on the development of entrepreneurial intentions and actions. *Entrepreneurship Theory and Practice*, 18(4), 63–77. doi: [10.1177/104225879401800404](https://doi.org/10.1177/104225879401800404).
- Brown, S. D., & Lent, R. W. (2017). Social cognitive career theory in a diverse world: Closing thoughts. *Journal of Career Assessment*, 25(1), 173–180. doi: [10.1177/1069072716660061](https://doi.org/10.1177/1069072716660061).
- Brown, R., & Mawson, S. (2019). Entrepreneurial ecosystems and public policy in action: A critique of the latest industrial policy blockbuster. *Cambridge Journal of Regions, Economy and Society*, 12(3), 347–368. doi: [10.1093/cjres/rsz011](https://doi.org/10.1093/cjres/rsz011).
- Carr, J. C., & Sequeira, J. M. (2007). Prior family business exposure as intergenerational influence and entrepreneurial intent: A theory of planned behavior approach. *Journal of Business Research*, 60(10), 1090–1098. doi: [10.1016/j.jbusres.2006.12.016](https://doi.org/10.1016/j.jbusres.2006.12.016).
- Carsrud, A., & Brännback, M. (2011). Entrepreneurial motivations: What do we still need to know?. *Journal of Small Business Management*, 49(1), 9–26. doi: [10.1111/j.1540-627X.2010.00312.x](https://doi.org/10.1111/j.1540-627X.2010.00312.x).
- Cassar, G., & Friedman, H. L. (2009). Does self-efficacy affect entrepreneurial investment?. *Strategic Entrepreneurship Journal*, 3(3), 241–260. doi: [10.1002/sej.73](https://doi.org/10.1002/sej.73).
- Chowdhary, S., Selvakumar, P., Sangeetha, B., Sarvaani, V. V., Anute, N., & Sharma, M. (2025). The role of social capital in entrepreneurial development. In *Support networks for entrepreneurs: Social capital and strategic collaborations* (pp. 311–338). IGI Global Scientific Publishing.
- Clark, D. R., Pidduck, R. J., Lumpkin, G. T., & Covin, J. G. (2024). Is it okay to study entrepreneurial orientation (EO) at the individual level? Yes. *Entrepreneurship Theory and Practice*, 48(1), 349–391. doi: [10.1177/10422587231178885](https://doi.org/10.1177/10422587231178885).
- Covin, J. G., & Slevin, D. P. (1991). A conceptual model of entrepreneurship as firm behavior. *Entrepreneurship Theory and Practice*, 16(1), 7–26. doi: [10.1177/104225879101600102](https://doi.org/10.1177/104225879101600102).
- Davidsson, P., & Honig, B. (2003). The role of social and human capital among nascent entrepreneurs. *Journal of Business Venturing*, 18(3), 301–331. doi: [10.1016/S0883-9026\(02\)00097-6](https://doi.org/10.1016/S0883-9026(02)00097-6).
- Duong, C. D., Nguyen, T. T. T., Le, T. L., Ngo, T. V. N., Nguyen, C. D., & Nguyen, T. D. (2024). A serial mediation model of entrepreneurial education and entrepreneurial intention: A social cognitive career theory approach. *International Journal of Innovation Science*, 16(1), 61–76. doi: [10.1108/IJIS-10-2022-0207](https://doi.org/10.1108/IJIS-10-2022-0207).
- Duong, C. D., Tran, V. T., & St-Jean, E. (2024). Social cognitive career theory and higher education students' entrepreneurial intention: The role of perceived educational support and perceived entrepreneurial opportunity. *Journal of Entrepreneurship, Management and Innovation*, 20(1), 86–102. doi: [10.7341/20242015](https://doi.org/10.7341/20242015).
- D'Andrea, F. A. M. C. (2023). Entrepreneurship and institutional uncertainty. *Journal of Entrepreneurship and Public Policy*, 12(1), 10–31. doi: [10.1108/JEPP-01-2022-0018](https://doi.org/10.1108/JEPP-01-2022-0018).
- Esfandiar, K., Sharifi-Tehrani, M., Pratt, S., & Altinay, L. (2019). Understanding entrepreneurial intentions: A developed integrated structural model approach. *Journal of Business Research*, 94, 172–182. doi: [10.1016/j.jbusres.2017.10.045](https://doi.org/10.1016/j.jbusres.2017.10.045).
- Estay, C., Durrieu, F., & Akhter, M. (2013). Entrepreneurship: From motivation to start-up. *Journal of International Entrepreneurship*, 11(3), 243–267. doi: [10.1007/s10843-013-0109-x](https://doi.org/10.1007/s10843-013-0109-x).
- Estrin, S., & Mickiewicz, T. (2011). Entrepreneurship in transition economies: The role of institutions and generational change. In Minniti M. (Ed.), *The dynamics of entrepreneurship: Evidence from the global entrepreneurship monitor data*, 181–208

- Fayolle, A., & Gailly, B. (2015). The impact of entrepreneurship education on entrepreneurial attitudes and intention: Hysteresis and persistence. *Journal of Small Business Management*, 53(1), 75–93. doi: [10.1111/jsbm.12065](https://doi.org/10.1111/jsbm.12065).
