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Sustainable Entrepreneurship: Exploring the direct and indirect effect of innovativeness on performance

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Master in International Management

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Resumo

O empreendedorismo sustentável cria valor para além do lucro. O seu papel é cada vez mais importante na abordagem de questões relacionadas com os desafios ambientais. Os empresários sustentáveis podem representar a ferramenta para atingir os Objetivos de Desenvolvimento Sustentável estabelecidos pelas Nações Unidas, que abordam as alterações climáticas, a injustiça social, os direitos humanos, e o crescimento económico. Para resolver estes desafios ambientais, há necessidade de empreendedores sustentáveis com elevado desempenho. O papel da inovação, das capacidades organizacionais e da responsabilidade social corporativa (RSC) filantrópica no desempenho dos empreendedores sustentáveis ainda é escasso. Este estudo propõe uma análise dos efeitos indiretos e diretos da inovação na autoeficácia empreendedora (AEE) e na autoeficácia empreendedora social, (AEES) e o papel mediador das capacidades organizacionais e da RSC filantrópica. Os resultados de um inquérito a 116 empreendedores sustentáveis a partir de modelos de equações estruturais e análise de matriz de desempenho de importância, identificaram uma relação positiva entre inovação e AEE, capacidades organizacionais, e RSE filantrópica. A relação indireta mediada pelas capacidades organizacionais foi considerada positiva, e para a RSC filantrópica resultou positiva para o AEES mas negativa para a AEE. Foi interessante verificar que o AEES só é influenciado positivamente nas relações indiretas. Este estudo contribui para a literatura sobre como a inovação pode promover a AEE e o AEES e o papel das capacidades organizacionais e da RSC filantrópica na melhoria do desempenho em empreendedores sustentáveis.

Keywords: inovação, autoeficácia empreendedora, autoeficácia empreendedora social, capacidades organizacionais, RSC filantrópica

Jel Classification: L26 Entrepreneurship, Q56 Sustainability

Abstract

Sustainable entrepreneurship creates value beyond profit. Its role is increasingly important in addressing issues related to environmental challenges. Sustainable entrepreneurs can represent the tool to attain the Sustainable Development Goals established by the United Nations, that address climate change, social injustice, human rights, and economic growth. To solve these environmental challenges there is a need for high-performing sustainable entrepreneurs. The role of innovativeness, organizational capabilities, and philanthropic corporate social responsibility (CSR) in the performance of sustainable entrepreneurs is still underexplored. Hence, this study proposes an analysis of the indirect and direct effects of innovativeness on entrepreneurial self-efficacy (ESE) and social entrepreneurial self-efficacy (SESE) and the mediating role of organizational capabilities and philanthropic CSR. Findings from a survey of 116 sustainable entrepreneurs from structural equation modeling and importance-performance matrix analysis, identified a positive relationship between innovativeness and ESE, organizational capabilities, and philanthropic CSR. The indirect relationship mediated by organizational capabilities was found positive, and for philanthropic CSR it resulted positive for SESE but negative for ESE. Interestingly, it was found that SESE is only positively influenced in indirect relations. This study contributes to the literature on how innovativeness can promote ESE and SESE and the role of organizational capabilities and philanthropic CSR in enhancing performance in sustainable entrepreneurs.

Keywords: innovativeness, entrepreneurial self-efficacy, social entrepreneurial self-efficacy, organizational capabilities, philanthropic CSR

Jel Classification: L26 Entrepreneurship, Q56 Sustainability

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Glossary

CSR: Corporate Social Responsibility

ESE: Entrepreneurial Self-Efficacy

IPMA: Importance Performance Map Analysis

PLS: Partial Least Squares

SDG: Social Development Goals

SE: Sustainable Entrepreneurship

SEM: Structural Equation Modeling

SESE: Social Entrepreneurial Self-Efficacy

SME: Small Medium Enterprise

1. Introduction

Sustainable entrepreneurship (SE) represents a bridge between sustainable development and entrepreneurship. It creates economic, social, and ecological value through its business activity; therefore, it can answer the most urgent social and ecological challenges (Cohen & Winn, 2007; Dean & McMullen, 2007; Schaltegger & Wagner, 2011). Sustainable entrepreneurs consider sustainable development as a unique business opportunity (Crals & Vereeck, 2005) that can help transform the current economy into a sustainable one, generating solutions for various social and environmental problems (Schaltegger & Wagner, 2011). They innovate by focusing on the mass market aiming to benefit a bigger portion of society and going beyond market success to start societal change (Schaltegger & Wagner, 2011). Nowadays, sustainable entrepreneurs have a key role in creating businesses that have a positive impact on the environment, and understanding what can improve their performance is important to help create a more sustainable future.

Scholars have suggested entrepreneurial self-efficacy (ESE) as a distinct characteristic of an entrepreneur (Chen et al., 1998). It is a concept based on self-efficacy that is considered the most effective predictor of performance (Bandura, 1977, 1982, 1986; Bandura & Schunk, 1981). It is defined as the strength of an individual's belief in their capabilities that they can perform successfully numerous entrepreneurial roles and tasks (Chen et al., 1998).

On the other hand, social entrepreneurial self-efficacy (SESE) is another predictor of performance which refers to the strength of an individual's belief that he or she has the skills and ability to succeed in the roles and tasks of a successful social entrepreneur (Zhang et al., 2021). The concept represents human behavior towards social missions that can impact an individual's beliefs, efforts, levels of input, and persistence (Dwivedi & Weerawardena, 2018).

The independent variable is innovativeness, represents a fundamental concept for the long-term competitiveness of the organization (Noble et al., 2002). In innovation lies the basis of entrepreneurship activity and it is also because of innovation that various entrepreneurs develop their activities (Drucker, 1998). Indeed, entrepreneurs hold higher self-efficacy in innovation and risk-taking entrepreneurial roles and tasks than non-business founders (Chen et al., 1998).

The mediators in the study are organizational capabilities and philanthropic CSR. Organizational capabilities are the dynamic capabilities that represent the ability of a firm to reach new and innovative forms of competitive advantage (Teece et al., 1997). Philanthropic corporate social responsibility (CSR) is defined as addressing the corporation's responsibility to be involved in activities that promote human welfare or goodwill (Carroll, 1991).

Innovativeness promotes the long-term competitiveness of the organization, the concept of organizational capabilities reflects the internal strengths of organizations, which can determine how they can get an advantage over other organizations leading to better performance (Barney, 1991; Penrose, 1959). There is increasing evidence in bodies of management literature testifying to the positive impacts of CSR on firm performance (Luo & Homburg, 2007; Maignan et al, 1999; Qu, 2009). Therefore, the potential impact of the independent variable and the mediators on competitiveness and performance, led us to consider whether they can impact positively ESE and SESE and motivated us to undertake the current study. To this end, this study investigates the direct and indirect links between innovativeness and ESE and SESE, and it analyses the potential effect of two mediators, organizational capabilities, and philanthropic CSR.

This study attempts to address three theoretical gaps. Firstly, over the last two decades growing attention has been placed on ESE and increasing literature has identified factors that may promote or hinder ESE formation. The systematic review on ESE by Newman et al. (2019), explores ESE antecedents and outcomes, and according to it several factors may promote or inhibit its formation. Among them, factors such as firm characteristics, individual differences, and personality traits have been researched as antecedents of ESE, but research frameworks involving the role of innovativeness, on ESE and SESE remain underexplored. Secondly, there is a growing body of research on SESE, including research recognizing its importance as an antecedent in the field of social entrepreneurial intentions and as a mediator between prior experience and social entrepreneurial intent (Hockerts, 2017; Liu & Huang, 2020; Zhang et al., 2021), however, limited empirical research has established the factors that may foster or inhibit SESE. Thirdly, it has been shown that organizational capabilities and philanthropic CSR are beneficial for the performance of companies (Barney, 1991; Penrose, 1959; Lindgreen et al., 2009), but their direct roles and their function as a mediator with ESE and SESE in the field of sustainable entrepreneurs remains scarce. Additionally, most research on the impact of CSR on performance focuses on general CSR, whereas this study centers mainly on the specific dimension of philanthropic CSR.

To fill these gaps the objective of the study is to explore the link between innovativeness and ESE and SESE in entrepreneurs, particularly those whose profiles align with sustainability as they currently play an important role and are seen as being at the forefront of a shift to a new form of capitalist development, that can help answer fears over global warming, climate change, and their negative environmental impacts. The link is further developed by looking at the direct and mediating role of organizational capabilities and philanthropic CSR. The reason why the

study explores specifically the role of innovativeness, and the mediating role of organizational capabilities and philanthropic CSR is because they are all related to advancing competitive advantages and increasing performance (Collis, 1994; Ionescu 2021; Li et al 2022; Teece et al., 1997; Waddock & Graves, 1997), and since the objective of this study is to research what can improve the performance of sustainable entrepreneurs, we assumed that they would have a positive influence.

