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Evaluating the role of marshalling self-efficacy, psychological resilience and social support in shaping sustainable entrepreneurial intention among students

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ABSTRACT

While entrepreneurial self-efficacy is heavily researched, marshalling self-efficacy, a crucial aspect for mobilizing resources, remains understudied. Similarly, while research has examined the relationship between personal resilience and entrepreneurial intention, there is a lack of understanding regarding the connection between these factors and specifically sustainable entrepreneurship among students in South America. This research seeks to gain a deeper insight into the relationship between interpersonal communication skills and key psychological factors that facilitate sustainable business creation, studying the impact of resilience on marshalling self-efficacy and its subsequent effects on social support and sustainable entrepreneurial intention. Data from 404 complete responses of university students from Chile and Ecuador, collected via an online self-report survey, were analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM). The findings supported that resilience has a significant impact on marshalling self-efficacy, which in turn affects perceived social support and sustainable entrepreneurial intentions. These insights could address the development of university programs aimed at reinforcing the training of prospective sustainable entrepreneurs, by equipping them with the skills to overcome challenges and secure resources.

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Introduction

Self-efficacy encompasses individuals' beliefs in their capabilities to achieve performance levels that impact events in their lives (Bandura & Wessels, 1994). Student self-efficacy has been extensively examined in domains such as its effects on academic performance at school and university (Honick & Broadbent, 2016), its influence on students' satisfaction with their studies (Azila-Gbette et al., 2022), and its protective role against bullying (Wu et al., 2023). Research has explored various antecedents that affect self-efficacy among school and university students. These studies have demonstrated that factors such as income level (Bahora et al., 2008; Xin et al., 2020), age (Liberatore & Wagner, 2023), and perceived social support (Jang et al., 2021) are associated with students' self-efficacy levels. Additionally, the adoption of new technologies or innovative teaching methodologies in higher education has been found to enhance university students' self-efficacy (Chiang et al., 2022; Wang et al., 2023).

Entrepreneurial self-efficacy, which is conceptualized as entrepreneurs' belief in and confidence in their capabilities to execute entrepreneurial behaviours (Barakat et al., 2014), has been the subject of extensive research. Studies have examined conditions that enhance entrepreneurial self-efficacy, such as the role of cognitive styles and risk preference in shaping entrepreneurial self-efficacy (Kumar & Shukla, 2022), and the positive impact of entrepreneurial training through university courses and programs on students' development of entrepreneurial self-efficacy (Bachmann et al., 2021; Saptono et al., 2021). Furthermore, the effect of entrepreneurial self-efficacy on attitudes that encourage business creation has been thoroughly documented. In this context, the influence of self-efficacy on the intention to initiate new businesses generally (Murugesan & Jayavelu, 2017) and its effect on

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social and sustainable entrepreneurial intentions (Cavazos-Arroyo et al., 2017; Yasir et al., 2020) have been supported. These studies have often evaluated entrepreneurial self-efficacy as a broad construct, without an in-depth examination of self-perceptions regarding specific capabilities essential for venture creation.

Research has identified various types of entrepreneurial self-efficacy relevant to the process of establishing a business (Bakar et al., 2017; González-Betanzos et al., 2023; Schjoedt & Craig, 2017). Mueller and Conway Dato-On (Mueller & Dato-On, 2008) outline four sequential stages and tasks for entrepreneurs associated with self-efficacy. The first phase concerns the conception of an innovative idea or opportunity recognition. The second phase involves efforts to develop a thorough business plan. The third and fourth phases pertain to resource aggregation and management execution. In this line, McGee et al. (2009) established a multi-dimensional entrepreneurial self-efficacy construct addressing early entrepreneurial stages: searching, planning, marshalling resources, and implementing. The searching phase includes developing a unique idea or recognizing an opportunity. In the planning phase, the entrepreneur converts the idea into a business plan. Marshalling self-efficacy relates to the perceived ability to gather support, establish networks, and effectively communicate the business concept. The implementing phase addresses tasks related to the growth and sustainability of the business (McGee et al., 2009).

In this framework, the analysis of marshalling self-efficacy has received less attention than general self-efficacy. Research on entrepreneurial self-efficacy primarily assesses self-perceived entrepreneurial skills and their influence on entrepreneurial intention overall, using short scales that collectively assess all entrepreneurial skills related to self-efficacy (Caputo et al., 2025; Drakpa et al., 2024; Nguyen & Phan, 2024). Therefore, self-perceptions concerning persuasion skills, which are linked to marshalling-type self-efficacy, have mostly not been specifically explored. Marshalling self-efficacy is critically important for the development of entrepreneurship, especially in contemporary contexts where entrepreneurs are required to secure funding and support to realize their business initiatives. In this vein, research has underscored the necessity for entrepreneurs to possess persuasive and effective communication skills to acquire funding for starting technological (Nacu & Avasilcăi, 2014) and sustainable businesses (Bento et al., 2019). Entrepreneurs' communication skills, particularly their oral pitch presentation skills, have a significant impact on business angels' investment decisions and crowdfunding support (Clark, 2008; Palmieri et al., 2022).

Complementarily, psychological resilience, defined as an individual's capacity to maintain stability, endure, and recover from adverse life events (Vaughan et al., 2008), is also a significant trait for entrepreneurs. Individual resilience has been emphasized in studies concerning business creation and success (Amankwah-Amoah et al., 2022; Kochakzade et al., 2018), particularly in research related to establishing businesses in challenging contexts, such as examining the role of resilience in prisoners' entrepreneurial intentions (Ciptono et al., 2023). Recently, the influence of resilience on the entrepreneurial intention of top athletes related to general businesses has also been evaluated (Steinbrink & Ströhle, 2024), using the theory of planned behaviour (Ajzen, 1991) as a basis. Additionally, while the influence of resilience on social support perceptions and sustainable entrepreneurial intention has been recently examined (Barrera-Verdugo et al., 2024), its interaction with marshalling-type entrepreneurial self-efficacy remains unexplored.

Therefore, despite the acknowledged importance of both psychological resilience and entrepreneurial self-efficacy for business creation, there has been scant research on the relationship between personal resilience and university students' entrepreneurial self-efficacy. Similarly, the analysis of resilience's effect on specific types of self-efficacy remains limited. While it has been suggested that resilience and self-esteem influence the self-efficacy of leaders in high-tech startup projects (Zaman et al., 2021) and the impact of resilience on entrepreneurs' self-efficacy during the COVID-19 pandemic has been examined (Hutchinson et al., 2021), the effect of personal resilience on marshalling self-efficacy, which pertains to self-perceived abilities to obtain support for launching new ventures, remains underexplored.

Moreover, although the influence of self-efficacy on entrepreneurial perceptions and attitudes, such as the intention to establish new businesses, is well-established, there has been a paucity of research on the impact of specific dimensions of entrepreneurial self-efficacy. In this line, marshalling self-efficacy's effect on the perception of social support remains underexplored. Perceived social support is understood as the encouragement and assistance an individual expects from their immediate environment in their pursuit to become a social entrepreneur (Tran & Von Korflesch, 2016).

Previous studies have highlighted the positive relationship between perceived social support and entrepreneurial development, emphasizing the importance of both social and institutional support (Fox et al., 2023; Li et al., 2023).

Similarly, the influence of marshalling self-efficacy on the intention to pursue sustainable business ventures—characterized by a person's mindset and commitment to create a new enterprise that aims to generate economic, social, and environmental value in the long term—has not been extensively examined (Vuorio et al., 2018). This issue is currently of high importance, due to the need for entrepreneurs' business models to be aligned with sustainability for achieving the Sustainable Development Goals (Criado-Gomis et al., 2018). Sustainable entrepreneurship has gained increased significance, focusing on the preservation of nature, support for life and community, and the creation of services and products that enhance the well-being of individuals, the economy, and society (Terán-Yépez et al., 2020).

This study contends that there is a knowledge gap, and it is relevant to deepen the understanding of the interactions among these variables in sustainable entrepreneurship development. Therefore, the objective of this research is examines the impact of resilience on marshalling self-efficacy and its subsequent effects on perceived social support and the intention to pursue sustainable entrepreneurship. Uniquely, this research aims to deepen our understanding of the role of personal resilience, and a less studied type of self-efficacy related to the ability to persuade in order to obtain support. Furthermore, it specifically examines the impact of these conditions on perceptions of social support and the intention to pursue sustainable entrepreneurship. As has been argued, understanding the conditions incident to the development of sustainable entrepreneurship in South America is of crucial importance due to the environmental and social problems faced by this region (Rosario-Ortiz et al., 2023; Zarbá et al., 2022).

An online self-report survey was completed by 404 university students from Chile and Ecuador enrolled in business administration and engineering programs. The selection of management and engineering students from South America is justified due to the high esteem in which entrepreneurship is held as a vehicle for social and economic development in the region (Soto et al., 2022). The focus on students in administration and engineering is also significant because, in response to growing concerns about sustainability, these programs are increasingly adopting methodologies that encourage students to develop environmentally conscious and community-oriented products.

The online survey comprised the Brief Resilience Scale (Smith et al., 2008), McGee et al.'s Multidimensional Self-Efficacy Scale (2009), Hockerts' Social Entrepreneurial Antecedents Scale (SEAS) (Hockerts, 2015), and an adapted version of Liñan and Chen's entrepreneurial intention scale (Chen et al., 2009) to evaluate the intention to establish new sustainable enterprises. Statistical analysis was conducted using PLS-SEM methodology, as this approach is suitable for analysing relationships between observed and latent variables within a complex model that includes abstract concepts and facilitates robustness assessments of measurements (Hair et al., 2019).

From a theoretical perspective, this research enriches the understanding of the individual and social factors that shape university students' inclination to establish new sustainable businesses. It offers fresh insights into the role of personal resilience, which is associated with the ability to adapt and recover from adversity (Masten, 1994), in cultivating self-perceived abilities to garner support for business creation, indicative of marshalling self-efficacy. The study also deepens knowledge of how a specific type of self-efficacy, referred to as marshalling, influences perceptions of social support and sustainable entrepreneurial intention. A more profound understanding of the psychological processes that drive the intention to create sustainable businesses is crucial due to the significant role attributed to environmentally and socially responsible businesses in the economic and social advancement of countries (Crnogaj et al., 2014).

The findings of this research complement the approaches of theories of entrepreneurial behaviour that have supported the effect of entrepreneurial self-efficacy and social environment on entrepreneurial intention, adding depth to their approaches by considering specific domains of self-efficacy and social context, and also considering the effect of resilience on self-efficacy. The Theory of Planned Behaviour (Ajzen, 1991) postulates that individuals' beliefs about their ability to perform a specific behaviour significantly influence entrepreneurial intention. The Entrepreneurial Potential Model (Krueger & Brazeal, 1994) suggests that self-efficacy is an indicator of perceived feasibility and influences the choice of work activities. Shapero and Sokol's (1982) Entrepreneurial Event Theory postulates that the social and cultural environment influences the propensity to start new ventures.

From a practical viewpoint, higher education administrators could utilize the findings from this study to enhance the effectiveness of programs designed to foster the creation of sustainable ventures. These findings could inform the refinement of program and project designs aimed at developing sustainable entrepreneurial skills and attitudes among university students.

The following sections will delineate the stages conducted to complete this research. Initially, the theoretical frame of reference of the study will be explained. Subsequently, the materials and methods used for data collection and analysis will be described. Thereafter, the results will be presented, and their discussion will be conducted from a theoretical and practical perspective. Finally, the main conclusions of the study will be presented, along with an explication of its limitations and a discussion of potential future research.

Theoretical framework

Resilience and marshalling self-efficacy

Personal resilience is an individual's capacity to recover and rebound in the face of adversity, as well as their flexibility and ability to prosper when faced with challenges (Taormina, 2015; Tusaie & Dyer, 2004). Key features include the ability to employ adaptive coping strategies, effective emotion regulation, and the capacity to experience minimal disruptions or even improvements in functioning following challenging experiences. Resilient individuals often demonstrate flexibility in their responses to stress, a strong support network, and a positive outlook that enables them to navigate difficulties more effectively (Troy et al., 2023). Research on entrepreneurial behaviour has demonstrated that resilience is a determinant of perceived entrepreneurial success (Margaça et al., 2022), perceived entrepreneurial performance (Santoro et al., 2021), and entrepreneurial intention (Ciptono et al., 2023).