- Fayolle, A., & Linen, F. (2014). The future of research on entrepreneurial intentions. *Journal of Business Research*, 67(5), 663–666. doi: [10.1016/j.jbusres.2013.11.024](https://doi.org/10.1016/j.jbusres.2013.11.024).
- Fitzsimmons, J. R., & Douglas, E. J. (2011). Interaction between feasibility and desirability in the formation of entrepreneurial intentions. *Journal of Business Venturing*, 26(4), 431–440. doi: [10.1016/j.jbusvent.2010.01.001](https://doi.org/10.1016/j.jbusvent.2010.01.001).
- Foo, M. D., Uy, M. A., & Baron, R. A. (2009). How do feelings influence effort? An empirical study of entrepreneurs' affect and venture effort. *Journal of Applied Psychology*, 94(4), 1086–1094. doi: [10.1037/a0015599](https://doi.org/10.1037/a0015599).
- Galvão, A., Marques, C. S., Mendes, T., & Azevedo, C. (2024). How does perceived university support boost students' entrepreneurial intentions?. *Journal of the Knowledge Economy*, 16(3), 12698–12726. doi: [10.1007/s13132-024-02441-7](https://doi.org/10.1007/s13132-024-02441-7).
- Gartner, W. B., Shaver, K. G., Gatewood, E., & Katz, J. A. (1994). Finding the entrepreneur in entrepreneurship. *Entrepreneurship Theory and Practice*, 18(3), 5–9. doi: [10.1177/104225879401800301](https://doi.org/10.1177/104225879401800301).
- Gelaidan, H. M., & Abdullateef, A. O. (2017). Entrepreneurial intentions of business students in Malaysia: The role of self-confidence, educational and relation support. *Journal of Small Business and Enterprise Development*, 24(1), 54–67. doi: [10.1108/JSBED-06-2016-0078](https://doi.org/10.1108/JSBED-06-2016-0078).
- Głodowska, A., & Wach, K. (2022). Entrepreneurship research in central and Eastern Europe: A systematic literature review and bibliometric analysis. *Journal of International Studies*, 15(3), 201–214. doi: [10.14254/2071-8330.2022/15-3/14](https://doi.org/10.14254/2071-8330.2022/15-3/14).
- Gonzalez-Tamayo, L. A., Olarewaju, A. D., Bonomo-Odizzio, A., & Krauss-Delorme, C. (2024). University student entrepreneurial intentions: The effects of perceived institutional support, parental role models, and entrepreneurial self-efficacy. *Journal of Small Business and Enterprise Development*, 31(8), 205–227. doi: [10.1108/JSBED-09-2022-0408](https://doi.org/10.1108/JSBED-09-2022-0408).
- Gupta, V. K., & Gupta, A. (2015). Relationship between entrepreneurial orientation and firm performance in large organizations over time. *Journal of International Entrepreneurship*, 13(1), 7–27. doi: [10.1007/s10843-014-0138-0](https://doi.org/10.1007/s10843-014-0138-0).
- Hägg, G. (2021). The entrepreneurial diary—a reflective learning activity to enhance the judgmental abilities of student entrepreneurs. *International Journal of Entrepreneurial Behavior and Research*, 27(5), 1142–1165. doi: [10.1108/IJEBR-07-2020-0496](https://doi.org/10.1108/IJEBR-07-2020-0496).
- Haque, M. R., Kour, M., & Mahin, M. H. (2025). The role of family support, self-efficacy, and entrepreneurial education in developing entrepreneurial intentions in developing countries. *Journal of the Knowledge Economy*, 16(3), 12143–12169. doi: [10.1007/s13132-024-02285-1](https://doi.org/10.1007/s13132-024-02285-1).
- Hassan, A., Anwar, I., Saleem, I., Islam, K. B., & Hussain, S. A. (2021). Individual entrepreneurial orientation, entrepreneurship education and entrepreneurial intention: The mediating role of entrepreneurial motivations. *Industry and Higher Education*, 35(4), 403–418. doi: [10.1177/09504222211007051](https://doi.org/10.1177/09504222211007051).
- Hernández-Carrión, C., Camarero-Izquierdo, C., & Gutiérrez-Cillán, J. (2020). The internal mechanisms of entrepreneurs' social capital: A multi-network analysis. *BRQ Business Research Quarterly*, 23(1). doi: [10.1177/2340944420901047](https://doi.org/10.1177/2340944420901047).
- Hieu, L. Q., & Loan, N. T. (2022). Role of entrepreneurial competence, entrepreneurial education, family support and entrepreneurship policy in forming entrepreneurial intention and entrepreneurial decision. *Pakistan Journal of Commerce and Social Science*, 16(1), 204–221. doi: [10.64534/commer.2022.121](https://doi.org/10.64534/commer.2022.121).
- Hirschi, A., & Fischer, S. (2013). Work values as predictors of entrepreneurial career intentions. *Career Development International*, 18(3), 216–231. doi: [10.1108/CDI-04-2012-0047](https://doi.org/10.1108/CDI-04-2012-0047).
- Hmieleski, K. M., & Baron, R. A. (2009). Entrepreneurs' optimism and new venture performance: A social cognitive perspective. *Academy of Management Journal*, 52(3), 473–488. doi: [10.5465/amj.2009.41330755](https://doi.org/10.5465/amj.2009.41330755).