By analyzing what can impact ESE and SESE, the research can be helpful and bring clarity to sustainable entrepreneurs that are willing to improve their knowledge on ways to enhance their performance. This is important because having high levels of ESE and SESE results in experiencing a positive mental state involving entrepreneurial passion, resilience, efficient entrepreneurial behavior in planning, opportunity recognition, task effort, goal commitment, persistence, and higher entrepreneurial intentions (Newman et al., 2019). Additionally, by increasing ESE, entrepreneurs are most likely to successfully identify new business opportunities, create new products, think creatively, commercialize an idea or new development (Zhao et al., 2005), and by enhancing SESE they will be more likely to identify new business opportunities for social change, creating new products/services to solve social problems, thinking creatively to benefit others and commercializing an idea for social enterprise (Liu & Huang 2020; Zhao et al., 2005). The above-mentioned capabilities are essential for sustainable entrepreneurs that want to prosper and be successful. The study also extends the current literature on ESE and SESE, by creating a conceptual model which combines innovativeness, organizational capabilities, and philanthropic CSR. It is also one of the first researches that places SESE as an outcome, thus contributing to extending the literature on it.

To test the conceptual model, a quantitative study was conducted. The ideas were empirically examined on a sample of 116 sustainable entrepreneurs, through a survey with existing measures, structural equation modeling, and importance-performance matrix analysis. Our findings suggest that innovativeness can impact positively ESE, organizational capabilities, and philanthropic CSR. However, innovativeness only impacts positively SESE when the link is mediated. Organizational capabilities relate positively to ESE and SESE both directly and as mediator. On the other hand, the direct relationship with philanthropic CSR results in negative for ESE and positive for SESE, and the mediating relationship results in only positive for SESE.

This article is structured as follows. The paper first provides a literature review, that embodies the structure of theoretical knowledge that is helpful in the development of the conceptual model and for the research hypothesis. Following, the methodological approach used and the data collection process are presented. Next, the paper presents the research results

of the empirical study, which are then discussed. The paper concludes with theoretical and managerial contributions and implications including the limitations and suggestions for future research.

2. Literature review

The 2030 Agenda for Sustainable Development, embraced by the United Nations in 2015, tackles the most urgent challenges of our time, caused by massive disparities in opportunities, wealth, and power. At the core of it are the 17 Sustainable Development Goals (SDGs), that attempt to address climate change, social injustice, human rights, and economic growth (Ceptureanu et al., 2022). As the world economy recovered from the Covid-19 crisis, global energy-related carbon dioxide emissions rose by 6% in 2021 to 36.3 billion tonnes, reaching their highest ever level (Press Release IEA, 2022). Additionally, since 2001 nineteen of the 20 warmest years globally have been registered proving a clear trend towards global warming (NASA, 2020). Sustainable entrepreneurs may represent our best chance to achieve the SDGs, thanks to their skillsets, initiatives, and their innovation that can benefit society and the environment bringing transformational change where the focus is placed on the achievement of commercial success, as well as positive environmental and social impacts (Driver & Porter, 2012; Schaltegger & Wagner 2011; Zahra et al., 2009). Thus, their beliefs in their skills are important in reaching global sustainable development.

In the following paragraphs, we will present a literature review of the variables of the study, starting with the dependent variables represented by ESE and SESE, the independent variable innovativeness, and the mediators organizational capabilities and philanthropic CSR.

2.1 Entrepreneurial self-efficacy and Social entrepreneurial self-efficacy

ESE is a concept based on social cognitive theory (Bandura, 1986), which considers self-efficacy beliefs as an important mechanism of self-direction. Self-efficacy impacts people's beliefs, and the way they think, act and feel. More specifically, it indicates the individual belief in their capability to achieve a set of tasks or a job (Bandura, 1977). Self-efficacy can affect an individual's thought pattern which can enhance or compromise performance (Bandura, 1997). It has a great influence on the choices individual make, their aspirations, how much effort they put into a given task, whether their thought patterns are self-limiting or self-promoting, the amount of stress they experience in coping with challenging environmental demands, and their susceptibility to depression (Bandura, 1991). Those with higher levels of self-efficacy are more likely to set a high or challenging goal, and persist toward the achievement of their goals, even under difficult and stressful circumstances (Bandura, 1997). They can recover quickly from failure, even in the face of adverse conditions which consecutively raise the level of motivation and performance achievements (Bandura, 1997).

ESE is operationally defined as the self-confidence possessed by individuals in their ability to succeed in carrying out specific roles in entrepreneurship. It is as well described as the strength of an individual's belief that he or she can successfully perform various entrepreneurial roles and tasks (Chen et al., 1998). Chen et al. (1998) suggested the ESE construct to forecast the chances of an individual becoming entrepreneur. The study found that the total ESE score distinguished entrepreneurship students from students of management and organizational psychology and ESE was also positively linked to the intention to create one's own business (Chen et al., 1998). There is an increasing emphasis on the role of ESE in the study of entrepreneurship and on how individuals act and think entrepreneurially (Newman et al., 2019) and individuals who have strong confidence in their capabilities, will exert more persistence and exercise major effort to master challenges (Wood & Bandura, 1989).

Evidence related to the positive relation between ESE and performance is confirmed by various research. Forbes (2005) identified a positive relationship between ESE and new ventures revenue performance, in line with Baum and Locke (2004) that found that ESE has a positive direct effect on venture growth. Miao et al. (2017), similarly and consistent with social learning theory, found that entrepreneur's ESE can enhance firm financial performance. When entrepreneurs believe in their abilities to complete tasks in entrepreneurial areas, they engage in challenging objectives, show persistence, and can overcome rapidly from failure, all these efforts are then reproduced in their positive performances (Miao et al., 2017). To this end, it is not surprising that entrepreneurs, high in ESE, have higher levels of work satisfaction (Bradley & Roberts, 2004). According to Engel et al. (2014), participants with higher ESE were more likely to frame uncertainty as an opportunity and to embrace effectual logic when dealing with a high uncertainty venture scenario. According to Schumpeter and Knight (as cited in Brouwer, 2000) uncertainty and innovation are preconditions for entrepreneurship, therefore, the benefits of ESE and SESE are likely to be particularly advantageous in the entrepreneurship field that is characterized by excess information, overload uncertainty, and high time pressure (Baron, 1998).

Several studies investigated factors that can impact ESE. Among them, Cooper et al. (2016) analyzed firm-level characteristics such as firms' strategic orientation and entrepreneurial culture and found them to be positively related to entrepreneurs' innovation-focused ESE, a sub-dimension of ESE. Forbes (2005) has also found that comprehensive decision-making processes that engage a wider group of employees and involve more current information, enhance entrepreneurs' ESE. Finally, Snell et al. (2015) found a positive link between a firm's marketing capabilities and the entrepreneur's ESE. Besides research on firm

characteristics, the key antecedents of ESE include cultural and institutional environment, education and training, work experience, role models, mentors, and individual differences (Newman et al., 2019). Within individual differences, personality traits such as conscientiousness and a proactive personality have been already analyzed, resulting in a strong link with ESE (Newman et al., 2019).

Social entrepreneurial self-efficacy (SESE), indicates the strength and confidence in an individual's belief that he or she has the skills and ability to achieve the roles and tasks of a successful social entrepreneur (Scherer et al., 1989; Zhang et al., 2021). It is the belief in one's ability to make positive social change and those with high levels of SESE will be more likely to engage, persist, and perform well in efforts that create social value (Smith & Woodworth, 2012). The concept was introduced as a new theory to refer to human behavior toward social missions that affect an individual's beliefs, efforts, levels of input, and persistence (Dwivedi & Weerawardena, 2018). Specifically, SESE captures a different kind of entrepreneurial confidence than that considered by traditional ESE. Whereas traditional ESE boosts individual confidence in performing roles and tasks generally associated with commercial innovation and risk-taking (Chen et al., 1998), SESE boosts confidence in performing entrepreneurial tasks associated with social innovation and benefitting others, such as identifying social problems and creating new products/services to solve these problems (Bacq & Alt, 2018). Research on SESE has focused mostly on its role as a moderator in the relationship between proactiveness, market orientation, and value co-creation (Liu & Huang, 2020) and as a mediator in the relationship between perseverance and proactive personality (Zhang et al., 2021). Therefore, it can be determined that ESE and SESE are major components for sustainable entrepreneurs to possess, especially in leading and venturing into a new business, to make sure that the company they are running or developing can attain success.

2.2 Innovativeness

Innovativeness is defined as “an overall innovative capability of introducing new products to the market or opening up new markets, through a combination of strategic orientation with innovative behavior and process” (Wang & Ahmed, 2004). It is a domain-specific personality trait (Goldsmith & Foxall, 2003) that refers to the constant effort to advance an individual's work procedures (Utsch & Rauch, 2000) and it is also defined as goal-oriented and planning behavior, including aspects related to job performance or venture performance. (Frese, 1995; Locke & Latham, 1990; Miner et al., 1989; Schwenk & Shrader, 1993).