In parallel, self-efficacy is conceptualized as the belief in one's own abilities to organize and execute the necessary courses of action to achieve specific achievements (Bandura & Wessels, 1994). In entrepreneurship, self-efficacy encompasses entrepreneurs' beliefs and confidence in their capabilities to perform tasks and engage in entrepreneurial behaviours (Barakat et al., 2014). The self-efficacy construct originates from Bandura's (2001) social cognitive theory. This theoretical model describes the dynamic interplay of behavioral, cognitive, and environmental factors that influence each other, resulting in the emergence of new psychological phenomena. The self-efficacy theory posits that behavior initiation and persistence are predominantly influenced by assessments of one's skills and abilities, alongside expectations of successful adaptation to environmental challenges. Similarly, the resilience is cultivated through the process of confronting and surmounting adversities (Taormina, 2015), therefore, resilience functions as the crucible in which self-efficacy is cultivated, while self-efficacy concurrently reinforces resilience (Navickienė & Vasiliauskas, 2024).

The extant literature on the influence of personal resilience on entrepreneurial self-efficacy is limited, with the majority of studies focusing on the impact of resilience on self-efficacy in academic performance at schools and universities (Affuso et al., 2023; Wu et al., 2020), in job performance (Hur et al., 2021; Zhao et al., 2022) and in patients with diseases (Kuang et al., 2021). In this sense, a number of studies have demonstrated that the capacity to adapt and recuperate from challenges in domains such as academia, employment, and health has a favourable influence on one's personal self-perceptions concerning academic and laboral performance, and on the self-perceived capability to surmount health issues (Iqbal et al., 2022; Nikoogoftar & Shahini, 2021; Siddique et al., 2021; Zaman et al., 2021).

Within the entrepreneurship domain, Santoro et al. (2020) demonstrated the relationship between resilience and perceived entrepreneurial success, Wu et al. (2023) revealed the impact of resilience on the entrepreneurial intentions of returned immigrants, and Salem et al. (2023) affirmed the influence of resilience on entrepreneurial orientation. In relation to the impact of resilience on self-efficacy in entrepreneurial contexts, Zaman et al. (2021) asserted that in startup projects, there is a substantial positive effect of project leaders' resilience on their self-efficacy.

Regarding the link between resilience and persuasion capabilities, prior research has associated perseverance, which is a characteristic linked to resilience, with personal skills in persuasion and negotiation within the sales sector. It has been suggested that sales executives need to quickly and effectively deal with

setbacks, failures and adversity (Friend et al., 2016), that achieving customer purchases necessitates sales personnel to persistently persuade customers of the merits of their products (Janakiraman et al., 2019), and that salespeople should possess the adaptive skills necessary to customize their offerings to meet the distinct needs of their customers (Itani et al., 2019). In a similar vein, entrepreneurs are required to demonstrate adaptability, perseverance and persuasion in order to overcome obstacles and obtain funding and support for the development of their businesses (Glade et al., 2025; Harvey, 2025).

In light of the extant theoretical references which establish a relation between the concepts of resilience and self-efficacy (Bandura 2001; Navickienė & Vasiliauskas, 2024; Taormina 2015), the results of previous research which supports the effect of resilience on self-efficacy in areas as academic and labour force performance (Affuso et al., 2023; Hur et al., 2021; Wu et al., 2020; Zhao et al., 2022), disease recovery (Kuang et al., 2021; Nikoogoftar & Shahini, 2021) and leadership (Zaman et al., 2021), and the link between resilience and persuasion capabilities in sales functions (Friend et al., 2016; Itani et al., 2019; Janakiraman et al., 2019), it is reasonable to hypothesize that individual resilience, encompassing persistence and the ability to adapt, could positively influence marshalling self-efficacy, which relates to the self-perceived capacity for persuasive abilities that aid in network building and support acquisition. Consequently, the following hypothesis is proposed:

Hypothesis 1: Psychological resilience has a positive effect on marshalling self-efficacy.

Marshalling self-efficacy and sustainable entrepreneurial intention

Entrepreneurial intention is one of the most frequently examined variables in entrepreneurial behaviour research. Its significance stems from being a key factor in explaining business creation, as it serves as one of the most efficacious indicators for predicting future entrepreneurial actions (Douglas et al., 2021; Esfandiar et al., 2019). This concept is defined as the extent of an individual's readiness to establish a new business or become an entrepreneur (Kautonen et al., 2015). In the context of sustainability, it is viewed as a mindset that signifies an individual's belief and dedication to starting a new venture that aims to generate economic, social, and environmental value in the future (Vuorio et al., 2018).

The association between self-efficacy and entrepreneurial intention has been rigorously analysed (Chen et al., 2020; Murugesan & Jayavelu, 2017). Shapero and Sokol's (1982) theory of the entrepreneurial event support this connection by identifying entrepreneurial intention as an outcome of perceived feasibility, which, similarly to self-efficacy, represent the individual's belief in their capability to undertake entrepreneurial actions. Ajzen's Theory of Planned Behavior (TPB) posits that behavioural intentions, which are the immediate precursors to actual behaviour, are influenced by three key factors: attitudes toward the behaviour, subjective norms, and perceived behavioural control (Ajzen, 1991). Perceived behavioural control reflects the individual's perception of the ease or difficulty of performing the behaviour, which is equivalent to self-efficacy. Ajzen (2020) stated that, conceptually, there is no difference between perceived behavioural control and self-efficacy, as both refer to people's beliefs that they are capable of performing a given behaviour. In accordance with extant theoretical approaches, the effect of general entrepreneurial self-efficacy on entrepreneurial intention has been supported by the findings of previous studies (Liu et al., 2019; Pelegrini & Moraes, 2022).

Studies have also analysed the impact of self-efficacy on intentions to participate in social entrepreneurship, thereby demonstrating its positive influence (Cavazos-Arroyo et al., 2017; Chandra & Kerlin, 2021). Furthermore, the influence of general self-efficacy on the intention to establish sustainable businesses has been examined. Yasir et al. (2020) demonstrated that general entrepreneurial self-efficacy is a reliable predictor of sustainable entrepreneurial intention. Meanwhile, Middermann et al. (2020) supported that perceived self-efficacy exerts a positive effect on sustainable entrepreneurial intention, suggesting that it is a valuable predictor in this context as well. A limited number of studies have explored the impact of particular aspects of entrepreneurial self-efficacy on entrepreneurial intention. In this context, Xu et al. (2023) concluded that self-efficacy, in the aspects of searching, planning and marshalling, has a positive moderating effect on the relationship between entrepreneurial education and general entrepreneurial intention.

Drawing on the findings of earlier studies, this research posits that self-efficacy should also have a positive impact on sustainable entrepreneurial intentions. This approach has two fundamental premises. Firstly, the incidence of general self-efficacy on entrepreneurial intention has been supported in both social entrepreneurship (Sijabat, 2024) and sustainable entrepreneurship (Middermann et al., 2020; Yasir et al., 2020). Secondly, communication and persuasive skills, which are linked to self-efficacy, are also characteristics of the personality trait known as extraversion (Riggio et al., 2003). The extraversion personality trait, characterised by sociability, talkativeness and energy (Costa & McCrae, 1992), has been demonstrated to positively influence both general and sustainable entrepreneurial intentions (Mei et al., 2017; Schlaegel et al., 2021).

In this regard, research indicates that individuals who score highly on extraversion are intended to communicate actively with others, yet they may also experience strong self-consciousness and act in accordance with their own ideas (Mei et al., 2017). Extraversion has also been linked to positive associations with leadership and networking, which can assist in developing new business (Schlaegel et al., 2021). These qualities of extraversion are consistent with the conditions of marshalling self-efficacy, because marshalling self-efficacy involves gaining support for the new venture's vision and the ability to network and communicate the business idea clearly (Nowiński & Haddoud, 2019). Consequently, given the established impact of general self-efficacy on social and sustainable entrepreneurial intention, as well as the recognised effect of extraversion on entrepreneurial intention, the following hypothesis is proposed:

Hypothesis 2: Marshalling self-efficacy has a positive effect on sustainable entrepreneurial intention.

Marshalling self-efficacy and perceived social support

The influence of the social environment is a contributory factor in the creation and development of new businesses, as recognized by theoretical models such as Ajzen's (1991) theory of planned behaviour, which includes subjective norms representing social pressure as a determinant of entrepreneurial intention, and the Global Entrepreneurship Monitor (GEM) model that integrates social support as a crucial element of the entrepreneurial ecosystem affecting the inception of new enterprises (Bosma et al., 2021). More recently, within the context of social entrepreneurship, the concept of perceived social support has been introduced. This construct refers to an individual's perception of the availability of support from their social environment, namely, the encouragement and assistance that a person anticipates from their immediate network to become a social entrepreneur (Tran & Von Korflesch, 2016).

Some research has indicated that persuasiveness and extroversion enhance the perception of support from one's environment. Specifically, the positive association between communication skills and perceived social support has been documented in contexts such as the perceived social support among high school students (Noyan Erbaş et al., 2021) and among patients undergoing medical treatments (Guan et al., 2021). Prior research has also demonstrated that personal communication skills positively influence self-efficacy in domains such as product sales performance (Yang et al., 2011), and that personal persuasion is positively associated with gaining support in leadership roles within work teams (Zhang et al., 2022).

In addition, the impact of social skills and persuasion on obtaining social support has been recognized (Barth, 1988). In this regard, Iwanaga et al. (2023) have asserted that perceived empathic and social self-efficacy are essential for strengthening interpersonal relationships and acquiring social support. In the field of entrepreneurship, Clark (2008) found that entrepreneurs' communication skills and persuasiveness, which are linked to marshalling self-efficacy, influence the level of support they receive from investors for their new ventures. Besides, McGloin et al. (2023) suggested that personal confidence in presenting, adaptability, and empathetic listening are critical for entrepreneurs to effectively interact with and obtain support from various audiences.

In light of these findings which support the impact of communication skills on social support, this research proposes that marshalling self-efficacy, which denotes the self-perceived capability to persuade and motivate individuals to launch a new business, may also positively impact the perceived support for the formation of social enterprises. In the domain of social business, the implementation of such enterprises necessitates effective persuasion and negotiation skills to obtain support from key entities, including volunteer groups, funders and government agencies (Young & Grinsfelder, 2011). Therefore, the following hypothesis is proposed:

Hypothesis 3: Marshalling self-efficacy positively influences perceived social support.

Perceived social support and sustainable entrepreneurial intention

Social support has demonstrated a positive relationship with variables that foster entrepreneurship as positive entrepreneurial attitudes (Liguori et al., 2020), entrepreneurial inclination (Sahban et al., 2016) and entrepreneurial orientation (Setiawan et al., 2022). The favourable influence of social support on entrepreneurial outcomes can be explained by the fact that one of the factors influencing the development of entrepreneurship is the support perceived from the entrepreneurship ecosystem, which includes social, governmental, and private organizational support (Bosma et al., 2021).

The Entrepreneurial Event Model (Shapero & Sokol, 1982) posits that entrepreneurial intentions are primarily influenced by perceived desirability which refers to the degree to which an individual feels that starting a business is an attractive option. Perceived desirability is influenced by the entrepreneurial environment and social norms (Putri & Wijaya, 2023). This phenomenon can be attributed to the notion that individuals who perceive support from their environment and social influences are more inclined to perceive the feasibility of establishing new enterprises. In this regard, research has underscored the pivotal role of social support and influence in shaping entrepreneurial intentions, as it can foster personal confidence, equip entrepreneurs with vital resources, and offer emotional sustenance, all of which are indispensable for aspiring entrepreneurs (Cogan et al., 2022; Fitouri & Zouaoui, 2024).

Hockerts (2015) suggested that enhanced perceived social support promotes the creation of social enterprises because individuals assess the feasibility of an action based not only on their self-efficacy but also on the availability of support systems and networks that will aid in achieving the desired outcomes. Correspondingly, research has also validated the positive impact of social support on the intention to establish new businesses (Acuña-Durán et al., 2021; Ilevbare et al., 2022). Bui et al. (2023) supported that perceived social support are significant positive influences on the intention to become a social entrepreneur, arguing that it enhances individuals' confidence and motivation to pursue social ventures.

In consideration of the established impact of social support on general entrepreneurial intention, which is in accordance with the assertions put forth in the Entrepreneurial Event Model (Shapero & Sokol, 1982), this study posits that perceived social support should exert a favourable influence on sustainable entrepreneurial intention. This proposition is substantiated by research that has validated the influence of perceived social support on entrepreneurial intention in social business (Bui et al., 2023), and the conceptual parallels between social entrepreneurship and sustainable entrepreneurship, given that both forms of entrepreneurship aim to promote the social well-being of the present and future generations by considering the decisions and operations of the firm (W. Young & Tilley, 2006). Therefore, the following hypothesis is proposed:

Hypothesis 4: Perceived social support has a positive impact on sustainable entrepreneurial intention.

Materials and methods

This research analyses students' entrepreneurial behaviour through surveys, which is a quantitative research design. This approach is characterised by the use of structured instruments, such as questionnaires, to collect data and carry out quantitative statistical analysis. This study is also cross-sectional in that it assesses students over a period of time without making longitudinal comparisons over time.