- Hoang, G., Le, T. T. T., Tran, A. K. T., & Du, T. (2020). Entrepreneurship education and entrepreneurial intentions of university students in Vietnam: The mediating roles of self-efficacy and learning orientation. *Education + Training*, 63(1), 115–133. doi: [10.1108/ET-05-2020-0142](https://doi.org/10.1108/ET-05-2020-0142).
- Hsu, D. K., Burmeister-Lamp, K., Simmons, S. A., Foo, M. D., Hong, M. C., & Pipes, J. D. (2019). I know I can, but I don't fit: Perceived fit, self-efficacy, and entrepreneurial intention. *Journal of Business Venturing*, 34(2), 311–326. doi: [10.1016/j.jbusvent.2018.08.004](https://doi.org/10.1016/j.jbusvent.2018.08.004).
- Hudik, M., & Dvouletý, O. (2025). The allocation of entrepreneurial talent: Revisiting the role of formal and informal institutions. *Small Business Economics*, 66(1), 215–231. doi: [10.1007/s11187-025-01102-6](https://doi.org/10.1007/s11187-025-01102-6).
- Ibrahim, N. A., & Lucky, E. O. I. (2014). Relationship between entrepreneurial orientation, entrepreneurial skills, environmental factor and entrepreneurial intention among Nigerian students in UUM. *Entrepreneurship and Innovation Management Journal*, 2(4), 203–213. doi: [10.13140/RG.2.1.1586.5363](https://doi.org/10.13140/RG.2.1.1586.5363).
- Karlsson, T., & Moberg, K. (2013). Improving perceived entrepreneurial abilities through education: Exploratory testing of an entrepreneurial self-efficacy scale in a pre-post setting. *The International Journal of Management Education*, 11(1), 1–11. doi: [10.1016/j.ijme.2012.10.00](https://doi.org/10.1016/j.ijme.2012.10.00).
- Karyaningsih, R. P. D., Wibowo, A., Saptono, A., & Narmaditya, B. S. (2020). Does entrepreneurial knowledge influence vocational students' intention? Lessons from Indonesia. *Entrepreneurial Business and Economics Review*, 8(4), 138–155. doi: [10.15678/EBER.2020.080408](https://doi.org/10.15678/EBER.2020.080408).
- Keat, O. Y., Selvarajah, C., & Meyer, D. (2011). Inclination towards entrepreneurship among university students: An empirical study of Malaysian university students. *International Journal of Business and Social Science*, 2(4).
- Koe, W. L. (2016). The relationship between individual entrepreneurial orientation (IEO) and entrepreneurial intention. *Journal of Global Entrepreneurship Research*, 6(1), 13. doi: [10.1186/s40497-016-0057-8](https://doi.org/10.1186/s40497-016-0057-8).
- Kolvereid, L., & Moen, Ø. (1997). Entrepreneurship among business graduates: Does a major in entrepreneurship make a difference?. *Journal of European Industrial Training*, 21(4), 154–160. doi: [10.1108/03090599710171404](https://doi.org/10.1108/03090599710171404).
- Korpysa, J., & Waluyohadi (2022). Creative entrepreneurial intention of students in Indonesia: Implementation the theory of planned behaviour. *International Entrepreneurship Review*, 8(3), 53–67. doi: [10.15678/IER.2022.0803.04](https://doi.org/10.15678/IER.2022.0803.04).
- Kropiński, P. (2024). Uncertainty in central and Eastern European markets: Evidence from Twitter-based uncertainty measures. *Post-communist Economies*, 36(3), 382–403. doi: [10.1080/14631377.2023.2288737](https://doi.org/10.1080/14631377.2023.2288737).
- Krueger, N. F., & Carsrud, A. L. (1993). Entrepreneurial intentions: Applying the theory of planned behaviour. *Entrepreneurship and Regional Development*, 5(4), 315–330. doi: [10.1080/08985629300000020](https://doi.org/10.1080/08985629300000020).
- Krueger, N., & Sussan, F. (2017). Person-level entrepreneurial orientation: Clues to the 'entrepreneurial mindset. *International Journal of Business and Globalisation*, 18(3), 382–395. doi: [10.1504/IJBG.2017.083216](https://doi.org/10.1504/IJBG.2017.083216).
- Krueger, N. F., Reilly, M. D., & Carsrud, A. L. (2000). Competing models of entrepreneurial intentions. *Journal of Business Venturing*, 15(5-6), 411–432. doi: [10.1016/S0883-9026\(98\)00033-0](https://doi.org/10.1016/S0883-9026(98)00033-0).
- Kumar, R., & Shukla, S. (2019). Creativity, proactive personality and entrepreneurial intentions: Examining the mediating role of entrepreneurial self-efficacy. *Global Business Review*, 23(1), 101–118. doi: [10.1177/0972150919844395](https://doi.org/10.1177/0972150919844395).
- Kurczewska, A., Doryń, W., & Wawrzyniak, D. (2020). An everlasting battle between theoretical knowledge and practical skills? The joint impact of education and professional experience on entrepreneurial success. *Entrepreneurial Business and Economics Review*, 8(2), 219–237. doi: [10.15678/EBER.2020.080212](https://doi.org/10.15678/EBER.2020.080212).