There is evidence from many authors regarding the importance of innovativeness as a strategy in the entrepreneurial process (Frese, 1995; Lumpkin & Dess, 1996; More, 1986; Schumpeter, 1934, 1942). Indeed, entrepreneurial activities are considered by Schumpeter (1934) as creative destruction. They destroy everything conventional with their innovativeness, by creating and replacing them with superior environmental social products and services. Innovation can be considered as the source of entrepreneurship, where entrepreneurship favors innovation to attain its economic and social value, hence the two come together creating a continuous and complementary process. (Zhao, 2005). Innovation capabilities are considered determinants and antecedents of entrepreneurship (Dias et al., 2021). The study shed light on the importance of innovation on entrepreneurship capabilities, establishing that innovation has a positive relationship with entrepreneurial capabilities (Dias et al., 2021).

Several studies found a direct and positive correlation between innovation and superior performance (Calantone et al., 2002; Hult et al., 2004; Keskin, 2006; Panayides, 2006; Thornhill, 2006). Innovativeness also has a significant effect on profit growth and employee growth (Utsch & Rauch, 2000). Indeed, innovation is also linked to the long-term competitiveness of the organization (Noble et al., 2002), because it creates unique intangible resources that are hard to imitate (Rasmussen, 2014), and because it satisfies customer needs by creating innovative products that align to market trends (Appiah-Adu et al., 2018).

Business founders possess higher ESE in innovation and risk-taking than non-founders (Chen et al., 1998), and there are more nascent entrepreneurs among innovators than among graduate students of business (Chen et al., 1998). The finding of Chen et al. (1998) acknowledged innovation and risk-taking as key primary entrepreneurial capabilities. This fact is related to the proactive personality of entrepreneurs being more likely to innovate (Kickul & Gundry, 2002) and because innovators feel comfortable when dealing with risk (Chen et al., 1998). Further, Hough and Scheepers (2008) concluded that the entrepreneur was the risk-taking person to activate innovation and often took proactive measures that resulted in new products or services generation, leading to long-term sustainable competitive advantage (Porter, 2008). Innovativeness also refers positively and considerably to personality traits of self-efficacy, higher-order strength, and achievement (Pekkala et al., 2018). Innovativeness has been examined together with initiative, as a mediator for achievement orientation which is also considered a composite of self-efficacy and it was found that innovativeness is a mediator, while initiative is not (Utsch & Rauch, 2000). Finally, according to Dias et al. (2021), it is suggested that firms should possess innovation capabilities as essential predictors if they want to reach higher levels of entrepreneurial capabilities. At last, it is quite surprising how little

attention has been paid to the innovativeness of entrepreneurs as it relates to their personalities (Kerr et al., 2018).

In social entrepreneurship, innovativeness reflects a tendency toward continually developing and promoting novel ideas and solutions to social needs, new ways of marketing, raising funds, and influencing government while departing from conventional approaches (Dwivedi & Weerawardena, 2018; Mort, 2002). Social entrepreneurial orientation includes six dimensions, among them innovativeness is the third strongest dimension, suggesting that creative and value-adding approaches responding to social needs are a crucial aspect of socially entrepreneurial behavior (Liu & Huang, 2020). Prabhu (1999) and Sullivan Mort et al. (2003) also identified three factors being central to social entrepreneurship among them innovativeness plays a key role. A social entrepreneur's innovativeness, directly and indirectly, increases the social performance of social enterprises (Shin, 2018). More specifically, openness and innovativeness play a mediating role not only in social performance but also in economic performance (Shin, 2018).

The empirical evidence regarding the relationship between innovativeness and organizational capabilities remains scarce (Bature et al., 2018). However, Acar and Özşahin (2018) consider having an innovative strategic attitude to help a business organization bear the pressures from external environmental complexities. Additionally, Miller and Friesen (1982) and Tsao and Chen (2012) affirm that integrating a culture of innovativeness in an organization leads to a higher probability of developing a variety of capabilities to help deal with the everchanging market needs to compete approvingly in the marketplace. Finally, Bature et al. (2018) found that proactiveness and innovativeness indirectly influenced Small medium enterprise (SME) performance by building organizational capabilities.

Innovation is crucial for companies to advance and maintain their competitiveness while accomplishing their CSR needs to various stakeholders, when CSR is fully implemented in the business process, it will create innovative practices that will boost the business competitiveness (Vilanova et al., 2009). Bahta (2020) contributed greatly to the CSR-SME relationship and shed light on the importance of CSR as an important driver mechanism for businesses to be more innovative and competitive. According to Korra (2018) firms with a larger application of CSR practices are more likely to be innovators when compared to other companies that implement less CSR practices, therefore CSR practice may increase innovative performance and provide support for growth.

In sum, scholars have suggested the connection and importance of innovativeness for entrepreneurs, as well as its influence in enhancing the competitiveness of an organization

through organizational capabilities and philanthropic CSR, thus in response and in light of this discussion, this research hypothesize:

H1a. Innovativeness positively relates to ESE.

H1b. Innovativeness positively relates to SESE.

H1c. Innovativeness positively relates to Organizational Capabilities.

H1d. Innovativeness positively relates to Philanthropic CSR.

2.3 Organizational capabilities

Organizational capabilities refer to a firm's capacity to use its resources, tangible or intangible, to execute a task or an activity. They represent the internal strengths that can explain how an organization gets an advantage over other organizations leading to improved and increased performance (Amit & Schoemaker, 1993; Barney, 1991; Penrose, 1959; Teece et al., 1997). They are organizational processes including managerial competencies, knowledge, and skills of employees along with efficient organizational structure, organizational culture, efficient coordinative mechanism, strategic planning, and the ability to engage creative employees (Spanos & Lioukas, 2001). Organizational capabilities can improve companies' competitive advantages and strengthen their ability to react to internal and external change (Inan & Bititci, 2015), and they are according to the resource-based view of the firm, a source of sustainable competitive advantage (Collis, 1994).

Wingwon (2012) explains the effect of entrepreneurship, organization capability, strategic decision-making, and innovation factors on the competitive advantage of SME businesses. According to the study, the organization capability factor had a direct effect on innovation and therefore on the competitive advantage of the organization, additionally entrepreneurship has a positive direct effect on organizational capability. Innovation can also be considered a great organizational capability because the creation of new products can be a tool of growth that can increase sales, profits, and the power of competition for many organizations (Battor & Battor, 2010; Sivadas & Dwyer, 2000).

Research concerning firm capabilities and ESE shows evidence regarding only the firm's marketing capabilities, showing a positive relationship between it and the entrepreneur's ESE (Snell et al., 2015). The study argues that marketing capabilities enhance entrepreneurs' confidence that they will be able to deal with challenges during entrepreneurial tasks, leading individuals to maintain positive judgments of their physiological states (Newman et al., 2019).

In the search we conducted in this study, we have not encountered any studies which focused on the impact of organizational capabilities on SESE in sustainable entrepreneurs, but we found some studies which have some aspects similar to our research. Yu et al. (2015) for instance, show that two types of organizational capabilities can make positive contributions to social enterprises' performance. Precisely, stakeholder engagement capabilities and business planning capabilities can create positive contributions to social enterprise performance in economic and social domains. On the other hand, human resources and management capabilities make positive effects on social performance but not on economic performance. Some more evidence comes from the study from Kwiotkowska (2022) that shows that by concentrating on a combination of various organizational capabilities, it is possible to promote and encourage social entrepreneurship.

Overall, it has been confirmed by several studies that organizational capabilities are crucial for excellent firm performance (Monteiro et al., 2017; Tzokas et al., 2015; Zacca & Dayan, 2018). However, how organizational capabilities affect the performance of entrepreneurs from the point of view of ESE and SESE and its relation to innovativeness has been underexplored therefore we propose:

H2a. Organizational capabilities have a direct effect on ESE.

H2b. Organizational capabilities have a direct effect on SESE

H3a. Organizational capabilities mediate the relation between innovativeness and ESE

H3b Organizational capabilities mediates the relation between innovativeness and SESE

2.4 Philanthropic CSR

CSR is defined, in a broader view, as corporate behaviors and commitments, which aim to affect positively stakeholder obligations and go beyond mere economic interest (Carroll, 1991; Kotler & Lee, 2008; Turker, 2009). It refers to business decision-making concerning ethical values, fulfillment of legal requirements, and respect for people, communities, and the environment (Carroll, 1979; Maignan et al., 1999). CSR is associated with sustainable development built on the integration of social, economic, and environmental aspects (Buendía-Martínez & Carrasco Monteagudo, 2020). It is increasingly acquiring attention because of the current global focus on sustainability. Corporations, willing to be good corporate citizens, have to follow four responsibilities: economic, legal, ethical, and philanthropic (Carroll, 1991). The philanthropic dimension addresses the corporation's responsibility to engage in activities that promote human

welfare or goodwill (Carroll, 1991), including the responsibilities of contributing financially and through human resources to the community, helping enhance their quality of life (Carroll, 1991).