Sample

Given the complexities associated with conducting convenience samples, particularly due to the financial demands and lower response rates that are common in online surveys, the use of convenience samples offers significant advantages. Convenience samples are comparatively easier to recruit and are predominantly located close to academic institutions, thereby increasing accessibility and minimising recruitment costs

(Arnold & Triki, 2018). To address the inherent shortcomings of convenience sampling, researchers can emphasise the importance of diversity within the study population and implement sample weighting methods (Penn et al., 2023; Ørmen, 2020). In the context of this research, it was confirmed that the sample included sufficient variability in terms of gender, age and different business and engineering disciplines within Chile.

The greater proportion of men in engineering programs corresponds with the lower representation of women in science, technology, engineering, and mathematics (STEM) careers (Martínez-Velasco et al., 2024). The mean age of the students was 23.71 years with a standard deviation of 7.33 years, 58.17% of these were in the initial four semesters of their degree program, while 41.83% were between the fifth and twelfth semesters. The majority of participants in the survey were students pursuing degrees in Industrial Engineering ($n = 63$), Bachelor's Degree in Administration ($n = 59$), Accounting and Auditing ($n = 57$), and Commercial Engineering ($n = 53$). Only fully completed surveys were included for analysis in this research. Table 1 presents the characteristics of the student sample.

Measurement

An online self-report survey was disseminated through the Survey Monkey platform, along with the distribution of access links to request student participation. The response collection period for the online survey lasted from October 2022 to April 2023. The students responded to the self-report survey independently and privately via an electronic device, which facilitated the honesty of their answers. Additionally, the students assessed are adults who are less influenced by their social environment. Online self-report surveys are a widely used method in recent research associated with entrepreneurial behaviour (Matteson et al., 2011). Compared to paper-based surveys, they tend to have fewer missing and inappropriate responses. This is attributed to the structured nature of online forms, which can guide respondents more effectively and reduce errors. Furthermore, online surveys can mitigate the potential for bias associated with the presence of an interviewer, leading to more candid and self-disclosed responses, particularly on sensitive topics (Milton et al., 2017). This research project obtained approval from the ethics committee at Universidad de Las Américas (ID: 1312022). In compliance with the ethics committee's guidelines, the survey included a section for written informed consent. Survey access was provided exclusively to students who consented by accepting the form.

The survey assessed psychological resilience using the Brief Resilience Scale (BRS) developed by Smith et al. (2008). These researchers asserted that existing measures of resilience before their work were too extensive, and that the BRS is an efficient and reliable tool for assessing resilience more rapidly. The BRS has been applied in recent studies (Caniël et al., 2022; Konstantinov et al., 2021) as well as in recent investigations into entrepreneurial resilience (Moke et al., 2018; Ojewumi et al., 2020), showing appropriate reliability in its measurements.

The measurement of marshalling-type entrepreneurial self-efficacy was conducted using the Multidimensional Entrepreneurial Self-Efficacy Scale (MSE) developed by McGee et al. (2009). This scale

Table 1. Sample description

	Women		Men		Total	
	n	%	n	%	n	%
<26 years old	143	80.34%	175	77.43%	318	78.71%
From 25 to 39 years old	23	12.92%	34	15.04%	57	14.11%
>40 years old	11	6.18%	24	10.62%	35	8.66%
From 1 to 4 semester	102	57.30%	133	58.85%	235	58.17%
From 5 to 12 semester	76	42.70%	93	41.15%	169	41.83%
Administration and accounting careers	82	46.07%	72	31.86%	154	38.12%
Engineering careers	96	53.93%	154	68.14%	250	61.88%
Chile	114	64.04%	148	65.49%	262	64.85%
Ecuador	64	35.96%	78	34.51%	142	35.15%
Total	178	100.00%	226	100.00%	404	100.00%

The category 'engineering careers' comprises students enrolled in fields such as industrial, production, and computer engineering. The 'administration and accounting careers' encompass students in programs like commercial engineering, bachelor's degree in administration, administrative engineering, and accounting.

is structured around the entrepreneurial tasks involved in the business creation process, which are divided into four distinct phases: (1) search, (2) planning, (3) marshalling, and (4) execution (Mueller & Goic, 2003). Building on this taxonomy, McGee et al. (2009) validated the Multidimensional Entrepreneurial Self-Efficacy Scale, which identifies five dimensions of entrepreneurial self-efficacy: searching, planning, marshalling, managing people, and financial management. These dimensions are assessed through statements (observed variables) that respondents evaluate on a four-point confidence scale. Participants state their level of confidence in response to the question: 'How confident are you in your personal ability to...?' The present research incorporated the three statements from the MSE that are specific to the measurement of marshalling self-efficacy.

The entrepreneurial intention was assessed using the scale by Liñan and Chen (2009), which contains statements aimed at determining the propensity to start a new business in the future. This scale has been extensively employed and has shown reliable performance in assessing entrepreneurial intention. To evaluate sustainable entrepreneurial intention, the scale's statements were tailored to inquire about university students' intentions to create businesses that are socially and environmentally sustainable. Additionally, before responding to these statements, the students reviewed the following definition of sustainable entrepreneurship: Sustainable entrepreneurship is the development of businesses centered on innovative environmental products and services that have the potential for considerable market success and contribute to positive social change (Schaltegger & Wagner, 2011).

The assessment of perceived social support for social entrepreneurship was conducted using the 'marshalling' dimension of Hockerts (2015) Social Entrepreneurial Antecedents Scale (SEAS), which includes statements pertaining to the perception of access to formal and informal support networks for establishing a social enterprise. This scale has been effectively utilized in entrepreneurship research to evaluate perceived social support, exhibiting satisfactory reliability (Igwe et al., 2020; Jadmiko, 2021). In this study, three statements from the 'perceived social support' dimension of SEAS were employed. Table 2 presents the study variables along with the response options.

Statistical analysis

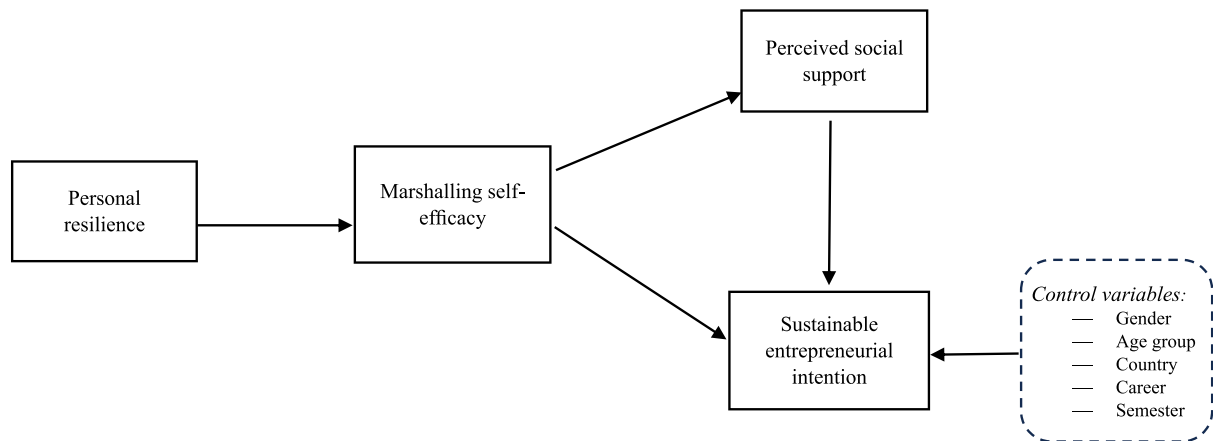
This study examines the relationships between latent variables by evaluating the proposed hypotheses using PLS-SEM analysis. This method is among the most frequently employed multivariate data analysis techniques in business and social science research (Memon et al., 2021). The broad acceptance of PLS-SEM stems from its capability to concurrently evaluate relationships between observed and latent variables within a complex model, as well as to conduct multiple robustness tests while accounting for the measurement error intrinsic to the assessment of abstract concepts (Hair et al., 2019). PLS-SEM models are extensively utilized in the investigation of entrepreneurial behaviour.

PLS-SEM permits the use of smaller sample sizes than Covariance Based SEM (CB-SEM), thus enabling the effective analysis of complex models while maintaining accuracy, particularly with the inverse square root and gamma-exponential methods (Hair et al., 2014; Kock & Hadaya, 2018). One extensively utilized criterion is the '10 times rule' for sample size in Partial Least Squares Structural Equation Modeling (PLS-SEM). This suggests that the minimum sample size should be 10 times the maximum number of indicators pointing to a latent variable. However, more recent research has proposed more demanding methods. Wagner and Grimm (2023) suggest that the sample size should be 30 times the maximum number of indicators pointing to a latent variable. Similarly, Kock and Hadaya (2018) proposed the 'minimum R-squared method', which uses minimum R² in the model to estimate the minimum sample size. In light of the aforementioned criteria, the minimum sample size for the PLS-SEM model proposed in this study, which comprises 10 indicators pointing to a latent variable and a maximum of six observed variables linked to a construct (SEI), is 100, 300 and 157 observations, respectively. The sample size of 404 observations exceeds the minimum threshold and is also larger than the sample sizes used in recent studies analysing entrepreneurial intentions among university students (Dar et al., 2024; Elnadi & Gheith, 2023; Hossain et al., 2023; Murad et al., 2024). Figure 1 illustrates the proposed relationships between the latent variables.

Table 2. Statements of the measurement scales and levels of response

Latent variables	Statements (observed variables)	Code	Response options
Marshalling self-efficacy	To persuade others to identify with and believe in my vision and plans for starting a new business.	sma1	Confidence scale from “very little confidence” (1), “little confidence” (2), “moderate confidence” (3), to “high confidence” (4).
	Establish a network of contacts and exchange information with others.	sma2	
	Clearly and concisely explain my business idea in everyday language, either verbally or in writing.	sma3	
Resilience	I tend to bounce back quickly after hard times.	res1	Likert scale from “strongly disagree (1), “disagree” (2), “slightly disagree” (3), “neither disagree nor agree” (4), “slightly agree” (5), “agree” (6) to “strongly agree” (7).
	It does not take me long to recover from a stressful event	res2	
Sustainable entrepreneurial intention	I usually come through difficult times with little trouble	res3	
	I am committed to doing whatever is necessary to become a sustainable entrepreneur.	sei1	
	My career objective is to become a sustainable entrepreneur.	sei2	
	I will exert maximum endeavour to establish and manage my own socially and environmentally sustainable enterprise.	sei3	
	I am committed to founding a socially and environmentally sustainable firm in the future.	sei4	
	I have given serious thought to establishing a socially and environmentally sustainable firm.	sei5	
Perceived social support	I have a strong intention to establish a socially and environmentally sustainable firm in the future.	sei6	
	It is feasible to attract investors to establish an organization aimed at solving social problems.	pss1	
	Individuals would support me if I intended to establish an organization to help socially marginalized people.	pss2	
	If I were to plan on addressing a significant social issue, I would gain support from people.	pss3	
Control variables	Gender	gen	1= Woman, 0= Men
	Age cohort	age	Under 26 years = 1, Older than 25 years = 0*
	Country	count	Chile = 1, Ecuador = 0
	Career area	career	Administration and accounting = 1 Engineering careers=0
	Semester in academic program	semester	From semester to 1 to 12**

*Students below the age of 26 fall within the classification of the centennial cohort. ** In South America, programs in management and engineering typically range from 4 to 6 years, or 8 to 12 semesters.

**Figure 1.** PLS-SEM model associated with the research hypothesis. Elaborated by the authors .

Results

Measurement model assessment

The reliability and convergent validity analysis shown in Table 3 reveals that all the scales in the model demonstrated Cronbach's alpha values from 0.753 to 0.948 and Dillon-Goldstein's rho values above 0.8. Additionally, the average variance extracted (AVE) for the latent constructs exceeded 0.650 across all latent variables. The standardized factor loadings also surpassed 0.700 for every construct. These indicators affirm

Table 3. Reliability and convergence

Constructs	Observed variables	Loadings	Cronbach A	CR rho_a	DG	AVE
Resilience	res1	0.898	0.804	0.827	0.885	0.720
	res2	0.753				
	res3	0.887				
Marshalling self-efficacy	sma1	0.837	0.753	0.754	0.859	0.670
	sma2	0.806				
	sma3	0.811				
Perceived social support	pss1	0.730	0.795	0.817	0.881	0.713
	pss2	0.903				
	pss3	0.890				
Sustainable EI	sei1	0.788	0.948	0.950	0.959	0.795
	sei2	0.906				
	sei3	0.908				
	sei4	0.928				
	sei5	0.915				
	sei6	0.903				

Sustainable EI = Sustainable entrepreneurial intention, Cronbach A= Cronbach's alpha, CR rho_a = Composite Reliability, DG = Dillon-Goldstein's rho, AVE = Average Variance Extracted.

the appropriate levels of reliability and convergent validity for the latent variables in the PLS-SEM model, in line with criteria stipulated by experts who require AVE > 0.5, factor loading > 0.7, Cronbach's alpha > 0.7, CR rho_a > 0.7, and Dillon-Goldstein's ρ > 0.7 (Hair et al., 2011; Riou et al., 2016).