- Laguía, A., & Moriano, J. A. (2021). Perceived representation of entrepreneurship in the mass media and entrepreneurial intention. *International Entrepreneurship and Management Journal*, 17(1), 401–421. doi: [10.1007/s11365-019-00609-1](https://doi.org/10.1007/s11365-019-00609-1).

- Lanero, A., Vázquez, J. L., & Aza, C. L. (2016). Social cognitive determinants of entrepreneurial career choice in university students. *International Small Business Journal*, 34(8), 1053–1075. doi: [10.1177/0266242615612882](https://doi.org/10.1177/0266242615612882).
- Le, T. T., Doan, X. H., & Duong, C. D. (2023). A serial mediation model of the relation between cultural values, entrepreneurial self-efficacy, intentions and behaviors: Does entrepreneurial education matter? A multi-group analysis. *Journal of Open Innovation: Technology, Market, and Complexity*, 9(2), 100064. doi: [10.1016/j.joitmc.2023.100064](https://doi.org/10.1016/j.joitmc.2023.100064).
- Lent, R. W., & Brown, S. D. (2006). On conceptualizing and assessing social cognitive constructs in career research: A measurement guide. *Journal of Career Assessment*, 14(1), 12–35. doi: [10.1177/1069072705281364](https://doi.org/10.1177/1069072705281364).
- Lent, R. W., & Brown, S. D. (2019). Social cognitive career theory at 25: Empirical status of the interest, choice, and performance models. *Journal of Vocational Behavior*, 115, 103316. doi: [10.1016/j.jvb.2019.06.004](https://doi.org/10.1016/j.jvb.2019.06.004).
- Lent, R. W., Brown, S. D., & Hackett, G. (1994). Toward a unifying social cognitive theory of career and academic interest, choice, and performance. *Journal of Vocational Behavior*, 45(1), 79–122. doi: [10.1006/jvbe.1994.1027](https://doi.org/10.1006/jvbe.1994.1027).
- Lent, R. W., Brown, S. D., & Hackett, G. (2002). Social cognitive career theory. *Career Choice and Development*, 4(1), 255–311.
- Lent, R. W., Lopez, A. M. Jr., Lopez, F. G., & Sheu, H. B. (2008). Social cognitive career theory and the prediction of interests and choice goals in the computing disciplines. *Journal of Vocational Behavior*, 73(1), 52–62. doi: [10.1016/j.jvb.2008.01.002](https://doi.org/10.1016/j.jvb.2008.01.002).
- Lent, R. W., Morris, T. R., Wang, R. J., Moturu, B. P., Cygrymus, E. R., & Yeung, J. G. (2022). Test of a social cognitive model of proactive career behavior. *Journal of Career Assessment*, 30(4), 756–775. doi: [10.1177/10690727221080948](https://doi.org/10.1177/10690727221080948).
- Licznarska, M., & Ziemiański, P. (2022). A breath of fresh air—social cognitive career theory in studying entrepreneurial intentions. *International Journal of Entrepreneurship and Small Business*, 45(2), 126–151. doi: [10.1504/IJESB.2022.120976](https://doi.org/10.1504/IJESB.2022.120976).
- Liguori, E. W., Bendickson, J. S., & McDowell, W. C. (2018). Revisiting entrepreneurial intentions: A social cognitive career theory approach. *International Entrepreneurship and Management Journal*, 14(1), 67–78. doi: [10.1007/s11365-017-0462-7](https://doi.org/10.1007/s11365-017-0462-7).
- Liguori, E., Winkler, C., Vanevenhoven, J., Winkel, D., & James, M. (2020). Entrepreneurship as a career choice: Intentions, attitudes, and outcome expectations. *Journal of Small Business and Entrepreneurship*, 32(4), 311–331. doi: [10.1080/08276331.2019.1600857](https://doi.org/10.1080/08276331.2019.1600857).
- Linen, 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. doi: [10.1111/j.1540-6520.2009.00318.x](https://doi.org/10.1111/j.1540-6520.2009.00318.x).
- Linen, 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. doi: [10.1007/s11365-015-0356-5](https://doi.org/10.1007/s11365-015-0356-5).
- Linen, F., Jaén, I., & Rodriguez, M. (2024). An action phase theory approach to the configuration of entrepreneurial goal and implementation intentions. *International Journal of Entrepreneurial Behavior and Research*, 30(11), 64–90. doi: [10.1108/IJEBr-07-2023-0772](https://doi.org/10.1108/IJEBr-07-2023-0772).
- Liu, M., Gorgievski, M. J., Qi, J., & Paas, F. (2022). Perceived university support and entrepreneurial intentions: Do different students benefit differently?. *Studies in Educational Evaluation*, 73, 101150. doi: [10.1016/j.stueduc.2022.101150](https://doi.org/10.1016/j.stueduc.2022.101150).
- Lyons, R. M., Mac an Bháird, C., & Lynn, T. G. (2016). *An exploration of passion: The effect of entrepreneurship education [Conference presentation]*. ECSB 3E Conference, Leeds.