According to Stoian (2017), CSR activities in SMEs can enhance the growth of the firm. This result is in line with previous studies and with management literature that affirms the positive relationship between CSR and firm performance (Luo & Homburg, 2007; Maignan et al., 1999; Qu, 2009) and a positive association between CSR and SME performance (Ionescu 2021; Li et al., 2022; Tsoutsoura, 2004; Waddock & Graves, 1997). It has been also shown that the relationship between CSR and sustainable financial performance is positive when moderated by entrepreneurship (Luo et al., 2022). There is also a positive link between environmental and philanthropic activities and organizational performance, which strengthens previous research remarking a positive relationship between investment in CSR and organizational performance (Lindgreen et al., 2009). The study of Lee et al. (2012) examines the impact of employee perception of CSR activities on employee attachment and corporate performance. The research found that the more employees feel an alignment between CSR and the culture of the firm, the higher the employee's positive perception toward the firm will be. The study shows that CSR capability and perceived cultural fit can encourage positive CSR perception, hence lead to better performance (Lee et al., 2012). Indeed, employees who recognize that their organization is investing in CSR practices are more engaged, more productive, more likely to be committed to organizational goals and they can generate positive attention from both current and future employees (Dutton et al., 1994; Turban & Greening, 1996). By investing in CSR and increasing the engagement with stakeholders, revenues and profits can grow, thus leading to higher chances of survival in the long term (Lindgreen et al., 2009). Lastly, CSR activities involving community responsibility, philanthropic responsibility, and environmental responsibility have a significant positive influence on social performance in social enterprise (Jang, 2014).

In sum, CSR is positively correlated to firm performance and to positive employee perception. However, research that analyses the relationship between the impact of philanthropic CSR on the performance of sustainable entrepreneurs remains scarce. Thus, formally we propose the following hypothesis:

H4a. Philanthropic CSR has a direct effect on ESE

H4b. Philanthropic CSR has a direct effect on SESE

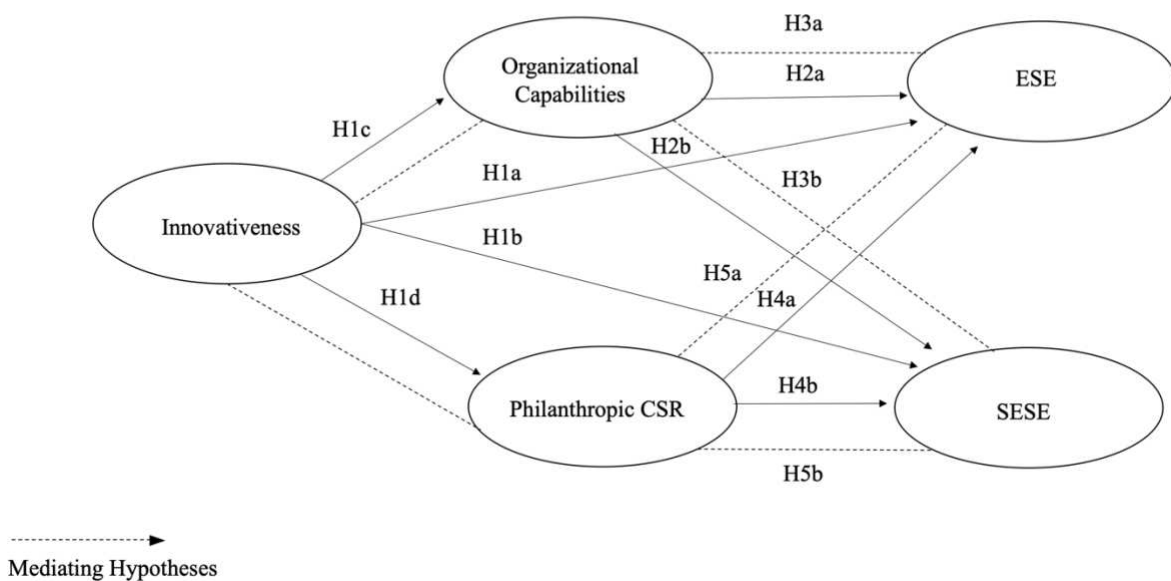
H5a. Philanthropic CSR mediates the relation between innovativeness and ESE

H5b. Philanthropic CSR mediates the relation between innovativeness and SESE

By considering the previous described relationships the following conceptual model has been devised (Figure 2.1).

Figure 2.1

Conceptual Model



Note: Connected lines direct relationships among constructs; Dashed lines indirect relationships among constructs.

3. Methodology

3.1 Data collection and sample

The analysis employed a quantitative approach by creating a survey for data collection. The sampling frame for the quantitative study is composed of 116 sustainable entrepreneurs, that are founders and chief executive officers of their own companies. In choosing the sustainable entrepreneurs to be included in the sample frame, we respected the following inclusion criteria used by Zhao et al. (2005) and Montgomery and Stone (2009):

1. The company tries to offer environmentally friendly products.
2. The company identifies new business opportunities for social change.
3. The business created new products/services to solve social problems.
4. The company has an environmentally related mission.

The research is based on a non-probabilistic sample. The choice to use a convenience sample was because of an absence of an official and clear database to identify the total of the universe. Consequently, a purposive sampling technique was used to guarantee that the respondents were effectively sustainable entrepreneurs and that they followed the inclusion criteria previously introduced. Since this is a specific type of entrepreneurship and professional sources do not determine the type of entrepreneurs.

To obtain the sample, sustainable entrepreneurs were recruited during two events (Web Summit 2021 in Lisbon and the European Innovation Council Summit 2021). The events allowed access to a database of entrepreneurs that were invited to participate in the quantitative study. Additionally, the sample was also researched and selected on LinkedIn. The participants after being contacted were invited to participate in an internet-based questionnaire that was used for data collection.

The questionnaire was based on existing literature and pre-existing validated scales were used to measure the four constructs appearing in the structural model. In particular, innovativeness was measured using three items, respectively, that were taken from from Hughes and Morgan (2007). Entrepreneurial self-efficacy was measured through a four-item scale by Zhao et al. (2005) and social entrepreneurial self-efficacy was measured using four items that were from Zhao et al. (2005) with the adaptation of Liu and Huang (2020). The firm organizational capabilities were measured through a seven-item scale adapted from Spanos and Lioukas (2001). Philanthropic CSR activities were measured using a six-item scale by Lee et al. (2013) based on Lichtenstein et al., (2004); Maignan & Ferrell, (2001); Montgomery &

Stone, (2009). These six scales were measured using seven-point Likert-type scales anchored by one (strongly disagree) and seven (strongly agree). The questionnaire items are described in details in Table A1 (appendix).

A previous version of the questionnaire was pre-tested with a short sample of 5 respondents to validate wording and the full comprehension of the questionnaires. The final internet-based questionnaire was sent by email to around 300 sustainable entrepreneurs and a total of 116 complete questionnaires were received. Data collection occurred between November 2021 and February 2022. The respondents were 78,4% males and 21,6% females. In terms of age, out of the 116 respondents, 115 answered stating that: 20,8% were less than 30 years old, 43,4% were between 30 and 40 years old, 21,7% were between 40 and 50 years old and the remaining 13,9 % were older than 50. Regarding firm size, 57,3% of the sustainable entrepreneurs stated that their firms had 10 or fewer employees, 32,1% stated they had between 11 and 50 employees, 7,8% stated they had between 51 and 200 and the remaining 2,6% stated that their firms had more than 200 employees. The average years in operation of a business were 5.44 with a standard deviation of 5.54 years (minimum: 5 months; maximum: 27 years). Regarding the country of origin 13,7% were from Portugal, 12% from Italy, 9,1% from the UK, 8,2% from Spain, 8,2% from Germany, 6,4% from Netherlands, 6,4% from France, 4,5% from Denmark, 3,6% from the USA, 3,6% from Sweden, 2,7% from Belgium, 1,8% Austria, 1,8% from Norway, 1,8% from South Africa. The other 14.4% was respectively from Brazil, Uganda, Tunisia, Hong Kong, Malaysia, Singapore, Argentina, Romania, United Arab Emirates, India, Russia, Estonia, Latvia, Croatia, Ireland, and Switzerland. Having an international sample helped to bring a plethora of different views, backgrounds, and contexts, hence adding value to the research.