Discriminant validity

Table 4 presents a comparison between the squared correlations of the latent variables and the AVE coefficients. The results affirm the model's adequate discriminant validity, adhering to the criterion established by Fornell and Larcker (1981), which dictates that AVE coefficients must be larger than the squared correlations among latent variables.

PLS-SEM model

Table 5 shows the results from the global PLS-SEM model analysis of the 404 responses. The parameters achieved include R2 values above 0.100, absolute GOF exceeding 0.310, relative GOF over 0.900, Q2 greater than 0.35, and F2 surpassing 0.150. According to these metrics, the PLS-SEM model has low to moderate explanatory power and an acceptable overall goodness of fit (Hair et al., 2021; Vinzi et al., 2010).

The outcomes presented in Table 6 demonstrate that the path coefficient between resilience and marshalling self-efficacy was positively significant at the 99% confidence level ($\beta = 0.400$, $p = 0.000$). The positive effect of marshalling self-efficacy on sustainable entrepreneurial intention was also significant at the 99% confidence level ($\beta = 0.146$, $p = 0.006$). Additionally, the results indicated a positive and significant relationship between marshalling self-efficacy and perceived social support at the 99% confidence level ($\beta =$

Table 4. Squared interfactor correlation versus average variance extracted

	Resilience	Marshalling self-efficacy	Perceived social support	Sustainable EI
Resilience	1.000	–	–	–
Marshalling self-efficacy	0.160	1.000	–	–
Perceived social support	0.103	0.123	1.000	–
Sustainable EI	0.049	0.073	0.191	1.000
AVE	0.720	0.670	0.713	0.795

Sustainable EI = Sustainable entrepreneurial intention.

Table 5. Structural model – predictive power

R2	Q2	F2
0.168	0.428	0.202

Table 6. Structural model - standardized path coefficients (Bootstrap)

	β	p-value	f2	SE	IC (95%)	VIF	Hypothesis
Resilience -> Marshalling SE	0.400	0.000	0.056	0.045	(0.310; 0.490)	1.000	H1: Accepted
Marshalling SE -> Perceived SS	0.350	0.000	0.048	0.050	(0.251; 0.449)	1.000	H2: Accepted
Marshalling SE -> Sustainable EI	0.146	0.006	0.009	0.055	(0.036; 0.256)	1.171	H3: Accepted
Perceived SS -> Sustainable EI	0.399	0.000	0.053	0.052	(0.289; 0.504)	1.208	H4: Accepted
<i>Control variables</i>							
Country -> Sustainable EI	-0.074	0.164	0.002	0.052	(-0.177; 0.029)	1.213	
Age cohort -> Sustainable EI	-0.082	0.094	0.002	0.050	(-0.181; 0.017)	1.260	
Career -> Sustainable EI	-0.025	0.581	0.000	0.046	(-0.118; 0.068)	1.088	
Semester -> Sustainable EI	0.023	0.615	0.000	0.045	(-0.067; 0.113)	1.117	
Gender -> Sustainable EI	0.093	0.042	0.003	0.046	(0.002; 0.184)	1.043	

Marshalling SE = Marshalling self-efficacy, Perceived SS= Perceived social support, Sustainable EI = Sustainable entrepreneurial intention.

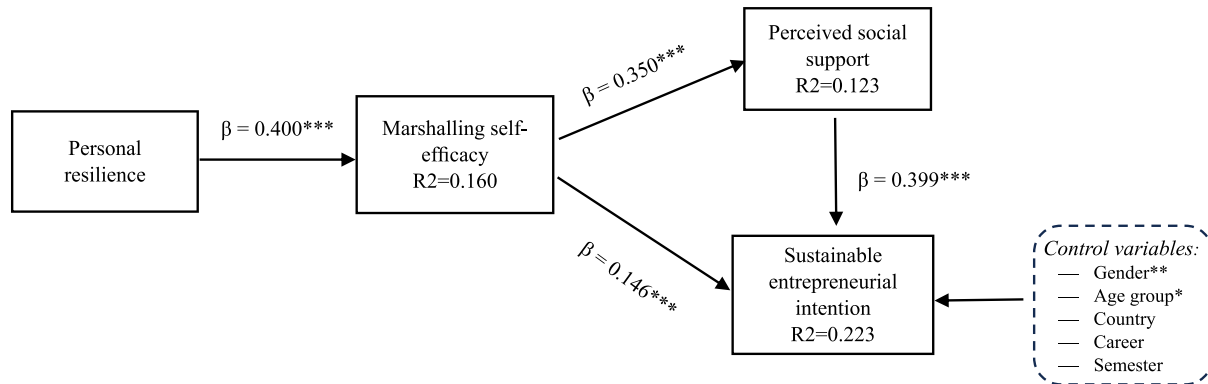


Figure 2. Results of the PLS-SEM model. *** = standardized coefficients significant at the 99% confidence level. ** = standardized coefficients significant at the 95% confidence level. * = standardized coefficients significant at the 90% confidence level. Elaborated by the authors.

0.350, $p = 0.000$), further confirming the positive and significant influence of perceived social support on sustainable entrepreneurial intention ($\beta = 0.399$, $p = 0.000$).

Among the control variables, only the female gender exhibited a positive and significant impact on entrepreneurial intention at the 95% confidence level ($\beta = 0.093$, $p = 0.043$). Table 6 includes standard error values (SE), confidence intervals (IC), and variance inflation factors (VIF), all of which were below 2.0, indicating no multicollinearity issues (Vinzi et al., 2010). Furthermore, the effect size f^2 of the latent variables is presented. According to Cohen (2013), values close to 0.05 represent a low effect, which is consistent with the magnitudes of R^2 obtained, which do not exceed 0.170. The control variables show f^2 values close or equal to zero.

Figure 2 illustrates the standardized coefficients and their statistical significance, as well as the R^2 values related to the dependent variables of the model.

Discussion

This study examines the effect of psychological resilience on enhancing marshalling entrepreneurial self-efficacy and assesses the impact of such self-efficacy on sustainable entrepreneurial intentions and perceived social support. The results compiled in Table 6 validate the proposed hypotheses by confirming the statistical significance of the standardized coefficients associated with these hypotheses at a 99% confidence level (p -values < 0.01). Notably, the findings indicate that resilience and self-efficacy are significant psychological traits that can aid in the development of socially and environmentally sustainable ventures.

Theoretically, this research provides new evidence that augments theories regarding the determinants of entrepreneurial intention and the establishment of sustainable businesses. The results enhance the comprehension of resilience's impact on entrepreneurial self-efficacy, particularly in the dimension related to personal abilities for garnering support and networking. The confirmation of a positive effect of psychological resilience on marshalling self-efficacy, as posited in hypothesis 1, indicates that the capacity of

engineering and business university students to adapt to and rebound from challenges amplifies their perceived ability to influence others, forge collaborative networks, and secure support to access investments, credit, supplier products, or sales channels. These insights correspond with findings from other research domains, which demonstrate a positive link between resilience and self-efficacy in secondary and higher education (Affuso et al., 2023; Wu et al., 2020), as well as in job performance (Hur et al., 2021; Zhao et al., 2022).

The results that substantiate the impact of marshalling self-efficacy on perceived social support and sustainable entrepreneurial intention, associated with hypotheses 2 and 3, corroborate and expand upon the premises of theoretical models such as the Entrepreneurial Potential Model (Krueger & Brazeal, 1994). This model suggests that self-efficacy is indicative of perceived viability and is a primary factor in choosing entrepreneurship as a career. Furthermore, the influence of perceived social support on sustainable entrepreneurial intention, related to hypothesis 4, is conceptualized within The Entrepreneurial Event Theory by Shapero and Sokol (1982), which posits that social and cultural milieus influence the propensity to initiate new enterprises. Consequently, this study enhances the understanding of the factors preceding entrepreneurial intention by examining marshalling self-efficacy in the context of sustainable business.

The evidence obtained holds important practical implications for university administrators tasked with strengthening the entrepreneurial attitudes and competencies of students. Persons responsible for professional training can use this research to strengthen their students' sustainable entrepreneurial intentions. Firstly, this can be achieved by encouraging the development of skills that promote resilience, enabling students to overcome difficulties and adapt to challenges. In accordance with the conclusions of Joyce et al. (2018), resilience-strengthening programmes can be categorised as follows: firstly, cognitive behavioural therapy (CBT)-based interventions; secondly, mindfulness-based interventions; and thirdly, mixed interventions, which combine CBT and mindfulness training. In the field of entrepreneurship, strengthening resilience can be achieved through targeted training programmes that focus on developing coping strategies, promoting positive emotions, social support, an adaptive mindset, and encouraging a belief in one's ability to overcome challenges (Alshebami, 2022; Hartmann et al., 2022). Likewise, implementing effective interventions that address the recovery paradox during times of change and uncertainty can further support entrepreneurs in building their resilience (Battisti et al., 2025). Therefore, university administrators could promote entrepreneurial challenges that involve solving social and environmental problems. For example, they could set up entrepreneurship incubators that present sustainable challenges to students. These challenges would allow students to train their adaptability and belief in their ability to overcome challenges in face-to-face business scenarios.

Secondly, university administrators should focus on strengthening students' marshalling self-efficacy. Entrepreneurial self-efficacy can be strengthened through specific initiatives such as coaching-based programs (Hunt et al., 2019), vocational entrepreneurship education programs (Maritz & Brown, 2013) or programs based on case application and storytelling (Bachmann et al., 2021). In this line, universities have cultivated the persuasive abilities of their students, related to marshalling self-efficacy, through programs based on methods such as the elevator pitch, which involves presenting a brief business proposal within the limited timeframe of an elevator ride (McCollough et al., 2016), and the AIDA framework, which is designed to attract the attention, interest, desire, and action of an audience (Song et al., 2021). These techniques have been employed to equip students with the skills necessary to secure external support in venture development or to facilitate product sales (Cheung et al., 2022; Fernández-Vázquez & Álvarez-Delgado, 2020). Therefore, university administrators should promote marshalling self-efficacy by implementing outreach programmes or projects in universities connecting students with investors, banks, suppliers and other entrepreneurship ecosystem organisations, including government institutions. In these contexts, students could be trained in persuasion techniques to enhance their self-perceptions related to the ability to obtain support and build networks.

Conclusions

This research elucidates that resilience and self-efficacy represent essential psychological characteristics that can enhance the formation of enterprises that are socially and environmentally sustainable. In particular, it has been evidenced that resilience significantly impacts the development of

marshalling self-efficacy, which in turn influences the perception of social support and the intentions associated with sustainable entrepreneurship. Consequently, this study has yielded novel insights that enhance our comprehension of the interplay between personal characteristics that are pivotal to fostering the creation of sustainable businesses. The findings extend the frameworks of theories of entrepreneurial behaviour that have established the influence of entrepreneurial self-efficacy and social context on entrepreneurial intention (Ajzen, 1991; Shapero & Sokol, 1982) by incorporating specific domains of self-efficacy and social context, and by assessing the impact of resilience on self-efficacy.

The results of this study are significant in demonstrating how an individual's capacity to adapt and overcome adversity, related to resilience, impacts their self-perception with regard to their capabilities in relation to obtaining support. Furthermore, it provides a more comprehensive understanding of self-efficacy's role in fostering new sustainable enterprises by clarifying the influence of a specific type of self-efficacy, known as marshalling self-efficacy, on perceptions and attitudes conducive to the creation of sustainable ventures. The results obtained can provide a valuable source of information for university administrators responsible for cultivating entrepreneurial mindsets and skills among students. It is therefore relevant that they focus on reinforcing resilience and marshalling self-efficacy through dedicated programmes using effective methods.

Limitations and future research

The research scrutinizes the responses of students from South America who are enrolled in management and engineering programs, excluding students from other continents and those engaged in different fields of study. This study only incorporates responses from Chile and Ecuador; therefore, caution should be exercised when generalizing the obtained results. Future studies should include a larger sample size from a greater number of South American countries in order to increase the coverage of the analysis. Forthcoming research should also assess resilience, marshalling self-efficacy, and the intention to engage in sustainable entrepreneurship across countries on other continents, such as Asia, North America, and Europe, in order to affirm the findings of this study within diverse cultural milieus. In addition, the convenience sampling approach employed in the study constrains the extrapolation of the results, despite the assertion that the demographic characteristics of the sample are representative of the student conditions in South America.