- Maheshwari, G., & Kha, K. L. (2022). Investigating the relationship between educational support and entrepreneurial intention in Vietnam: The mediating role of entrepreneurial self-efficacy in the theory of planned behavior. *The International Journal of Management Education*, 20(2), 100553. doi: [10.1016/j.ijme.2021.100553](https://doi.org/10.1016/j.ijme.2021.100553).

- Maresch, D., Harms, R., Kailer, N., & Wimmer-Wurm, B. (2016). The impact of entrepreneurship education on the entrepreneurial intention of students in science and engineering versus business studies. *Entrepreneurship Theory and Practice*, 40(4), 683–713. doi: [10.1016/j.techfore.2015.11.006](https://doi.org/10.1016/j.techfore.2015.11.006).
- Marshall, D. R., Meek, W. R., Swab, R. G., & Markin, E. (2020). Access to resources and entrepreneurial well-being: A self-efficacy approach. *Journal of Business Research*, 120, 203–212. doi: [10.1016/j.jbusres.2020.08.015](https://doi.org/10.1016/j.jbusres.2020.08.015).
- Martins, I., & Perez, J. P. (2020). Testing mediating effects of individual entrepreneurial orientation on the relation between close environmental factors and entrepreneurial intention. *International Journal of Entrepreneurial Behavior and Research*, 26(4), 771–791. doi: [10.1108/IJEBR-08-2019-0505](https://doi.org/10.1108/IJEBR-08-2019-0505).
- Martins, I., & Perez, J. P. (2025). Individual entrepreneurial orientation: Analyzing what we know, what we need to know, and future directions. *Journal of Small Business Management*, 64(1), 1–50. doi: [10.1080/00472778.2025.2472199](https://doi.org/10.1080/00472778.2025.2472199).
- McGee, J. E., Peterson, M., Mueller, S. L., & Sequeira, J. M. (2009). Entrepreneurial self-efficacy: Refining the measure. *Entrepreneurship Theory and Practice*, 33(4), 965–988. doi: [10.1111/j.1540-6520.2009.00304.x](https://doi.org/10.1111/j.1540-6520.2009.00304.x).
- Miller, D. (1983). The correlates of entrepreneurship in three types of firms. *Management Science*, 29(7), 770–791. doi: [10.1287/mnsc.29.7.770](https://doi.org/10.1287/mnsc.29.7.770).
- Miller, D. (2011). Miller (1983) revisited: A reflection on EO research and some suggestions for the future. *Entrepreneurship Theory and Practice*, 35(5), 873–894. doi: [10.1111/j.1540-6520.2011.00457.x](https://doi.org/10.1111/j.1540-6520.2011.00457.x).
- Moussa, B. N., & Kerkeni, S. (2021). The role of family environment in developing the entrepreneurial intention of young Tunisian students. *Entrepreneurial Business and Economics Review*, 9(1), 31–45. doi: [10.15678/EBER.2021.090102](https://doi.org/10.15678/EBER.2021.090102).
- Mustafa, M. J. J., Chin, J. W., Wegner, D., & Nungsari, M. (2025). Institutional environments, self-efficacy, outcome expectations and country context: Serial mediating effects on entrepreneurial intentions and decision-making. *Journal of Small Business and Enterprise Development*, 32(6), 1225–1249. doi: [10.1108/JSBED-12-2024-0643](https://doi.org/10.1108/JSBED-12-2024-0643).
- Nabi, G., Linen, F., Fayolle, A., Krueger, N., & Walmsley, A. (2017). The impact of entrepreneurship education in higher education: A systematic review and research agenda. *The Academy of Management Learning and Education*, 16(2), 277–299. doi: [10.5465/amle.2015.0026](https://doi.org/10.5465/amle.2015.0026).
- Ndofirepi, T. M. (2020). Relationship between entrepreneurship education and entrepreneurial goal intentions: Psychological traits as mediators. *Journal of Innovation and Entrepreneurship*, 9(1), 2. doi: [10.1186/s13731-020-0115-x](https://doi.org/10.1186/s13731-020-0115-x).
- Newman, A. O., M., Schwarz, S. C. & M., Nielsen, I., & Cohen, M. (2019). Entrepreneurial self-efficacy: A systematic review of the literature on its theoretical foundations, measurement, antecedents, and outcomes, and an agenda for future research. *Journal of Vocational Behavior*, 110(B), 403–419. doi: [10.1016/j.jvb.2018.05.012](https://doi.org/10.1016/j.jvb.2018.05.012).
- Nikitina, T., Licznarska, M., Ozoliņa-Ozola, I., & Lapina, I. (2023). Individual entrepreneurial orientation: Comparison of business and STEM students. *Education + Training*, 65(4), 565–586. doi: [10.1108/ET-07-2021-0256](https://doi.org/10.1108/ET-07-2021-0256).
- Nowiński, W., Haddoud, M. Y., Lančarič, D., Egerová, D., & Czeglédi, C. (2017). The impact of entrepreneurship education, entrepreneurial self-efficacy and gender on entrepreneurial intentions of university students in the Visegrad countries. *Studies in Higher Education*, 44(2), 361–379. doi: [10.1080/03075079.2017.1365359](https://doi.org/10.1080/03075079.2017.1365359).