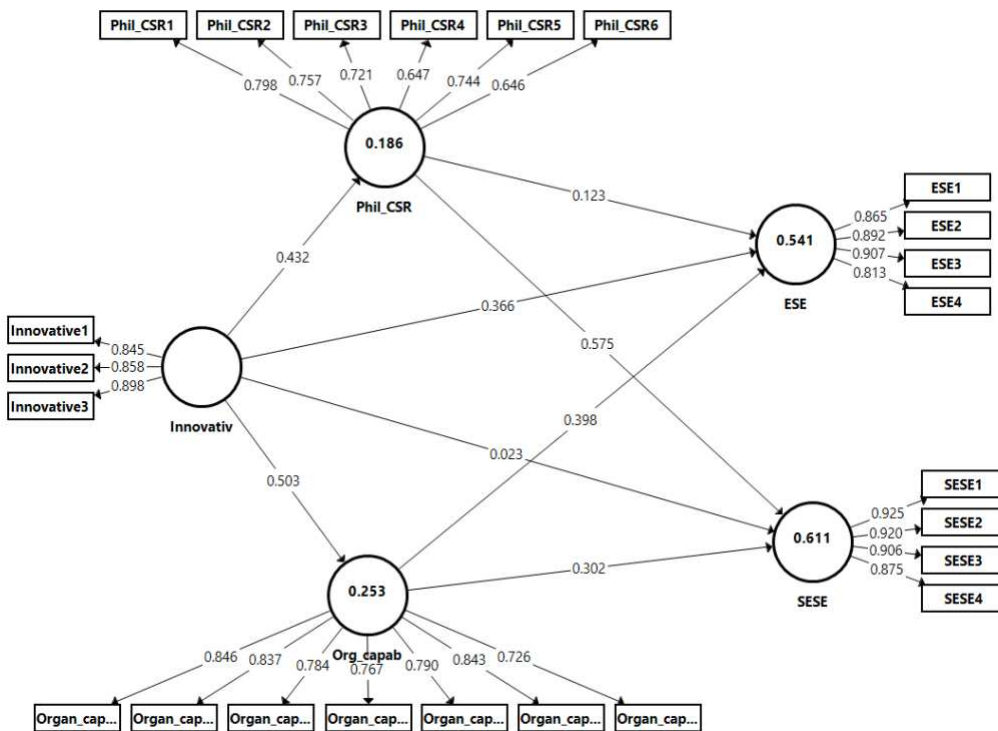
4. Results

4.1 Data analysis

To assess our conceptual model, we used structural equation modelling (SEM), more specifically, we used partial least squares (PLS), which is a variance-based structural equation modelling technique, by means of Smart PLS 3 software (Henseler et al., 2015) (Figure 4.1).

Figure 4.1

Conceptual model assessment through SEM.



The analyses and interpretation of the results adopted a two-stage approach. We firstly assessed the reliability and validity of the measurement model, and we secondly tested the structural model. To appraise the quality of the measurement model, we examined the individual indicators of reliability, convergent validity, internal consistency reliability, and discriminant validity (Hair et al., 2017). The results showed that the standardized factor loadings of all items were above 0.5 (with a minimum value of 0.64) and were all significant at $p < 0.001$, which gave evidence for the individual indicator reliability (Hair et al., 2017). Internal consistency reliability was confirmed because all the constructs' Cronbach alphas and composite reliability (CR) values exceeded the cut-off of 0.7 (Table 4.1) (Hair et al., 2017). Convergent validity was additionally confirmed for three key reasons. First, as mentioned previously all items loaded positively and significantly on their respective constructs. Next, all constructs had CR values

higher than 0.70. Lastly, as table 4.1 shows, the average variance extracted (AVE) for all constructs exceeded the threshold of 0.50 (Bagozzi & Yi, 1988).

The discriminant validity was assessed using two approaches. First, we adopted the Fornell and Larcker criterion (Fornell & Larcker, 1981). This criterion needs that a construct's square root of AVE (shown on the diagonal with bold values in table 4.1) is larger than its biggest correlation with any construct (Fornell & Larcker, 1981). Table 4.1 presents that this criterion is fulfilled for all constructs. Second, we used the heterotrait-monotrait ratio (HTMT) criterion (Hair et al., 2017; Henseler et al., 2015). As table 4.1 shows, all HTMT ratios are below the more conservative threshold value of 0.85 (Hair et al., 2017; Henseler et al., 2015). They offer additional evidence of discriminant validity. The structural model was determined using the sign, magnitude, and significance of the structural path coefficients; the magnitude of R^2 value for each endogenous variable as a measure of the model's predictive accuracy; and the Stone-Geisser's Q^2 values as a measure of the model's predictive relevance (Hair et al., 2017). Nevertheless, we examined collinearity before assessing the structural model (Hair et al., 2017). The variance inflation factor (VIF) values ranged from 1.00 to 1.53, which was below the indicative critical value of 5 (Hair et al., 2017). These values indicated no collinearity.

The coefficient of the determination R^2 or the four endogenous variables of organizational capabilities, philanthropic CSR, ESE and SESE were 0.25%, 0.18%, 0.54%, and 0.61%, respectively. These values surpassed the threshold value of 10% (Falk & Miller, 1992). The Q^2 values for all endogenous variables (0.14, 0.08, 0.38, and 0.49 respectively) were above zero which indicated the predictive relevance of the model. We used bootstrapping with 5,000 subsamples to assess the significance of the parameter estimations (Hair et al., 2017).

Table 4.1

Composite reliability, average variance extracted, correlations, and discriminant validity checks.

Latent Variables	α	CR	AVE	1	2	3	4	5
ESE	0,893	0,926	0,757	0,870	0,706	0,706	0,531	0,709
Innovativeness	0,835	0,901	0,752	0,619	0,867	0,557	0,478	0,478
Organizational Capabilities	0,906	0,925	0,640	0,642	0,503	0,800	0,552	0,632
Philanthropic CSR	0,818	0,866	0,520	0,477	0,432	0,493	0,721	0,807
SESE	0,928	0,949	0,822	0,646	0,423	0,596	0,733	0,906

Note: α -Cronbach Alpha; CR -Composite reliability; AVE -Average variance extracted.

Bolded numbers represent the square roots of AVE. Beneath the diagonal elements are the correlations between the constructs. Above the diagonal elements are the HTMT ratios.

4.2 Quantitative results

The results in table 4.2 show that innovativeness has a significantly positive effect on ESE ($\beta = 0.366$; $p < 0.001$), however, the direct effect of innovativeness on SESE ($\beta = 0.023$; n.s.) is

not significant. Innovativeness has a significantly positive relation with organizational capabilities ($\beta=0.503$; $p < 0.000$) and with philanthropic CSR ($\beta = 0.432$; $p < 0.000$). These results provide support for H1a, H1c and H1d, whereas H1b is not supported. Organizational capabilities have a significantly positive relation with ESE ($\beta=0.398$; $p < 0.000$) and SESE ($\beta=0.302$; $p < 0.001$), which supports H2a and H2b, respectively. Lastly, philanthropic CSR does not have a positive relation with ESE ($\beta=0.123$; n.s.) whereas with SESE there is a positive significantly relation ($\beta=0.575$; $p < 0.000$) of TLEs. These results provide support for H4b, however they do not support H4a.

Table 4.2

Structural model assessment.

Path	Original Sample (O)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Innovativeness-> ESE	0,366	0,109	3,370	0,001
Innovativeness -> SESE	0,023	0,076	0,298	0,765
Innovativeness -> Organizational capabilities	0,503	0,114	4,414	0,000
Innovativeness -> Philanthropic CSR	0,432	0,099	4,376	0,000
Organizational Capabilities -> ESE	0,398	0,110	3,621	0,000
Organizational Capabilities -> SESE	0,302	0,089	3,396	0,001
Philanthropic CSR -> ESE	0,123	0,079	1,556	0,120
Philanthropic CSR -> SESE	0,575	0,072	8,027	0,000

Table 4.3

Bootstrap results for indirect effects.

Indirect effect	Original Sample (O)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Innovativeness -> Organizational capabilities -> ESE	0,200	0,069	2,885	0,004
Innovativeness -> Organizational capabilities -> SESE	0,152	0,057	2,645	0,008
Innovativeness -> Philanthropic CSR -> ESE	0,053	0,036	1,492	0,136
Innovativeness -> Philanthropic CSR -> SESE	0,248	0,064	3,855	0,000

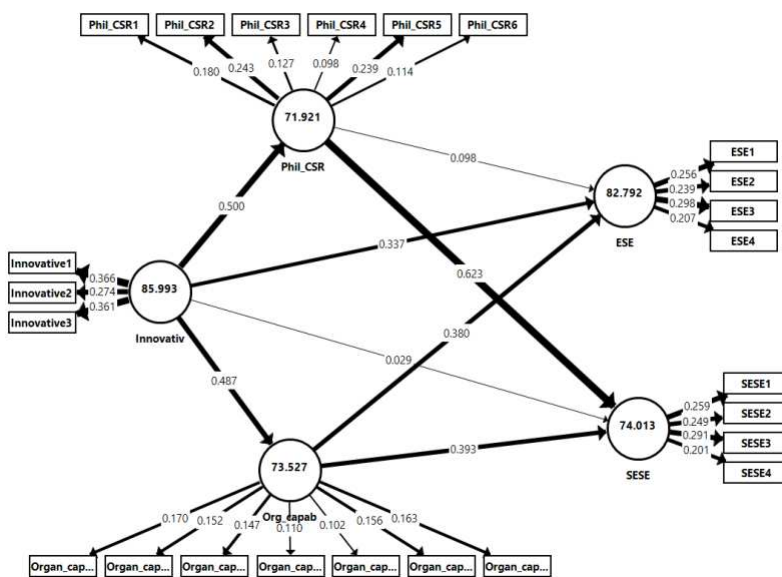
To test the mediation hypotheses (H3a-H3b-H5a-H5b), we adopted the recommendations of Hair et al. (2017). Hence, we used a bootstrapping procedure to test the significance of the indirect effects via the mediator (Preacher & Hayes, 2008). Table 4.3 introduces the results of the mediation effects. The indirect effects of innovativeness on ESE and SESE via the mediator of organizational capabilities are significant ($\beta =0.200$; $p<0,004$) and ($\beta =0.152$; $p<0,008$), respectively. These results provide support for the mediation hypotheses H3a and H3b. However, the indirect effects of innovativeness on ESE via the mediator of philanthropic CSR are not significant ($\beta =0.053$, n.s.). Further, the indirect effects on SESE are significant ($\beta =0.248$ $p<0,000$), thus, H5b is supported whereas and H5a is not.