Self-efficacy was measured using a scale established by McGee et al. (2009), which comprises three statements. Although this scale has been validated and used in recent studies (Ioannou & Retalis, 2025; Jayawardhana & Weerakoon, 2024; Ruiz-Dotras & Lladós-Masllorens, 2022; van Hugten et al., 2023), the small number of statements may potentially fail to encompass all aspects of marshalling self-efficacy. Future studies could develop and incorporate marshalling self-efficacy measurement scales with a larger number of statements to perform an assessment from a broader perspective.

The R² value obtained in this study is lower than 0.25, indicating low explanatory capacity (Hair et al., 2019). However, this parameter should always be interpreted in the context of the particular study (Garson, 2016; Hair et al., 2019). It is important to note that R² values of 0.10 are sometimes considered satisfactory in certain research contexts, for example when predicting stock returns (Raithel et al., 2012). Similarly, Urbach and Ahlemann (2010) report that R² should be above 0.10. With the purpose of developing models with higher explanatory capacity regarding sustainable entrepreneurial intention, future research could add independent variables such as personality and innovativeness, which have shown positive influence on entrepreneurial intentions (Awwad & Al-Aseer, 2021; Magableh & Kannan, 2023).

This research was conducted using a cross-sectional design, as this is a common approach in studies evaluating entrepreneurial intention among higher education students (Awaah & Hilton, 2025; de Moraes et al., 2024; Fragoso et al., 2020; Uddin et al., 2024). While these studies are useful for researching this topic, it is important to consider their limitations, such as selection and non-response biases (Kesmodel, 2018; Ramke et al., 2018). The online self-response survey used in this study is a well-established method in the field of student entrepreneurial intention research (He et al., 2024; McMahon et al., 2024; Vankov et al., 2024), however, it does have certain limitations, such as the possibility of self-report bias (Hirao et al., 2021). Conversely, online surveys offer distinct advantages, including access to diverse demographics and

enhanced speed and efficiency in acquiring responses (Behrend et al., 2011; Rhodes et al., 2003). Future studies could consider the incorporation of methods involving face-to-face interactions.

The objective of this research is to examine the impact of resilience on self-efficacy and its subsequent effects on perceived social support and intention to pursue sustainable entrepreneurship from a general perspective. The present study does not encompass moderation and mediation analysis, due to the extensive range of variables that merit analysis as intervening conditions. These include personality traits, intelligence, demographic characteristics and life values that may influence behavioral intentions. According to Ajzen (2020), the influence of these personal characteristics on intentions is presumed to be indirect, operating as intervening variables. Therefore, subsequent research endeavours may consider incorporating these into mediating or moderating analyses. Finally, upcoming studies ought to investigate the effects of resilience and particular elements of entrepreneurial self-efficacy on significant entrepreneurial behaviour variables, like the perceived success of sustainable enterprises or the innovation methods applied in such ventures.

Disclosure statement

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Data availability statement

The dataset produced and/or analysed during the current study are available from the corresponding author on reasonable request

CRedit authorship contribution statement

Gustavo Barrera-Verdugo: Conceptualization, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Resources, Software, Supervision, Validation, Visualization, Writing—original draft, Writing—review & editing.

Jaime Cadena-Echeverría: Investigation, Project administration, Resources, Supervision, Validation, Writing—original draft, Writing—review & editing.

Daniel Duran-Sandoval: Funding acquisition, Investigation, Project administration, Resources, Supervision, Validation, Writing—original draft, Writing—review & editing.

Antonio Villarroel-Villarroel: Funding acquisition, Investigation, Resources, Supervision, Validation, Writing—review & editing.

References

- Acuña-Durán, E., Pradenas-Wilson, D., Oyanedel, J. C., & Jalon-Gardella, R. (2021). Entrepreneurial intention and perceived social support from academics-scientists at Chilean universities. *Frontiers in Psychology*, 12, 682632. <https://doi.org/10.3389/fpsyg.2021.682632>
- Affuso, G., Zannone, A., Esposito, C., Pannone, M., Miranda, M. C., De Angelis, G., & Bacchini, D. (2023). The effects of teacher support, parental monitoring, motivation and self-efficacy on academic performance over time. *European Journal of Psychology of Education*, 38(1), 1–23. <https://doi.org/10.1007/s10212-021-00594-6>
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)

- Ajzen, I. (2020). The theory of planned behavior: Frequently asked questions. *Human Behavior and Emerging Technologies*, 2(4), 314–324. <https://doi.org/10.1002/hbe2.195>
- Alshebami, A. S. (2022). Psychological features and entrepreneurial intention among Saudi small entrepreneurs during adverse times. *Sustainability*, 14(13), 7604. <https://doi.org/10.3390/su14137604>
- Amankwah-Amoah, J., Khan, Z., Ifere, S. E., Nyuur, R. B., & Khan, H. (2022). Entrepreneurs' learning from business failures: An emerging market perspective. *British Journal of Management*, 33(4), 1735–1756. <https://doi.org/10.1111/1467-8551.12557>
- Arnold, V., & Triki, A. (2018). Use of student and online participants in behavioural accounting research. In *The Routledge companion to behavioural accounting research* (pp. 287–299). Routledge. [10.4324/9781315710129-20](https://doi.org/10.4324/9781315710129-20).
- Awaah, F., & Hilton, S. K. (2025). Students career interest and understanding of corporate governance education in Ghana. *Higher education, Skills & work-Based Learning*, 15(1), 19–28. <https://doi.org/10.1108/HESWBL-05-2023-0109>
- Awad, M. S., & Al-Aseer, R. M. N. (2021). Big five personality traits impact on entrepreneurial intention: The mediating role of entrepreneurial alertness. *Asia Pacific Journal of Innovation and Entrepreneurship*, 15(1), 87–100. <https://doi.org/10.1108/APJIE-09-2020-0136>
- Azila-Gbettor, E. M., Mensah, C., & Abiemo, M. K. (2022). Self-efficacy and academic programme satisfaction: Mediating effect of meaningfulness of study. *International Journal of Educational Management*, 36(3), 261–276. <https://doi.org/10.1108/IJEM-09-2021-0353>
- Bachmann, A. K., Maran, T., Furtner, M., Brem, A., & Welte, M. (2021). Improving entrepreneurial self-efficacy and the attitude towards starting a business venture. *Review of Managerial Science*, 15(6), 1707–1727. <https://doi.org/10.1007/s11846-020-00394-0>
- Bahora, M., Hanafi, S., Chien, V. H., & Compton, M. T. (2008). Preliminary evidence of effects of crisis intervention team training on self-efficacy and social distance. *Administration and Policy in Mental Health*, 35(3), 159–167. <https://doi.org/10.1007/s10488-007-0153-8>
- Bakar, M. S., Ramli, A., Ibrahim, N. A., & Muhammad, I. G. (2017). Entrepreneurial self-efficacy dimensions and higher education institution performance. *International Journal of Management Studies*, 24(1), 119–137. <https://doi.org/10.32890/ijms.24.1.2017.10479>
- Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology*, 52(1), 1–26. <https://doi.org/10.1146/annurev.psych.52.1.1>
- Bandura, A., & Wessels, S. (1994). *Self-efficacy in changing societies* (Vol. 4). Cambridge University Press.
- Barakat, S., Boddington, M., & Vyakarnam, S. (2014). Measuring entrepreneurial self-efficacy to understand the impact of creative activities for learning innovation. *International Journal of Management Education*, 12(3), 456–468. <https://doi.org/10.1016/j.ijme.2014.05.007>
- Barrera-Verdugo, G., Cadena-Echverría, J., Durán-Sandoval, D., & Villarroel-Villarroel, A. (2024). Analysing the effect of resilience and perceived social environment on university students' intention to start sustainable ventures. *PLOS ONE*, 19(4), e0301178. <https://doi.org/10.1371/journal.pone.0301178>
- Barth, R. P. (1988). Social skill and social support among young mothers. *Journal of Community Psychology*, 16(2), 132–143. [https://doi.org/10.1002/1520-6629\(198804\)16:2<132::AID-JCOP2290160204>3.0.CO;2-Z](https://doi.org/10.1002/1520-6629(198804)16:2<132::AID-JCOP2290160204>3.0.CO;2-Z)
- Battisti, M., Gish, J. J., Hatak, I., & Zhou, H. (2025). Establishing a recovery menu to increase the resilience of entrepreneurs. *British Journal of Management*, 36(1), 56–72. <https://doi.org/10.1111/1467-8551.12827>
- Behrend, T. S., Sharek, D. J., Meade, A. W., & Wiebe, E. N. (2011). The viability of crowdsourcing for survey research. *Behavior Research Methods*, 43(3), 800–813. <https://doi.org/10.3758/s13428-011-0081-0>
- Bento, N., Gianfrate, G., & Thoni, M. H. (2019). Crowdfunding for sustainability ventures. *Journal of Cleaner Production*, 237, 117751. <https://doi.org/10.1016/j.jclepro.2019.117751>
- Bosma, N., Hill, S., Ionescu-Somers, A., Kelley, D., Guerrero, M., & Schott, T. (2021). *GEM global report 2020/2021*. GER Association, LBS, Regents Park. (Note: Reports with one or more corporate authors are listed by the corporate author).
- Bui, D. T., Vu, T. N., Tran, T. V. H., Duong, C. D., & Le, T. L. (2023). Impact of institutional environment on social entrepreneurial intentions. *Journal of Open innovation, Technology, Market, & Complexity*, 9(3), 100120. <https://doi.org/10.1016/j.joitmc.2023.100120>
- Caniël, M. C., Hatak, I., Kuijpers, K. J., & de weerd-Nederhof, P. C. (2022). Trait resilience instigates innovative behaviour at work? A cross-lagged study. *Creativity and Innovation Management*, 31(2), 274–293. <https://doi.org/10.1111/caim.12486>
- Caputo, A., Nguyen, V. H. A., & Delladio, S. (2025). Risk-taking, knowledge, and mindset: Unpacking the antecedents of entrepreneurial intention. *International Entrepreneurship & Management Journal*, 21(1), 1–29. <https://doi.org/10.1007/s11365-024-01064-3>
- Cavazos-Arroyo, J., Puente-Díaz, R., & Agarwal, N. (2017). An examination of certain antecedents of social entrepreneurial intentions among Mexico residents. *Revista Brasileira de Gestão de Negócios*, 19(64), 180–199. <https://doi.org/10.7819/rbgv.19i643129>
- Chandra, Y., & Kerlin, J. A. (2021). Social entrepreneurship in context: Pathways for new contributions in the field. *Journal of Asian Public Policy*, 14(2), 135–151. <https://doi.org/10.1080/17516234.2020.1845472>