- Nowiński, W., Haddoud, M. Y., Wach, K., & Schaefer, R. (2020). Perceived public support and entrepreneurship attitudes: A little reciprocity can go a long way. *Journal of Vocational Behavior*, 121, 103474. doi: [10.1016/j.jvb.2020.103474](https://doi.org/10.1016/j.jvb.2020.103474).
- Perez, J. P., Martins, I., Aparicio, S., Lopez, T., & Urbano, D. (2026). Crafting individual entrepreneurial orientation through education and institutions: Evidence from efficiency and innovation-driven economies. *The International Journal of Management Education*, 24(2), 101328. doi: [10.1016/j.ijme.2025.101328](https://doi.org/10.1016/j.ijme.2025.101328).

- Pérez-Macías, N., Fernández-Fernández, J. L., & Vieites, A. R. (2022). Analyzing the past to prepare for the future: A review of literature on factors with influence on entrepreneurial intentions. *Journal of International Entrepreneurship*, 20(1), 52–114. doi: [10.1007/s10843-021-00289-5](https://doi.org/10.1007/s10843-021-00289-5).
- Peterman, N. E., & Kennedy, J. (2003). Enterprise education: Influencing students' perceptions of entrepreneurship. *Entrepreneurship Theory and Practice*, 28(2), 129–144. doi: [10.1046/j.1540-6520.2003.00035.x](https://doi.org/10.1046/j.1540-6520.2003.00035.x).
- Pfeifer, S., Šarlija, N., & Zekić Sušac, M. (2016). Shaping the entrepreneurial mindset: Entrepreneurial intentions of business students in Croatia. *Journal of Small Business Management*, 54(1), 102–117. doi: [10.1111/jsbm.12133](https://doi.org/10.1111/jsbm.12133).
- Pham, L. X., Phan, L. T., Le, A. N. H., & Bui Ngoc Tuan, A. (2024). Factors affecting social entrepreneurial intention: An application of social cognitive career theory. *Entrepreneurship Research Journal*, 14(2), 515–543. doi: [10.1515/erj-2021-0316](https://doi.org/10.1515/erj-2021-0316).
- Polese, A., & Rodgers, P. (2011). Surviving post-socialism: The role of informal economic practices. *International Journal of Sociology and Social Policy*, 31(11/12), 612–618. doi: [10.1108/01443331111177896](https://doi.org/10.1108/01443331111177896).
- Prabhu, V. P., McGuire, S. J., Drost, E. A., & Kwong, K. K. (2012). Proactive personality and entrepreneurial intent: Is entrepreneurial self-efficacy a mediator or moderator?. *International Journal of Entrepreneurial Behavior and Research*, 18(5), 559–586. doi: [10.1108/13552551211253937](https://doi.org/10.1108/13552551211253937).
- Puozzo, I. C., & Audrin, C. (2021). Improving self-efficacy and creative self-efficacy to foster creativity and learning in schools. *Thinking Skills and Creativity*, 42, 100966. doi: [10.1016/j.tsc.2021.100966](https://doi.org/10.1016/j.tsc.2021.100966).
- Rajh, E., Apasieva, T. J., Budak, J., Ateljević, J., Davčev, L., & Ognjenović, K. (2018). Youth and entrepreneurial intentions in four South-East European countries. *International Review of Entrepreneurship*, 16(3).
- Renzulli, L. A., Aldrich, H., & Moody, J. (2000). Family matters: Gender, networks, and entrepreneurial outcomes. *Social Forces*, 79(2), 523–546. doi: [10.2307/2675508](https://doi.org/10.2307/2675508).
- Riaz, M. F., Leitão, J., & Cantner, U. (2022). Measuring the efficiency of an entrepreneurial ecosystem at municipality level: Does institutional transparency play a moderating role?. *Eurasian Business Review*, 12(1), 151–176. doi: [10.1007/s40821-021-00194-w](https://doi.org/10.1007/s40821-021-00194-w).
- Robinson, S., & Stubberud, H. A. (2014). Elements of entrepreneurial orientation and their relationship to entrepreneurial intent. *Journal of Entrepreneurship Education*, 17(2), 1–11.
- Robson, P. J., & Bennett, R. J. (2000). SME growth: The relationship with business advice and external collaboration. *Small Business Economics*, 15(3), 193–208. doi: [10.1023/A:1008129012953](https://doi.org/10.1023/A:1008129012953).
- Romero-Galisteo, R. P., González-Sánchez, M., Gálvez-Ruiz, P., Palomo-Carrión, R., Casuso-Holgado, M. J., & Pinero-Pinto, E. (2022). Entrepreneurial intention, expectations of success and self-efficacy in undergraduate students of health sciences. *BMC Medical Education*, 22(1), 679. doi: [10.1186/s12909-022-03731-x](https://doi.org/10.1186/s12909-022-03731-x).
- Sahoo, S., & Panda, R. K. (2019). Exploring entrepreneurial orientation and intentions among technical university students: Role of contextual antecedents. *Education + Training*, 61(6), 718–736. doi: [10.1108/ET-11-2018-0247](https://doi.org/10.1108/ET-11-2018-0247).