4.3 Importance-performance map analysis

Importance performance map analysis (IPMA) is a useful tool that considers the performance and importance of the construct. It was conducted to extend and enrich the original results of the PLS-SEM analysis. The results can be useful in acknowledging managerial decisions, by providing a greater understanding of where management should concentrate its attention (Ringle, 2015). The target construct considered in our study is innovativeness which is linked to other four variables: organizational capabilities, philanthropic CSR, ESE, and SESE (Figure 4.2).

Figure 4.2

IPMA Model



Considering the IPMA results for performance (Table 4.4), all the variables have high-performance values with a minimum of 71,921 to a maximum of 85,993.

Table 4.4

Performance in the IPMA for innovativeness

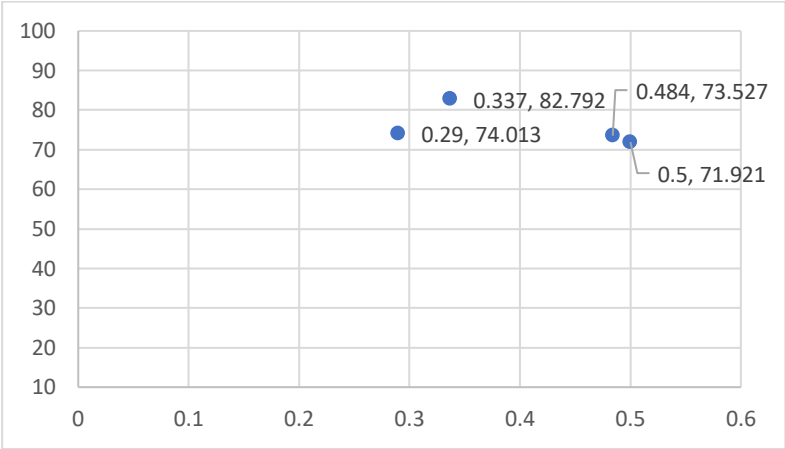
Variables	Performance
Innovativeness	85,993
Organizational capabilities	73,527
Philanthropic CSR	71,921
ESE	82,792
SESE	74,013

Innovativeness positively relates to ESE, organizational capabilities, and philanthropic CSR. It results that the strongest result in importance is philanthropic CSR (0,500), successively with organizational capabilities (0,487), lastly, with ESE (0,337). The lowest results in importance with innovativeness is the one with SESE (0,029), that is in line with previous results showing a non-significant relation between the two. Organizational capabilities show great importance with ESE (0,380) and with SESE (0,393) and philanthropic CSR holds the highest results in importance with SESE (0,623) but the lowest with ESE (0,098). All the results, respectively related to the importance are found in table 4.5. In table 4.6, the importance and performance results are shown together

Table 4.5
Importance in the IPMA for innovativeness

Importance	ESE	Innovativeness	Organizational Capabilities	Philanthropic CSR	SESE
ESE					
Innovativeness	0,337		0,487	0,500	0,029
Organizational Capabilities	0,380				0,393
Philanthropic CSR	0,098				0,623
SESE					

Figure 4.2
IPMA for innovativeness



5. Discussion

5.1 The direct effect of innovativeness on ESE, SESE, organizational capabilities and philanthropic CSR

This research explored the impact of innovativeness on ESE, and SESE and analyzed the role of two distinctive mediators: organizational capabilities and philanthropic CSR. We examined and confirmed a positive significant relationship between innovativeness and ESE, this relationship confirms evidence by studies from Chen (1998) that acknowledge the relation of innovation with entrepreneurial capabilities, and it is in line with Dias et al. (2021), suggesting that innovation capabilities are predictors of entrepreneurial capabilities. The results are in accordance with previous studies, that affirm innovativeness as a mediator for achievement orientation which is also a composite of self-efficacy (Utsch & Rauch, 2000).

Our study, however, extends the literature on the relationship between innovativeness and ESE in sustainable entrepreneurs, thus we can determine that by developing innovativeness, sustainable entrepreneurs experience higher levels of ESE. Regarding innovativeness and SESE we found a negative relationship. This is not in line with the evidence from previous studies stating that innovativeness can be considered one of the crucial aspects of socially entrepreneurial behavior (Liu & Huang, 2020) and it is not in line with the social entrepreneurial orientation theory, that includes it as the third strongest dimension (Liu & Huang, 2020). According to Shin (2018), innovation has both direct and indirect effects on the performance of social enterprises, however, this is not in line with our results. Our findings expand knowledge on performance specifically on SESE, showing that innovativeness does not enhance the self-efficacy of sustainable entrepreneurs in successfully performing roles and tasks to make positive social change.

Despite the scarce empirical evidence on the relationship between innovativeness and organizational capabilities, we found a significant positive relationship between the two. In this case, this relationship supports previous research from Bature (2018) that found that proactiveness and innovativeness indirectly influenced SME performance by building organizational capabilities. It also supports Miller and Friesen (1982) and Tsao and Chen (2012), that suggests that having a culture of innovativeness in an organization increases the probability of developing a series of capabilities to compete in the marketplace. Therefore, we can confirm the evidence and expand the knowledge regarding the field of SE showing that the implementation of innovativeness, can enhance organizational capabilities. Increasing organizational capabilities can, as result, improve firm climate, managerial competencies,

knowledge, and skills of employees, coordination, and strategic planning, therefore helping to develop competitive advantages resulting in better performance in SE.

Most of the literature regarding the relationship between innovativeness and philanthropic CSR focuses mainly on the general concept of CSR. Our finding from the quantitative study shows a positive significant relationship between innovativeness and philanthropic CSR. This is in line with the evidence from Vilanova et al. (2009), stating that when CSR is integrated, as result, it can develop innovative practices, and eventually, competitiveness. Bahta (2020) and Korra (2018) stated that firms with a larger application of CSR practices are more likely to be innovators. However, our findings can give a further contribution to the literature in the field of SE by identifying the positive impact of innovativeness, on the philanthropic dimension of CSR.

5.2 The direct effect of organizational capabilities on ESE and SESE

Our results from the quantitative study show a significant positive relationship between organizational capabilities with ESE. This relationship is in line with the evidence from several studies that state that organizational capabilities are essential for excellent firm performance (Monteiro et al., 2017; Tzokas et al., 2015; Zacca & Dayan, 2018). Our findings can also contribute to the literature on the role of organizational capabilities in ESE in SE. The results suggests that organizational capabilities can enhance sustainable entrepreneurs' ESE, therefore, increase their strengths in successfully performing various entrepreneurial roles and tasks, successfully identifying new business opportunities, and improving their belief in their ability.

From our conducted research, the literature on the effects of organizational capabilities on SESE appears to be still underexplored. A significant positive relationship existed between organizational capabilities and SESE. This relationship is consistent with the study from Yu et al. (2022), which proposes that organizational capabilities can impact the performance of social enterprises. This positive relationship is also consistent with the study from Kwiotkowska (2022) that showed that with a combination of various organizational capabilities it is possible to promote and encourage social entrepreneurship. However, the studies previously cited do not target sustainable entrepreneurs and they do not research the specific variable of SESE. Thus, our research has attempted to advance knowledge in the field of SE's organizational capabilities and SESE.

5.2 The direct effect of philanthropic CSR on ESE and SESE

The direct relationship between philanthropic CSR and ESE was found negative. Research related to this relationship was scarce, the only studies slightly related to the topic showed evidence of a positive relationship between CSR and firm performance (Luo & Homburg, 2007; Maignan et al., 1999; Qu, 2009), and the other one showed a positive link between environmental and philanthropic activities and organizational performance (Lindgreen et al. 2009). However, our findings show that CSR does not have a positive relationship with ESE, consequently, it is not effective in enhancing the self-efficacy of sustainable entrepreneurs.