- Chen, C.-C., Sun, B., Yang, H., Zheng, M., & Li, B. (2020). Emotional competence, entrepreneurial self-efficacy, and entrepreneurial intention: A study based on China college students' social entrepreneurship project. *Frontiers in Psychology*, 11, 547627. <https://doi.org/10.3389/fpsyg.2020.547627>
- Chen, X. P., Yao, X., & Kotha, S. (2009). Entrepreneur passion and preparedness in business plan presentations: A persuasion analysis of venture capitalists' funding decisions. *Academy of Management Journal*, 52(1), 199–214. <https://doi.org/10.5465/amj.2009.36462018>
- Cheung, V. S. Y., Lo, J. C. Y., Chi, D. K., & Ho, K. K. (2022). Evaluating social media's communication effectiveness on travel product promotion: Facebook for college students in Hong Kong. *Information Discovery and Delivery*, 51(1), 66–73. <https://doi.org/10.1108/IDD-10-2021-0117>
- Chiang, F. K., Zhang, Y., Zhu, D., Shang, X., & Jiang, Z. (2022). The influence of online STEM education camps on students' self-efficacy, computational thinking, and task value. *Journal of Science Education and Technology*, 31(4), 461–472. <https://doi.org/10.1007/s10956-022-09967-y>
- Ciptono, W. S., Anggadwita, G., & Indarti, N. (2023). Examining prison entrepreneurship programs, self-efficacy and entrepreneurial resilience as drivers for prisoners' entrepreneurial intentions. *International Journal of Entrepreneurial Behaviour Research*, 29(2), 408–432. <https://doi.org/10.1108/IJEBR-06-2022-0550>
- Clark, C. (2008). The impact of entrepreneurs' oral 'pitch' presentation skills on business angels' initial screening investment decisions. *Venture Capital*, 10(3), 257–279. <https://doi.org/10.1080/13691060802151945>
- Cogan, A., Pret, T., & Cardon, M. S. (2022). Everyday social support processes: Household members' instrumental and emotional support of entrepreneurs. *International Small Business Journal*, 40(5), 537–563. <https://doi.org/10.1177/02662426211054098>
- Cohen, J. (2013). *Statistical power analysis for the behavioral sciences*. routledge. <https://doi.org/10.4324/9780203771587>
- Costa, P. T., & McCrae, R. R. (1992). Normal personality assessment in clinical practice: The NEO personality inventory. *Psychological Assessment*, 4(1), 5–13. <https://doi.org/10.1037/1040-3590.4.1.5>
- Criado-Gomis, A., Iniesta-Bonillo, M. Á., & Cervera-Taulet, A. (2018). Sustainable entrepreneurial orientation within an intrapreneurial context: Effects on business performance. *International Entrepreneurship & Management Journal*, 14(2), 295–308. <https://doi.org/10.1007/s11365-018-0503-x>
- Crnogaj, K., Rebernik, M., Hojnik, B. B., & Gomezelj, D. O. (2014). Building a model of researching the sustainable entrepreneurship in the tourism sector. *Kybernetes*, 43(3/4), 377–393. <https://doi.org/10.1108/K-07-2013-0155>
- Dar, A. A., Hurrah, S. A., Hassan, A., Mansuri, B. B., & Saleem, A. (2024). Entrepreneurial intention of university students: A moderated approach using entrepreneurship education. *Industry and Higher Education*, 38(4), 350–362. <https://doi.org/10.1177/09504222231208436>
- de Moraes, M. A., de Moraes, G. H. S. M., Rampasso, I. S., Pacagnella Júnior, A. C., de Siqueira Camargo Vasconcelos, D., & Anholon, R. (2024). Gender equality in education: An analysis of entrepreneurial behavior in technological colleges in a developing country. *Innovations in Education and Teaching International*, 62(3), 1–18. <https://doi.org/10.1080/14703297.2024.2357710>
- Douglas, E. J., Shepherd, D. A., & Venugopal, V. (2021). A multi-motivational general model of entrepreneurial intention. *Journal of Business Venturing*, 36(4), 106107. <https://doi.org/10.1016/j.jbusvent.2021.106107>
- Drakpa, D., Penjor, K., Choden, S., Om, T., Zangmo, D., & Wangmo, C. (2024). Influence of self-efficacy on entrepreneurial intention among final year students of business colleges in Bhutan. *International Journal of Entrepreneurship & Small Business*, 53(2), 258–278. <https://doi.org/10.1504/IJESB.2024.140930>
- Elnadi, M., & Gheith, M. H. (2023). The role of individual characteristics in shaping digital entrepreneurial intention among university students: Evidence from Saudi Arabia. *Thinking Skills and Creativity*, 47, 101236. <https://doi.org/10.1016/j.tsc.2023.101236>
- Esfandiari, 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. <https://doi.org/10.1016/j.jbusres.2017.10045>
- Fernández-Vázquez, J. S., & Álvarez-Delgado, R. C. (2020). The interaction between rational arguments and emotional appeals in the entrepreneurial pitch. *International Journal of Entrepreneurial Behaviour Research*, 26(3), 503–520. <https://doi.org/10.1108/IJEBR-06-2019-0334>
- Fitouri, M., & Zouaoui, S. K. (2024). The influence of perceived financial security on social intention entrepreneurs in Tunisia. *Social Enterprise Journal*, 21(3), 385–399. <https://doi.org/10.1108/SEJ-06-2024-0093>
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50. <https://doi.org/10.1177/002224378101800104>
- Fox, C. J., Muldoon, J., & Davis, P. E. (2023). Social entrepreneurial intention: Examining the impacts of social and institutional support. *Journal of Business Research*, 164, 114036. <https://doi.org/10.1016/j.jbusres.2023.114036>
- Fragoso, R., Rocha-Junior, W., & Xavier, A. (2020). Determinant factors of entrepreneurial intention among university students in Brazil and Portugal. *Journal of Small Business & Entrepreneurship*, 32(1), 33–57. <https://doi.org/10.1080/08276331.2018.1551459>
- Friend, S. B., Johnson, J. S., Luthans, F., & Sohi, R. S. (2016). Positive psychology in sales: Integrating psychological capital. *Journal of Marketing Theory & Practice*, 24(3), 306–327. <https://doi.org/10.1080/10696679.2016.1170525>

- Garson, G. D. (2016). *Partial least squares: Regression & structural equation models (2016 editi)*. Statistical Associates Publishing.
- Glade, C., Kesting, P., Smolinski, R., & Kanbach, D. K. (2025). Start-up funding negotiations with venture capitalists: Understanding the behaviors and strategies of experienced entrepreneurs. *International Journal of Entrepreneurial Behavior and Research*, 31(4), 1062–1081. <https://doi.org/10.1108/IJEBr-06-2024-0615>
- González-Betanzos, F., Quiñonez-Tapia, F., & de Lourdes vargas-Garduño, M. (2023). Propiedades psicométricas de la Escala de Autoeficacia Empresarial en universitarios de México. *Revista de Métodos Cuantitativos para la Economía y la Empresa*, 35, 118–135. <https://doi.org/10.46661/revmetodoscuanteconempresa.6305>
- Guan, M., Han, J. Y., Shah, D. V., & Gustafson, D. H. (2021). Exploring the role of social support in promoting patient participation in health care among women with breast cancer. *Health Communication*, 36(13), 1581–1589. <https://doi.org/10.1080/1041023620201773704>
- Hair, J. F., Jr., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. (2021). *Partial least squares structural equation modeling (PLS-SEM) using R: A workbook*. Springer Nature. <https://library.oapen.org/handle/20.500.12657/51463>
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing Theory & Practice*, 19(2), 139–152. <https://doi.org/10.2753/MTP1069-6679190202>
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2–24. <https://doi.org/10.1108/EBR-11-2018-0203>
- Hair, J. F., Jr., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research. *European Business Review*, 26(2), 106–121. <https://doi.org/10.1108/EBR-10-2013-0128>
- Hartmann, S., Backmann, J., Newman, A., Brykman, K. M., & Pidduck, R. J. (2022). Psychological resilience of entrepreneurs: A review and agenda for future research. *Journal of Small Business Management*, 60(5), 1041–1079. <https://doi.org/10.1080/00472778.2021.2024216>
- Harvey, J. F. (2025). Self-promotion in entrepreneurship: A driver for proactive adaptation. *Journal of Applied Psychology*, 110(6), 859–875. <https://doi.org/10.1037/apl0001250>
- He, L., Li, H., & Zhang, Y. (2024). A dual mediation model between entrepreneurial intention and subsequent actions: Loss aversion and affordable loss. *Journal of the Knowledge Economy*, 15(1), 3122–3146. <https://doi.org/10.1007/s13132-023-01237-5>
- Hirao, N., Koizumi, K., Ikeda, H., & Ohira, H. (2021). Reliability of online surveys in investigating perceptions and impressions of faces. *Frontiers in Psychology*, 12, 733405. <https://doi.org/10.3389/fpsyg.2021.733405>
- Hockerts, K. (2015). The social entrepreneurial antecedents scale (SEAS): A validation study. *Social Enterprise Journal*, 11(3), 260–280. <https://doi.org/10.1108/SEJ-05-2014-0026>
- Honicke, T., & Broadbent, J. (2016). The influence of academic self-efficacy on academic performance: A systematic review. *Educational Research Review*, 17, 63–84. <https://doi.org/10.1016/j.edurev.2015.11002>
- Hossain, M. I., Tabash, M. I., Siow, M. L., Ong, T. S., & Anagreh, S. (2023). Entrepreneurial intentions of Gen Z university students and entrepreneurial constraints in Bangladesh. *Journal of Innovation and Entrepreneurship*, 12(1), 12. <https://doi.org/10.1186/s13731-023-00279-y>
- Hunt, C. M., Fielden, S., & Woolnough, H. M. (2019). The potential of online coaching to develop female entrepreneurial self-efficacy. *Gender in Management: An International Journal*, 34(8), 685–701. <https://doi.org/10.1108/GM-02-2019-0021>
- Hur, W. M., Moon, T. W., & Lee, J. H. (2021). The effect of self-efficacy on job performance through creativity: The moderating roles of customer incivility and service scripts. *Asia Pacific Journal of Marketing & Logistics*, 33(3), 888–905. <https://doi.org/10.1108/APJML-03-2019-0138>
- Hutchinson, K., Fergie, R., Fleck, E., Joufflas, G., & Parry, Z. (2021). Flexing the leadership muscle: An International study of entrepreneurial resilience in rural communities during the COVID-19 pandemic. *Journal of Small Business Strategy*, 31(4), 100–112. <https://doi.org/10.53703/001c.29484>
- Igwe, A., Ogbo, A., Agbaeze, E., Abugu, J., Ezenwakwelu, C., & Okwo, H. (2020). Self-efficacy and subjective norms as moderators in the networking competence-social entrepreneurial intentions link. *SAGE Open*, 10(3), 2158244020934878. <https://doi.org/10.1177/2158244020934878>
- Ilevbare, F. M., Ilevbare, O. E., Adelowo, C. M., & Oshorenua, F. P. (2022). Social support and risk-taking propensity as predictors of entrepreneurial intention among undergraduates in Nigeria Asia. *Pacific Journal of Innovation and Entrepreneurship*, 16(2), 90–107. <https://doi.org/10.1108/APJIE-02-2022-0010>
- Ioannou, A., & Retalis, S. (2025). Building entrepreneurial self-efficacy in the EdTech sector: The impact of an entrepreneurship education program. *The International Journal of Information and Learning Technology*, 42(3), 251–268. <https://doi.org/10.1108/IJILT-12-2023-0234>
- Iqbal, A., Ahmad, M., Qureshi, I., Batool, T., & Iqbal, M. (2022). Impact of spiritual intelligence and resilience on self-efficacy of nurses in the Pervaiz Ilahi institute of cardiology. *Journal of Computing & Biomedical Informatics*, 3(1), 289–305. <https://doi.org/10.56979/301/2022/71>
- Itani, O. S., Goad, E. A., & Jaramillo, F. (2019). Building customer relationships while achieving sales performance results: Is listening the holy grail of sales? *Journal of Business Research*, 102, 120–130. <https://doi.org/10.1016/j.jbusres.2019.04.048>

- Iwanaga, K., Chen, X., Bezyak, J., Holmes, C. M., Dotson-Hutto, C., & Hall, D. (2023). Validation of the perceived empathic and social self-efficacy scale: A brief report. *Rehabilitation Counseling Bulletin*, 67(1), 57–61. <https://doi.org/10.1177/00343552211043260>
- Jadmiko, P. (2021). Perceived social support as a moderator variable between the attitude of becoming a social entrepreneur (ATB) on social entrepreneurial intention. *Journal of Islamic Economics and Business Research*, 1(1), 86–99. <https://doi.org/10.18196/jiebr.v1i1.1703>
- Janakiraman, N., Bullemore, J., Valenzuela-Fernández, L., & Jaramillo, J. F. (2019). Listening and perseverance-two sides to a coin in quality evaluations. *Journal of Consumer Marketing*, 36(1), 72. <https://doi.org/10.1108/JCM-11-2016-2000>
- Jang, H., Smith, C. K., & Duys, D. K. (2021). LGB identity and career decision-making self-efficacy among sexual minority college students. *International Journal of Educational and Vocational Guidance*, 21(1), 61–79. <https://doi.org/10.1007/s10775-020-09428-1>
- Jayawardhana, K., & Weerakoon, C. (2024). Social entrepreneurial self-efficacy and social innovation: Effects of country default and market orientation. *Journal of Social Entrepreneurship*, 1–28. <https://doi.org/10.1080/19420676.2024.2389233>
- Joyce, S., Shand, F., Tighe, J., Laurent, S. J., Bryant, R. A., & Harvey, S. B. (2018). Road to resilience: A systematic review and meta-analysis of resilience training programmes and interventions. *British Medical Journal Open*, 8(6), e017858. <https://doi.org/10.1136/bmjopen-2017-017858>
- Kautonen, T., Van Gelderen, M., & Fink, M. (2015). Robustness of the theory of planned behavior in predicting entrepreneurial intentions and actions. *Entrepreneurship Theory and Practice*, 39(3), 655–674. <https://doi.org/10.1111/etap.12056>
- Kesmodel, U. S. (2018). Cross-sectional studies-what are they good for? *Acta Obstetrica Et Gynecologica Scandinavica*, 97(4), 388–393. <https://doi.org/10.1111/aogs.13331>
- Kochakzade, R. S., Aganje, N., Vaghefi, A., & Davodi, A. (2018). The relationship between resilience employment and entrepreneurship in the province PNU. *Journal of Social Sciences and Humanities Research*, 6(3), 47–51. <https://doi.org/10.24200/jsshr.vol6iss03pp47-51>
- Kock, N., & Hadaya, P. (2018). Minimum sample size estimation in PLS-SEM: The inverse square root and gamma-exponential methods. *Information Systems Journal*, 28(1), 227–26. <https://doi.org/10.1111/isj.12131>
- Konstantinov, V., Gritsenko, V., Zinurova, R., Kulesh, E., Osipenko, I., Reznik, A., & Isralowitz, R. (2021). COVID 19 fear impact among Russian “Helping profession” students. *Psych*, 3(2), 163–170. <https://doi.org/10.3390/psych3020014>
- Krueger, N. F., Jr., & Brazeal, D. V. (1994). Entrepreneurial potential and potential entrepreneurs. *Entrepreneurship Theory and Practice*, 18(3), 91–104. <https://doi.org/10.1177/104225879401800307>
- Kuang, D., Gu, D. F., Cao, H., Yuan, Q. F., Dong, Z. X., Yu, D., & Shen, X. M. (2021). Impacts of psychological resilience on self-efficacy and quality of life in patients with diabetic foot ulcers: A prospective cross-sectional study. *Annals of Palliative Medicine*, 10(5), 5610618–5615618. <https://doi.org/10.21037/apm-21-967>
- Kumar, R., & Shukla, S. (2022). Creativity, proactive personality and entrepreneurial intentions: Examining the mediating role of entrepreneurial self-efficacy. *Global Business Review*, 23(1), 101–118. <https://doi.org/10.1177/0972150919844395>
- Li, C., Murad, M., & Ashraf, S. F. (2023). The influence of women’s green entrepreneurial intention on green entrepreneurial behavior through university and social support. *Sustainability*, 15(13), 10123. <https://doi.org/10.3390/su151310123>
- Liberatore, M. J., & Wagner, W. P. (2023). The impact of age on user performance: A field experiment. *Journal of Computer Information Systems*, 63(2), 369–379. <https://doi.org/10.1080/08874417.2022.2065552>
- 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 & Entrepreneurship*, 32(4), 311–331. <https://doi.org/10.1080/08276331.2019.1600857>
- Liu, X., Lin, C., Zhao, G., & Zhao, D. (2019). Research on the effects of entrepreneurial education and entrepreneurial self-efficacy on college students’ entrepreneurial intention. *Frontiers in Psychology*, 10, 869. <https://doi.org/10.3389/fpsyg.2019.00869>
- Magableh, K. N., & Kannan, S. (2023). Early recognition of entrepreneurial traits and intentions: A comparative study on university students in Australia and Japan. *Entrepreneurship Education*, 6(2), 99–124. <https://doi.org/10.1007/s41959-023-00097-z>
- Margaça, C., Sánchez-García, J. C., Cardella, G. M., & Hernández-Sánchez, B. R. (2022). The role of spiritual mindset and gender in small business entrepreneurial success. *Frontiers in Psychology*, 13, 1082578. <https://doi.org/10.3389/fpsyg.2022.1082578>
- Maritz, A., & Brown, C. (2013). Enhancing entrepreneurial self-efficacy through vocational entrepreneurship education programmes. *Journal of Vocational Education & Training*, 65(4), 543–559. <https://doi.org/10.1080/13636820.2013.853685>
- Martínez-Velasco, A., Terán-Bustamante, A., de La torre-Díaz, L., & González, F. J. M. (2024). Critical Factors in the Participation of Women in Science, Technology, Engineering, and Mathematics -STEM- Disciplines in Mexico. In