- Sánchez, J. C. (2013). The impact of an entrepreneurship education program on entrepreneurial competencies and intention. *Journal of Small Business Management*, 51(3), 447–465. doi: [10.1111/jsbm.12025](https://doi.org/10.1111/jsbm.12025).
- Santos, S. C., & Liguori, E. W. (2020). Entrepreneurial self-efficacy and intentions: Outcome expectations as mediator and subjective norms as moderator. *International Journal of Entrepreneurial Behavior and Research*, 26(3), 400–415. doi: [10.1108/IJEBR-07-2019-0436](https://doi.org/10.1108/IJEBR-07-2019-0436).
- Saputra, I. A. G., Wulandari, S. S., Wijayati Wardoyo, D., Soeatyo, Y., & Listiadi, A. (2026). Beyond profit: A phenomenological exploration of generation Z's entrepreneurial motivations and the integration of financial and social value. *Entrepreneurial Business and Economics Review*, 14(1), 29–41. doi: [10.15678/EBER.2026.140102](https://doi.org/10.15678/EBER.2026.140102).

- Schlaegel, C., & Koenig, M. (2014). Determinants of entrepreneurial intent: A meta-analytic test and integration of competing models. *Entrepreneurship Theory and Practice*, 38(2), 291–332. doi: [10.1111/etap.12087](https://doi.org/10.1111/etap.12087).
- Shapero, A., & Sokol, L. (1982). The social dimensions of entrepreneurship. In C. A. Kent, D. L. Sexton, & K. H. Vesper (Eds.), *Encyclopedia of entrepreneurship* (pp. 72–90). Prentice Hall. doi: [10.1108/sd.2006.05622aaf.007](https://doi.org/10.1108/sd.2006.05622aaf.007).
- Sharma, D., & Sahoo, C. K. (2025). Examining the nexus of organizational support, entrepreneurial self-efficacy and self-employment intentions of technical education students in India. *Journal of Asia Business Studies*, 19(2), 449–469. doi: [10.1108/JABS-01-2024-0011](https://doi.org/10.1108/JABS-01-2024-0011).
- Sheu, H. B., & Bordon, J. (2017). SCCT research in the international context: Empirical evidence, future directions, and practical implications. *Journal of Career Assessment*, 25(1), 58–74. doi: [10.1177/1069072716657826](https://doi.org/10.1177/1069072716657826).
- Sheu, H. B., Lent, R. W., Brown, S. D., Miller, M. J., Hennessy, K. D., & Duffy, R. D. (2010). Testing the choice model of social cognitive career theory across Holland themes: A meta-analytic path analysis. *Journal of Vocational Behavior*, 76(2), 252–264. doi: [10.1016/j.jvb.2009.10.015](https://doi.org/10.1016/j.jvb.2009.10.015).
- Shi, L., Yao, X., & Wu, W. (2020). Perceived university support, entrepreneurial self-efficacy, heterogeneous entrepreneurial intentions in entrepreneurship education: The moderating role of the Chinese sense of face. *Journal of Entrepreneurship in Emerging Economies*, 12(2), 205–230. doi: [10.1108/JEEE-04-2019-0040](https://doi.org/10.1108/JEEE-04-2019-0040).
- Shook, C. L., & Bratianu, C. (2010). Entrepreneurial intent in a transitional economy: An application of the theory of planned behavior to Romanian students. *International Entrepreneurship and Management Journal*, 6(3), 231–247. doi: [10.1007/s11365-008-0091-2](https://doi.org/10.1007/s11365-008-0091-2).
- Taatila, V., & Down, S. (2012). Measuring entrepreneurial orientation of university students. *Education + Training*, 54(8/9), 744–760. doi: [10.1108/00400911211274864](https://doi.org/10.1108/00400911211274864).
- Teixeira, S. J., Casteleiro, C. M. L., Rodrigues, R. G., & Guerra, M. D. (2018). Entrepreneurial intentions and entrepreneurship in European countries. *International Journal of Innovation Science*, 10(1), 22–42. doi: [10.1108/IJIS-07-2017-0062](https://doi.org/10.1108/IJIS-07-2017-0062).
- Turker, D., & Selcuk, S. S. (2009). Which factors affect entrepreneurial intention of university students?. *Journal of European Industrial Training*, 33(2), 142–159. doi: [10.1108/03090590910939049](https://doi.org/10.1108/03090590910939049).
- Uansa-ard, S., & Wannamakok, W. (2022). University students' entrepreneurial intentions during COVID-19: The perspective of social cognitive career theory. *Journal of Entrepreneurship, Management and Innovation*, 18(3), 75–106. doi: [10.7341/20221833](https://doi.org/10.7341/20221833).
- Urbano, D., Orozco, J., & Turro, A. (2024). The effect of institutions on intrapreneurship: An analysis of developed vs developing countries. *Journal of Small Business Management*, 62(3), 1107–1147. doi: [10.1080/00472778.2022.2161556](https://doi.org/10.1080/00472778.2022.2161556).
- Valliere, D. (2017). Multidimensional entrepreneurial intent: An internationally validated measurement approach. *International Journal of Entrepreneurial Behavior and Research*, 23(1), 59–77. doi: [10.1108/IJEBr-08-2015-0182](https://doi.org/10.1108/IJEBr-08-2015-0182).