On the other hand, the direct relationship between philanthropic CSR and SESE was positive. The relationship resulted the highest in importance from the IPMA analysis, showing great strength between the constructs. The results related to philanthropic CSR and SESE are in line with the evidence from Jang (2014), stating that CSR activities involving community responsibility, philanthropic responsibility, and environmental responsibility have a significant positive influence on social performance in social enterprise. The positive result can be related to the similar features of philanthropic CSR and SESE, where the focus is fixed on social aspects. Therefore, by incorporating philanthropic CSR, the SESE of sustainable entrepreneurs enhances, and as result, their social performance improves, and social issues can be solved more successfully.

5.3 The indirect effect of innovativeness on ESE and SESE through organizational capabilities

According to the systematic review of the literature on ESE, on its theoretical foundations, measurements, antecedents and outcomes, the relationship between innovativeness and ESE with organizational capabilities as a mediator is still underexplored (Newman et al., 2019). Studies related to innovativeness and ESE are also limited, however innovativeness has a positive relationship with job performance and venture performance (Frese, 1995; Locke & Latham, 1990; Miner et al., 1989; Schwenk & Shrader, 1993). We also know that organizational capabilities can help companies get an advantage over others thus helping increase performance (Amit & Schoemaker, 1993; Barney, 1991; Penrose, 1959; Teece et al., 1997). According to Yu (2013), innovativeness plays an important role and is considered a crucial organizational capability for competitive advantage and sustainability in dynamic environments.

The results from our quantitative research were positive for innovativeness and ESE showing that organizational capabilities can promote the link between the two variables. This finding aligns with previous evidence from studies that recognize that organizational

capabilities are critical for excellent firm performance (Amit & Schoemaker, 1993; Barney, 1991; Penrose, 1959; Teece et al., 1997). Other studies have found a positive relationship between other types of firm capabilities, specifically, marketing capabilities and ESE (Snell et al., 2015). Furthermore, integrating a culture of innovativeness in an organization can increase the probability of developing capabilities to be more competitive (Miller & Friesen, 1982; Tsao & Chen, 2012) thus, this could most likely increase ESE in sustainable entrepreneurs. Although previous studies show the positive role of organizational capabilities in advancing competitive advantages, its mediating role between innovativeness and ESE was still underexplored and needed further investigation. Therefore, our research enhances the understanding of ESE by showing that innovativeness mediated by organizational capabilities can stimulate the self-efficacy of sustainable entrepreneurs, thus influencing positively their entrepreneurial intentions in achieving business success.

The analysis of the data collected through our study show that the relationship between innovativeness and SESE through the mediating role of organizational capabilities is also positive. This result was quite interesting as the direct relationship between innovativeness and SESE was found negative and in contrast, the indirect relationship was found positive showing that innovativeness can enhance SESE only when mediated by organizational capabilities. The previous studies conform with our previous results that show a positive correlation between innovativeness and organizational capabilities and organizational capabilities with SESE. The results are also in line with previous studies stating that innovativeness can help companies be more competitive and that it can help indirectly in influencing SME performance by building organizational capabilities. Regarding organizational capabilities and SESE, we know that a combination of several organizational capabilities can foster social entrepreneurship (Kwiotkowska, 2022). Research on factors that can influence SESE is scarce. Studies have focused mostly on innovativeness as a mediator for social performance (Shin, 2018) and on the role of innovativeness in indirectly influencing SME performance by building organizational capabilities (Bature, 2018). Our results advance the knowledge on SESE, proving that innovativeness does not have a significant direct impact on SESE, but if the relationship is mediated by organizational capabilities the result is positive.

5.4 The indirect effect of innovativeness on ESE and SESE through philanthropic CSR

The relationship between innovativeness and ESE through the mediation of philanthropic CSR is scarce (Newman et al., 2019). Most studies show increasing evidence that CSR can positively impact firm performance (Luo & Homburg, 2007; Maignan et al, 1999; Qu, 2009) and

according to Lindgreen et al. (2009) there is a positive link between environmental and philanthropic CSR and organizational performance. However, there is a lack of focus in research regarding the impact of innovativeness mediated by the specific dimension of philanthropic CSR on the performance of entrepreneurs.

The findings of our study show that the relationship between innovativeness and ESE through the mediation of philanthropic CSR is not significant. Although innovativeness directly positively impacts both ESE and philanthropic CSR, the result is in line with our previous results showing a non-significant relationship between philanthropic CSR and ESE. Previous research had suggested that innovativeness has a significant effect on performance features such as profit growth and employee growth (Utsch & Rauch, 2000). And there is increasing positive evidence of the impact of CSR on firm performance (Luo & Homburg, 2007; Maignan et al., 1999; Qu, 2009) However, our results suggest that combining innovativeness by mediating it with philanthropic CSR does not enhance the ESE of sustainable entrepreneurs.

Lastly the indirect relationship between innovativeness and SESE through philanthropic CSR is positive. This is another interesting finding as innovativeness does not have a positive relationship with SESE and the relationship results positive only when mediated by philanthropic CSR. This is in line with our previous results showing the positive relationship between philanthropic CSR and innovativeness and SESE, where it additionally resulted to have the strongest importance of the constructs through the IPMA. This relationship is also supported by previous evidence that shows that innovativeness positively and directly correlates to superior performance (Calantone et al., 2002; Hult et al., 2004; Keskin, 2006; Panayides, 2006; Thornhill, 2006) and that investing in CSR can increase performance (Luo & Homburg, 2007, Maignan et al, 1999; Qu, 2009). However, our study shows that innovativeness can enhance the belief in one's ability to make positive social change, only with the mediation of philanthropic CSR, therefore our findings extend the knowledge on the performance of sustainable entrepreneurs under the specific dimension of SESE.

6. Conclusion

SE has received increasing importance in the last decade by different actors, including international institutions, firms, and universities. Sustainable entrepreneurs are considered agents of change. They can overcome global challenges by finding a balance between economic viability, social welfare, and environmental protection (Belz & Binder, 2017; Muñoz & Dimov, 2015). There is a need for higher performant sustainable entrepreneurs as they can be the solution to, instead of the cause of, environmental degradation and social inequality.

The purpose of this study was, through a quantitative method approach, to expand knowledge on the direct and indirect influence of innovativeness on sustainable entrepreneurs' ESE and SESE, to identify the role of organizational capabilities and philanthropic CSR as mediators, and to understand if these two variables can positively impact directly ESE and SESE.

The independent variable analyzed was innovativeness which is considered a determinant and antecedent of entrepreneurship (Dias et al., 2021). ESE and SESE were the two dependent variables that are dominant predictors for performance (Bandura, 1977, 1982, 1986; Bandura & Schunk, 1981). The potential mediators researched were organizational capabilities and philanthropic CSR as they are both a source of competitive advantage (Collis, 1994; Ionescu, 2021; Li et al 2022; Teece et al., 1997; Waddock & Graves, 1997), hence they could have an important role in influencing the performance of sustainable entrepreneurs.

To test the hypothesis a quantitative study was conducted on a sample of 116 sustainable entrepreneurs from 29 different countries. The results acknowledge the identification of a set of relationships. Firstly, we identified a direct and positive relationships between innovativeness and ESE, organizational capabilities, and philanthropic CSR, however, the direct relationship with SESE was negative. The relationship between organizational capabilities with ESE and SESE was positive, whereas philanthropic CSR had a negative direct relation with ESE but a positive one with SESE. The indirect relationships between innovativeness through organizational capabilities to ESE and SESE were positive, whereas the relationship mediated through philanthropic CSR was found negative for ESE and positive for SESE. Finally, it was interesting to observe that although innovativeness's direct relation with SESE is negative when mediated through organizational capabilities or philanthropic CSR is positive.

6.1 Conceptual contributions

This study has made several contributions to the SE literature. Firstly, it extends literature on ESE and SESE as outcomes focusing specifically on sustainable entrepreneurs. An increasing number of studies has recognized the factors that may promote ESE including institutional environment, firm characteristics, education, training, work experience, role models and mentors and individual difference (Newman et al., 2019). From our conducted research, we have not found any studies which focused on extending knowledge on the role of innovativeness as the direct and indirect independent variable, therefore this research is also one of the first to uncover the direct effects of organizational capabilities and philanthropic CSR on ESE and SESE

Secondly, studies on the factors that can foster or inhibit SESE remain few. Therefore, this study contributes to literature on SESE by providing evidence of the importance of, firstly philanthropic CSR that was found to have the strongest link for the development of SESE, then of innovativeness and organizational capabilities. Our results represent a key contribution and a development on the topic of SESE as an outcome, placing an important piece in the research on the social performance of sustainable entrepreneurs' framework. Studying SESE is relevant as it is a key feature for a sustainable entrepreneur to have, by developing it they can make positive social change and thus making them more prone to engage, persist, and perform well in efforts to create social value. Thus, our research brings value to the topic by showing what factors can influence it.