- H. Ponce, J. Brieva, O. Lozada-Flores, L. Martínez-Villaseñor, & E. Moya-Albor (Eds.), *Data-Driven Innovation for Intelligent Technology. Studies in Big Data* (Vol. 148). Cham: Springer. https://doi.org/10.1007/978-3-031-54277-0_6
- Masten, A. S. (1994). Resilience in individual development: Successful adaptation despite risk and adversity. In M. C. Wang & E. W. Gordon (Eds.), *Educational resilience in inner-city America: Challenges and prospects* (pp. 3–25). Lawrence Erlbaum Associates, Inc.
- Matteson, K. A., Anderson, B. L., Pinto, S. B., Lopes, V., Schulkin, J., & Clark, M. A. (2011). Surveying ourselves: Examining the use of a web-based approach for a physician survey. *Evaluation & the Health Professions*, 34(4), 448–463. <https://doi.org/10.1177/0163278710391086>
- McCollough, M. A., Devezer, B., & Tanner, G. (2016). An alternative format for the elevator pitch. *The International Journal of Entrepreneurship and Innovation*, 17(1), 55–64. <https://doi.org/10.5367/ije.2016.0211>
- 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. <https://doi.org/10.1111/j.1540-6520.2009.00304.x>
- McGloin, R., Saxton, A., Rao, A., Hintz, E., Coletti, A., Hamlin, E., & Mathieu, J. (2023). Examining the importance of developing entrepreneurial communication skills in accelerator programs: A focus group based approach. *Entrepreneurship Education and Pedagogy*, 7(4), 468–493. Advance online publication. <https://doi.org/10.1177/25151274231183382>
- McMahon, S. R., Henshaw, G., Dowin Kennedy, E., Brannon, D. L., Podlesny, A. O., & Powell, K. I. (2024). No (Startup) experience required: Entrepreneurship education effectiveness for early career graduates. *Entrepreneurship Education and Pedagogy*, 25151274241292282. <https://doi.org/10.1177/25151274241292282>
- Mei, H., Ma, Z., Jiao, S., Chen, X., Lv, X., & Zhan, Z. (2017). The sustainable personality in entrepreneurship: The relationship between big six personality, entrepreneurial self-efficacy, and entrepreneurial intention in the Chinese context. *Sustainability*, 9(9), 1649. <https://doi.org/10.3390/su9091649>
- Memon, M. A., Ramayah, T., Cheah, J., Ting, H., Chuah, F., & Cham, T. H. (2021). PLS-SEM statistical programs: A review. *Journal of Applied Structural Equation Modeling*, 5(1), 1–14.
- Middermann, L. H., Kratzer, J., & Perner, S. (2020). The impact of environmental risk exposure on the determinants of sustainable entrepreneurship. *Sustainability*, 12(4), 1534. <https://doi.org/10.3390/su12041534>
- Milton, A. C., Ellis, L. A., Davenport, T. A., Burns, J. M., & Hickie, I. B. (2017). Comparison of self-reported telephone interviewing and web-based survey responses: Findings from the second Australian young and well national survey. *JMIR Mental Health*, 4(3), e8222. <https://doi.org/10.2196/mental.8222>
- Moke, K., Chang, C., Prihadi, K., & Goh, C. L. (2018). Mediation effect of resilience on the relationship between self-efficacy and competitiveness among university students. *International Journal of Evaluation & Research in Education*, 7(4), 279–284. <https://doi.org/10.11591/ijere.v7i4.15725>
- Mueller, S. L., & Dato-On, M. C. (2008). Gender-role orientation as a determinant of entrepreneurial self-efficacy. *Journal of Developmental Entrepreneurship*, 13(1), 3–20. <https://doi.org/10.1142/S108494670800082X>
- Mueller, S. L., & Goic, S. (2003). East-West differences in entrepreneurial self-efficacy: Implications for entrepreneurship education in transition economies. *International Journal of Entrepreneurship Education*, 1(4), 613–632.
- Murad, M., Othman, S. B., & Kamarudin, M. A. I. B. (2024). Entrepreneurial university support and entrepreneurial career: The directions for university policy to influence students' entrepreneurial intention and behavior. *Journal of Entrepreneurship and Public Policy*, 13(3), 441–467. <https://doi.org/10.1108/JEPP-08-2023-0082>
- Murugesan, R., & Jayavelu, R. (2017). The influence of big five personality traits and self-efficacy on entrepreneurial intention: The role of gender. *Journal of Entrepreneurship, Innovation and Emerging Economies*, 3(1), 41–61. <https://doi.org/10.1177/2393957516684569>
- Nacu, C. M., & Avasilcăi, S. (2014). Technological entrepreneurship: Success factors as perceived by potential young entrepreneurs. *Advanced Materials Research*, 837, 639–644. <https://doi.org/10.4028/www.scientific.net/AMR.837.639>
- Navickienė, O., & Vasiliauskas, A. V. (2024). The effect of cadet resilience on self-efficacy and professional achievement: Verification of the moderated mediating effect of vocational calling. *Frontiers in Psychology*, 14, 1330969. <https://doi.org/10.3389/fpsyg.2023.1330969>
- Nguyen, T. T., & Phan, H. T. T. (2024). Entrepreneurship environments and entrepreneurial intention-the role of self efficacy and role model. *International Journal of Engineering Business Management*, 16, 18479790241275925. <https://doi.org/10.1177/18479790241275925>
- Nikoogofar, M., & Shahini, Z. (2021). The effects of resilience training on self-efficacy, empowerment, and social adjustment of renal transplant patients. *J Nurs Midwifery Sci*, 8(3), 137–4103. https://doi.org/10.4103/jnms.jnms_173_20
- Nowiński, W., & Haddoud, M. Y. (2019). The role of inspiring role models in enhancing entrepreneurial intention. *Journal of Business Research*, 96, 183–193. <https://doi.org/10.1016/j.jbusres.2018.11.005>
- Noyan Erbaş, A., Özcebe, E., & Cak Esen, T. (2021). Investigation of the effect of Hanen's "More than words" on parental self-efficacy, emotional states, perceived social support, and on communication skills of children with ASD. *Logopedics, Phoniatrics, and Vocology*, 46(1), 17–27. <https://doi.org/10.1080/14015439.2020.1717601>
- Ojewumi, K. A., Fagbenro, D. A., & Babatunde, S. I. (2020). Psycho-demographic factors and entrepreneurial intention among university students. *Open Journal of Psychology Research*, 4(1), 31–42. <https://doi.org/10.32591/coasojpr.0401030310>

- Ørmen, J. (2020). Quantitative approaches to media and communication research. In K. B. Jensen (Ed.), *A Handbook of Media and Communication Research* (pp. 255–285). Routledge.
- Palmieri, R., Mercuri, C., & Mazzali-Lurati, S. (2022). Persuasive reasons in crowdfunding campaigns: Comparing argumentative strategies in successful and unsuccessful projects on kickstarter. *International Journal of Strategic Communication*, 16(2), 332–355. <https://doi.org/10.1080/1553118X.2021.2008942>
- Pelegri, G. C., & Moraes, G. H. S. M. D. (2022). Does gender matter? A university ecosystem, self-efficacy and entrepreneurial intention analysis in Brazilian universities. *Gender in Management: An International Journal*, 37(2), 271–286. <https://doi.org/10.1108/GM-01-2021-0007>
- Penn, J. M., Petrolia, D. R., & Fannin, J. M. (2023). Hypothetical bias mitigation in representative and convenience samples. *Applied Economic Perspectives and Policy*, 45(2), 721–743. <https://doi.org/10.1002/aepp.13374>
- Putri, A. Y., & Wijaya, A. (2023). The effect of entrepreneurial knowledge on entrepreneurial intention with perceived desirability, perceived social norms, and perceived feasibility as mediating variable. *International Journal of Application on Economics and Business*, 1(1), 613–620. <https://doi.org/10.24912/ijaeb.v1i1.613-620>
- Raithel, S., Sarstedt, M., Scharf, S., & Schwaiger, M. (2012). On the value relevance of customer satisfaction. Multiple drivers and multiple markets. *Journal of the Academy of Marketing Science*, 40(4), 509–525. <https://doi.org/10.1007/s11747-011-0247-4>
- Ramke, J., Palagyi, A., Kuper, H., & Gilbert, C. E. (2018). Assessment of response bias is neglected in cross-sectional blindness prevalence surveys: A review of recent surveys in low-and middle-income countries. *Ophthalmic Epidemiology*, 25(5–6), 379–385. <https://doi.org/10.1080/09286586.2018.1500613>
- Rhodes, S. D., Bowie, D. A., & Hergenrather, K. C. (2003). Collecting behavioural data using the world wide web: Considerations for researchers. *Journal of Epidemiology and Community Health*, 57(1), 68–73. <https://doi.org/10.1136/jech.57.1.68>
- Riggio, R. E., Riggio, H. R., Salinas, C., & Cole, E. J. (2003). The role of social and emotional communication skills in leader emergence and effectiveness. *Group Dynamics: Theory, Research & Practice*, 7(2), 83. <https://doi.org/10.1037/1089-2699.7.2.83>
- Riou, J., Guyon, H., & Falissard, B. (2016). An introduction to the partial least squares approach to structural equation modelling: A method for exploratory psychiatric research. *International Journal of Methods in Psychiatric Research*, 25(3), 220–231. <https://doi.org/10.1002/mpr.1497>
- Rosario-Ortiz, F. L., Korak, J., Mihelcic, J., Guidotti, S., Lowry, G., & Zimmerman, J. (2023). Hearing all voices: Environmental issues and opportunities in South America. *Environmental Science and Technology*, 57(35), 12933–12934. <https://doi.org/10.1021/acs.est.3c05193>
- Ruiz-Dotras, E., & Lladós-Masllorens, J. (2022). Entrepreneurial self-efficacy and financial and calculation skills can shape different profiles of venture intentions. *Journal of Entrepreneurship*, 31(1), 153–183. <https://doi.org/10.1177/09713557211069319>
- Sahban, M. A., Ramalu, S. S., & Syahputra, R. (2016). The influence of social support on entrepreneurial inclination among business students in Indonesia. *Information Management and Business Review*, 8(3), 32–46. <https://doi.org/10.22610/imbr.v8i3.1330>
- Salem, I. E., Elbaz, A. M., Al-Alawi, A., Alkathiri, N. A., & Elkhwesky, Z. (2023). Is eco-label hotel engagement the pathway to sustainability practices via entrepreneurial resilience and orientation in Oman? Findings from PLS-SEM and fsQCA. *International Journal of Contemporary Hospitality Management*, 35(2), 717–742. <https://doi.org/10.1108/IJCHM-02-2022-0229>
- Santoro, G., Bertoldi, B., Giachino, C., & Candelò, E. (2020). Exploring the relationship between entrepreneurial resilience and success: The moderating role of stakeholders' engagement. *Journal of Business Research*, 119, 142–150. <https://doi.org/10.1016/j.jbusres.2018.11.052>
- Santoro, G., Messeni-Petruzzelli, A., & Del Giudice, M. (2021). Searching for resilience: The impact of employee-level and entrepreneur-level resilience on firm performance in small family firms. *Small Business Economics*, 57(1), 455–471. <https://doi.org/10.1007/s11187-020-00319-x>
- Saptono, A., Wibowo, A., Widyastuti, U., Narmaditya, B. S., & Yanto, H. (2021). Entrepreneurial self-efficacy among elementary students: The role of entrepreneurship education. *Heliyon*, 7(9), e07995. <https://doi.org/10.1016/j.heliyon.2021.e07995>
- Schaltegger, S., & Wagner, M. (2011). Sustainable entrepreneurship and sustainability innovation: Categories and interactions. *Business Strategy and the Environment*, 20(4), 222–237. <https://doi.org/10.1002/bse.682>
- Schjoedt, L., & Craig, J. B. (2017). Development and validation of a unidimensional domain-specific entrepreneurial self-efficacy scale. *International Journal of Entrepreneurial Behavior and Research*, 23(1), 98–113. <https://doi.org/10.1108/IJEER-11-2015-0251>
- Schlaegel, C., Engle, R. L., Richter, N. F., & Taureck, P. C. (2021). Personal factors, entrepreneurial intention, and entrepreneurial status: A multinational study in three institutional environments. *Journal of International Entrepreneurship*, 19(3), 1–42. <https://doi.org/10.1007/s10843-021-00287-7>
- Setiawan, J. L., Kasim, A., & Ardyan, E. (2022). Understanding the consumers of entrepreneurial education: Self-efficacy and entrepreneurial attitude orientation among youths. *Sustainability*, 14(8), 4790. <https://doi.org/10.3390/su14084790>