- Vincent-Lancrin, S., González-Sancho, C., Bouckaert, M., de Luca, F., Fernández-Barrera, M., Jacotin, G., ... Vidal, Q. (2019). *Fostering students' creativity and critical thinking: What it means in school (educational research and innovation)*. OECD Publishing. doi: [10.1787/62212c37-en](https://doi.org/10.1787/62212c37-en).
- Wach, K., & Wojciechowski, L. (2016). Entrepreneurial intentions of students in Poland in the view of Ajzen's theory of planned behaviour. *Entrepreneurial Business and Economics Review*, 4(1), 83–94. doi: [10.15678/EBER.2016.040106](https://doi.org/10.15678/EBER.2016.040106).
- Welter, F. (2011). Contextualizing entrepreneurship—conceptual challenges and ways forward. *Entrepreneurship Theory and Practice*, 35(1), 165–184. doi: [10.1111/j.1540-6520.2010.00427.x](https://doi.org/10.1111/j.1540-6520.2010.00427.x).
- Williams, D. M. (2010). Outcome expectancy and self-efficacy: Theoretical implications of an unresolved contradiction. *Personality and Social Psychology Review*, 14(4), 417–425. doi: [10.1177/1088868310368802](https://doi.org/10.1177/1088868310368802).
- Williamson, C. R., & Mathers, R. L. (2011). Economic freedom, culture, and growth. *Public Choice*, 148(3-4), 313–335. doi: [10.1007/s11127-010-9656-z](https://doi.org/10.1007/s11127-010-9656-z).

- Wilson, F., Kickul, J., & Marlino, D. (2007). Gender, entrepreneurial self-efficacy, and entrepreneurial career intentions: Implications for entrepreneurship education. *Entrepreneurship Theory and Practice*, 31(3), 387–406. doi: [10.1111/j.1540-6520.2007.00179.x](https://doi.org/10.1111/j.1540-6520.2007.00179.x).
- Yesmin, M. N., Hossain, M. A., Islam, M. S., Rahman, M. M., Jahan, N., & Kim, M. (2024). Entrepreneurial intentions and the role of educational and social support: Do the self-efficacy and the theory of planned behavior variables matter?. *RAUSP Management Journal*, 59(4), 366–385. doi: [10.1108/RAUSP-03-2024-0053](https://doi.org/10.1108/RAUSP-03-2024-0053).
- Yousaf, U., Ali, S. A., Ahmed, M., Usman, B., & Sameer, I. (2021). From entrepreneurial education to entrepreneurial intention: A sequential mediation of self-efficacy and entrepreneurial attitude. *International Journal of Innovation Science*, 13(3), 364–380. doi: [10.1108/IJIS-06-2020-0133](https://doi.org/10.1108/IJIS-06-2020-0133).
- Yurtkoru, E. S., Kuşcu, Z. K., & Doğanay, A. (2014). Exploring the antecedents of entrepreneurial intention on Turkish university students. *Procedia-Social and Behavioral Sciences*, 150, 841–850. doi: [10.1016/j.sbspro.2014.09.092](https://doi.org/10.1016/j.sbspro.2014.09.092).
- Zhao, H., Seibert, S. E., & Hills, G. E. (2005). The mediating role of self-efficacy in the development of entrepreneurial intentions. *Journal of Applied Psychology*, 90(6), 1265–1272. doi: [10.1037/0021-9010.90.6.1265](https://doi.org/10.1037/0021-9010.90.6.1265).
- Zięba, K., & Golik, J. (2018). Testing students' entrepreneurial self-efficacy as an early predictor of entrepreneurial activities: Evidence from the SEAS project. *Journal of Entrepreneurship, Management and Innovation*, 14(1), 91–108. doi: [10.7341/20181415](https://doi.org/10.7341/20181415).

Further reading

- Gurel, E., Altınay, L., & Daniele, R. (2010). Tourism students' entrepreneurial intentions. *Annals of Tourism Research*, 37(3), 646–669. doi: [10.1016/j.annals.2009.12.003](https://doi.org/10.1016/j.annals.2009.12.003).
- Howard, M. C. (2020). Using the HEXACO-100 to measure individual entrepreneurial orientation: Introducing the HEXACO-IEO. *Journal of Business Venturing Insights*, 13, e00163. doi: [10.1016/j.jbvi.2020.e00163](https://doi.org/10.1016/j.jbvi.2020.e00163).
- Nowiński, W., & Haddoud, M. Y. (2019). The role of inspiring role models in enhancing entrepreneurial intention. *Journal of Business Research*, 96, 183–193. doi: [10.1016/j.jbusres.2018.11.005](https://doi.org/10.1016/j.jbusres.2018.11.005).
- Rauch, A., Wiklund, J., Lumpkin, G. T., & Frese, M. (2009). Entrepreneurial orientation and business performance: An assessment of past research and suggestions for the future. *Entrepreneurship Theory and Practice*, 33(3), 761–787. doi: [10.1111/j.1540-6520.2009.00308.x](https://doi.org/10.1111/j.1540-6520.2009.00308.x).

Corresponding author

Julita Eleonora Wasilczuk can be contacted at: jwas@pg.edu.pl