Thirdly, this study is one of the first to incorporate the effect of two usually separated dimensions, innovativeness with organizational capabilities and philanthropic CSR as mediators for ESE and SESE. The results frame an improved understanding of the role of innovativeness with the two mediators, supporting the idea that innovativeness together with organizational capabilities can positively impact ESE and SESE, and it extends the knowledge on innovativeness by showing that it can only impact SESE positively when mediated, whereas when the relationship is direct to SESE is negative. By combining the effect of the three variables this study provides knowledge on the factors influencing ESE and SESE, thus representing a powerful contribution to SE performance, supporting the idea from previous research that innovativeness has an important role in enhancing performance.

Lastly, we are contributing to extending the literature on innovativeness and its role in positively influencing directly organizational capabilities and philanthropic CSR. This is also a great contribution because combining the three can lead to increase performance in SE as all the three are related positively to firm results.

Following these various contributions, this study reinforces the idea that research on ESE and SESE is a field with wide-ranging potential for development.

6.2 Managerial implications

According to Zhao et al. (2005), entrepreneurship education is inclined to emphasize technical aspects of entrepreneurship, however scarce attention is given to the cognitions of entrepreneurs including their beliefs and intentions (Chen et al., 1998). Most entrepreneurship courses concentrate on common management skills and often neglect the cognitions of the entrepreneurs and their entrepreneurial skills such as innovation and risk-taking (Chen et al., 1998). Thus, training institutions and educators should consider more entrepreneurial attitudes and perceptions when building their courses and should focus more in strengthening student's ESE (Chen et al., 1998).

Therefore, based on the results of our study we can offer practical advice on how to increase ESE and SESE in sustainable entrepreneurs that are aiming to achieve superior performance. The data collected through the questionnaires provide insights on how to increase organizational capabilities and philanthropic CSR activities through innovativeness, which can consequently benefit positively the performance of sustainable entrepreneurs. The relevance of these implications is based on the importance and benefits of ESE and SESE for entrepreneurs, as evidence suggests that ESE positively influences business success and can make entrepreneurs more confident in performing tasks (Baum & Locke, 2004; Forbes, 2005; Miao et al., 2017; Srimulyani et al., 2021).

Specifically, to enhance ESE, it is important to implement actions that contribute to the development of innovativeness, that provide an environment within the business where innovativeness can thrive and where sustainable entrepreneurs can engage more in actions such as actively introducing improvements and innovations in the business, being creative in the methods of operations, and seeking new ways to do things. Thus, based on the results, by increasing innovativeness, ESE can grow, hence, chances to be more successful in identifying new business opportunities, to be more creative in thinking, in product making, and in commercializing new ideas will increase (Zhao et al., 2005). Research has shown that entrepreneurial self-efficacy (ESE) is positively related to entrepreneurial intentions and behavior (Chen et al., 1998; Zhao et al., 2005; Smith and Woodworth, 2012).

Engaging in the development of organizational capabilities or having a business with great organizational capabilities is another factor that can enhance ESE. The organizational capabilities needed are related to managerial competencies, knowledge, skills of employees,

firm climate, efficient organizational structure, coordination, strategic planning, and the ability to attract creative employees. Therefore, by developing these capabilities, sustainable entrepreneurs' ESE will increase. However, based on our results if the objective is to enhance ESE, philanthropic CSR activities are not advised, as the implementation of those activities does not lead to an increase in ESE.

The results from the questionnaire show that innovativeness mediated by organizational capabilities plays a key role in the increase of ESE, therefore implementing the two in a business will not only, lead to an increase in ESE but also to better general performance, thanks to the engagement in organizational capabilities. However, implementing innovativeness together with philanthropic CSR is not advised, as the combination of the two does not lead to the development of ESE in sustainable entrepreneurs.

Educating and training social entrepreneurs is becoming progressively dominant in business schools all around the world and it is an important aspect for entrepreneurs to gain confidence in their ability to effect positive social change (Smith & Woodworth, 2012). The importance of having confidence in creating positive social change applies to sustainable entrepreneurs as well, that can use social change to promote sustainability. Based on the results those interested in developing SESE, should seek to engage and increase mainly philanthropic CSR activities and allow the development of organizational capabilities. With the increase of SESE the chances for the sustainable entrepreneur to be more confident in identifying new business opportunities for social change, to create new products/services to solve social problems, to think creatively to benefit others and to commercialize ideas for social enterprises will increase. However, activities that involve innovativeness will not directly enhance SESE, therefore they are not advised.

Our current findings also provide insights on the positive relation between innovativeness and organizational capabilities and philanthropic CSR. To strengthen this relation, and increase performance, more attention should be focused on creating an environment where innovativeness is encouraged together with organizational capabilities. Furthermore, CSR has become a priority for business leaders in every country, as such, innovativeness needs to be integrated and applied by sustainable entrepreneurs to enhance their philanthropic CRS activities, thus increase their competitive edge and increase their confidence.

For far-sighted companies, the environment may turn out to be the biggest opportunity for enterprise and invention the industrial world has ever seen (Cairncross, 1992). Indeed, the environment presents a considerable opportunity, and it may be time that we comprehend the significance of entrepreneurship to sustainability and help educate entrepreneurs to succeed and

to be more confident in their vision. We believe that for those entrepreneurs that want to have superior performance and for courses on education or training of entrepreneurs, to focus on developing ESE and SESE by focusing on the role of innovativeness, organizational capabilities, and philanthropic CSR activities. In fact, creating a supportive environment for entrepreneurs is an important aspect to consider as well, because it influences self-efficacy both directly and indirectly through performance (Chen et al.,1998). ESE, for instance, has higher chances to develop and sustain in a supportive environment than in an adverse one (Chen et al.,1998). A supportive environment will higher the chances of creating entrepreneurial success which in turn will enhance ESE. Therefore, based on our results, companies or communities should work toward setting up an efficacy enhancing environment through organizational capabilities and philanthropic CSR, that will in turn help sustainable entrepreneurs to thrive and to be more confident in venturing in new businesses that may help the planet. By providing them with an already stable setting, through the implementation of the two concepts, their beliefs in their ability could improve and lead to better performance.

6.3 Limitations and future research

The following section presents the limitations of the study, each limitation followed by a suggestion for future investigations.

Firstly, our research is based on a quantitative method, further research could deepen and extend the knowledge by conducting qualitative research, including interviews, thus providing a comprehensive perspective on everyone's experiences, which could be later on compared with those of other participants in the study to extend the knowledge on the topic. Secondly, the generalization of the result is limited, due to the non-probabilistic purposive sampling procedure of the survey, further research could apply a probabilistic sample to extend generalization. Thirdly, another limitation comes from not considering the effect of culture. As the data tested was drawn from 29 countries, the different cultures of each sustainable entrepreneur could play a role and influence each result. Future research could analyze the moderating effect of culture on ESE and SESE, for instance, if certain cultures have higher ESE and SESE, it would be interesting to understand their characteristics compared to other cultures. Fourthly, our study found no direct relationship between innovativeness and SESE, however the relationship is only positive when mediated, therefore future research could investigate the reasons for this result.

Few research has covered the potential effect of developing ESE and SESE within groups, thus future research could try to uncover if working within teams can promote the development of ESE and SESE in sustainable entrepreneurs.

Lastly, the need for successful sustainable entrepreneurs and for countries to develop sustainability is increasing with time. Great confidence is required from entrepreneurs to venture into new innovative sustainable business, that is why it is not only a necessity but a real need for the planet to have sustainable entrepreneurs who are willing to take risks, have the right mindset and who are successful in finding solutions from the difficulties that rise from daily global challenges.

On that account, concerning the specific scope of the research, previous research studies relevant specifically to our framework were limited. Therefore, the study identified a literature gap in the field, suggesting further research on factors that can directly and indirectly influence ESE and especially SESE.

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Appendix

TABLE A1 Construct items

Innovativeness (1 = strongly disagree; 7 = strongly agree)
We actively introduce improvements and innovations in our business.
Our business is creative in its methods of operation.
Our business seeks out new ways to do things.
Organizational capabilities (1 = strongly disagree; 7 = strongly agree)
Managerial competencies
Knowledge and skills of employees
Firm climate
Efficient organizational structure
Coordination
Strategic planning
Ability to attract creative employees
Philanthropic CSR activities (1 = strongly disagree; 7 = strongly agree)
Our company helps solve social problems.
Our company has a strong sense of corporate social responsibility
Our company gives adequate contributions to local communities.
Our company allocates some of their resources to philanthropic activities.
Our company plays a role in society that goes beyond the mere generation of profits.
Our company encourages its employees to participate in voluntarily activities.
Entrepreneurial self-efficacy (1 = strongly disagree; 7 = strongly agree)
Successfully identifying new business opportunities
Creating new products,
Thinking creatively,
Commercializing an idea or new development
Social entrepreneurial self-efficacy (1 = strongly disagree; 7 = strongly agree)
Identifying new business opportunities for social change.
Creating new products/services to solve social problems.
Thinking creatively to benefit others.
Commercializing an idea for social enterprise.