- Shapero, A., & Sokol, L. (1982). The social dimensions of entrepreneurship. In C. Kent, D. Sexton, & K. H. Vesper (Eds.), *The encyclopedia of entrepreneurship* (pp. 72–90). Prentice-Hall.
- Siddique, M., Ali, M. S., Nasir, N., Awan, T. H., & Siddique, A. (2021). Resilience and self-efficacy: A correlational study of 10th grade chemistry students in Pakistan. *Multicultural Education*, 7(9), 210–222. <https://doi.org/10.5281/zenodo.5498287>
- Sijabat, R. (2024). The application of social learning theory in predicting the antecedents of social entrepreneurial intention. *Business: Theory and Practice*, 25(1), 210–222. <https://doi.org/10.3846/btp.2024.18814>
- Smith, B. W., Dalen, J., Wiggins, K., Tooley, E., Christopher, P., & Bernard, J. (2008). The brief resilience scale: Assessing the ability to bounce back. *International Journal of Behavioral Medicine*, 15(3), 194–200. <https://doi.org/10.1080/10705500802222972>
- Song, H., Ruan, W. J., & Jeon, Y. J. J. (2021). An integrated approach to the purchase decision-making process of food-delivery apps: Focusing on the TAM and AIDA models. *International Journal of Hospitality Management*, 95, 102943. <https://doi.org/10.1016/j.ijhm.2021.102943>
- Soto, I. B. R., Lozano, R. A. R., Suárez, C. A. H., & Núñez, R. P. (2022). Educación, innovación, emprendimiento, crecimiento y desarrollo en América Latina. *Revista Ciencias Sociales*, 3, 110–128. <https://www.redalyc.org/articulo.oa?id=28071865008>
- Steinbrink, K. M., & Ströhle, C. (2024). The entrepreneurial intention of top athletes—does resilience lead the way?. *International Entrepreneurship & Management Journal*, 20(2), 607–629. <https://doi.org/10.1007/s11365-023-00860-7>
- Taormina, R. J. (2015). Adult personal resilience: A new theory, new measure, and practical implications. *Psychological Thought*, 8(1), 35–46. <https://doi.org/10.23668/psycharchives.1964>
- Terán-Yépez, E., Marín-Carrillo, G. M., Del Pilar casado-Belmonte, M., & de las Mercedes capobianco-Uriarte, M. (2020). Sustainable entrepreneurship: Review of its evolution and new trends. *Journal of Cleaner Production*, 252, 119742. <https://doi.org/10.1016/j.jclepro.2019.119742>
- Tran, A. T., & Von Korflesch, H. (2016). A conceptual model of social entrepreneurial intention based on the social cognitive career theory. *Asia Pacific Journal of Innovation and Entrepreneurship*, 10(1), 17–38. <https://doi.org/10.1108/APJIE-12-2016-007>
- Troy, A. S., Willroth, E. C., Shallcross, A. J., Giuliani, N. R., Gross, J. J., & Mauss, I. B. (2023). Psychological resilience: An affect-regulation framework. *Annual Review of Psychology*, 74(1), 547–576. <https://doi.org/10.1146/annurev-psych-020122-041854>
- Tusaie, K., & Dyer, J. (2004). Resilience: A historical review of the construct. *Holistic Nursing Practice*, 18(1), 3–10. <https://doi.org/10.1097/00004650-200401000-00002>
- Uddin, M. K., Al Sayed, A., & Khan, S. I. (2024). Unveiling the drivers of social entrepreneurship intentions: Insights from business graduates in Bangladesh. *Journal of Social Entrepreneurship*, 1–25. <https://doi.org/10.1080/19420676.2024.2400914>
- Urbach, N., & Ahlemann, F. (2010). Structural equation modeling in Information Systems research using partial least squares. *The Journal of Information Technology Theory and Application*, 11(2), 5–40. <https://doi.org/10.1037/0021-9010.90.4.710>
- van Hugten, J., Coreynen, W., Vanderstraeten, J., & van Witteloostuijn, A. (2023). The Dunning-Kruger effect and entrepreneurial self-efficacy: How tenure and search distance jointly direct entrepreneurial self-efficacy. *Journal of Business Research*, 161, 113810. <https://doi.org/10.1016/j.jbusres.2023.113810>
- Vankov, D., Kozma, D., Vankov, B., Chiers, J., Galanternik, M., & Wang, L. (2024). The online entrepreneurship program effect on young people's self-efficacy and intention: An experiment in Argentina, Belgium, Bulgaria, China and Romania. *Journal of Entrepreneurship in Emerging Economies*, 16(6), 1824–1845. <https://doi.org/10.1108/JEEE-12-2022-0385>
- Vinzi, V. E., Chin, W. W., Henseler, J., & Wang, H. (2010). Editorial: Perspectives on Partial Least Squares. In V. E. Vinzi, W. Chin, J. Henseler, & H. Wang (Eds.), *Handbook of partial least squares*. Springer Handbooks of Computational Statistics. https://doi.org/10.1007/978-3-540-32827-8_1
- Vuorio, A. M., Puumalainen, K., & Fellnhofer, K. (2018). Drivers of entrepreneurial intentions in sustainable entrepreneurship International. *Journal of Entrepreneurial Behavior Research*, 24(2), 359–381. <https://doi.org/10.1108/IJEER-03-2016-0097>
- Wagner, R., & Grimm, M. S. (2023). *Empirical validation of the 10-times rule for SEM. In state of the art in partial least squares structural equation modeling (PLS-SEM) methodological extensions and applications in the social sciences and beyond*. Springer International Publishing.
- Wang, S., Sun, Z., & Chen, Y. (2023). Effects of higher education institutes' artificial intelligence capability on students' self-efficacy, creativity and learning performance. *Technology, education, and Information*, 28(5), 4919–4939. <https://doi.org/10.1007/s10639-022-11338-4>
- Wagh, C. E., Fredrickson, B. L., & Taylor, S. F. (2008). Adapting to life's slings and arrows: Individual differences in resilience when recovering from an anticipated threat. *Journal of Research in Personality*, 42(4), 1031–1046. <https://doi.org/10.1016/j.jrp.2008.02.005>
- Wu, H., Li, S., Zheng, J., & Guo, J. (2020). Medical students' motivation and academic performance: The mediating roles of self-efficacy and learning engagement. *Medical Education Online*, 25(1), 1742964. <https://doi.org/10.1080/10872981.2020.1742964>

- Wu, K., Zhao, X., Wang, X., Chen, X., Hung, T. K., Wang, Z., & Lee, S. C. (2023). The impact of entrepreneurial resilience on the entrepreneurial intention of return migrants: An empirical study based on survey data from multiple provinces in China. *SAGE Open*, 13(2), 21582440231182654. <https://doi.org/10.1177/21582440231182654>
- Wu, Y., Shi, L., Zhou, Y., & Zhang, Q. (2023). Defender self-efficacy and defender behaviour in school bullying of primary school pupils: The role of perceived responsibility and sex. *Journal of Psychology in Africa*, 33(3), 1–6. <https://doi.org/10.1080/14330237.2023.2195714>
- Xin, L., Tang, F., Li, M., & Zhou, W. (2020). From school to work: Improving graduates' career decision-making self-efficacy. *Sustainability*, 12(3), 804. <https://doi.org/10.3390/su12030804>
- Xu, J., Fu, Y., & Zhang, X. (2023). Does entrepreneurship education in China develop entrepreneurial intention? The role of self-efficacy and experience. *PLOS ONE*, 18(7), e0286090. <https://doi.org/10.1371/journal.pone.0286090>
- Yang, B., Kim, Y., & McFarland, R. G. (2011). Individual differences and sales performance: A distal-proximal mediation model of self-efficacy, conscientiousness, and extraversion. *Journal of Personal Selling and Sales Management*, 31(4), 371–381. <https://doi.org/10.2753/PSS0885-3134310401>
- Yasir, N., Mahmood, N., Jutt, A. A., Babar, M., Irfan, M., Jamil, F., Shaukat, M. Z., Khan, H. M., & Liren, A. (2020). How can entrepreneurial self-efficacy, proactivity and creativity enhance sustainable recognition opportunity? The effect of entrepreneurial alertness is to mediate the formation of sustainable entrepreneurial intention. *Revista Argentina de Clínica Psicológica*, 29, 1004–1023. <https://doi.org/10.24205/03276716.2020.1097>
- Young, D. R., & Grinsfelder, M. C. (2011). Social entrepreneurship and the financing of third sector organizations. *Journal of Public Affairs Education*, 17(4), 543–567. <https://doi.org/10.1080/15236803.2011.12001661>
- Young, W., & Tilley, F. (2006). Can businesses move beyond efficiency? The shift toward effectiveness and equity in the corporate sustainability debate. *Business Strategy and the Environment*, 15(6), 402–415. <https://doi.org/10.1002/bse.510>
- Zaman, U., Florez-Perez, L., Fariás, P., Abbasi, S., Khwaja, M. G., & Wijaksana, T. I. (2021). Shadow of your former self: Exploring project leaders' post-failure behaviors (Resilience, self-esteem and self-efficacy) in high-tech startup projects. *Sustainability*, 13(22), 12868. <https://doi.org/10.3390/su132212868>
- Zarbá, L., Piquer-Rodríguez, M., Boillat, S., Levers, C., Gasparri, I., Aide, T. M., Álvarez-Berrios, N. L., Anderson, L. O., Araoz, E., Arima, E., Batistella, M., & Grau, R. (2022). Mapping and characterizing social-ecological land systems of South America. *Ecology and Society*, 27(2). <https://doi.org/10.5751/ES-13066-270227>
- Zhang, S., Hu, J., Chuang, C. H., & Chiao, Y. C. (2022). Prototypical leaders reinforce efficacy beliefs: How and when leader-leader exchange relates to team effectiveness. *Journal of Organizational Behavior*, 43(6), 1136–1151. <https://doi.org/10.1002/job.2614>
- Zhao, W. X., Shao, L., Zhan, M., & Peng, M. Y. P. (2022). How do determiners of job performance matter during COVID-19? The conservation of resource theory. *Frontiers in Psychology*, 12, 774552. <https://doi.org/10.3389/fpsyg.2021.774552>