



Social Entrepreneurship Impact in Ten EU Countries with Supportive Regulations

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Received: 24 October 2022 / Accepted: 17 September 2023
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Abstract

This research examines the impact of social entrepreneurship (SE) on sustainability and innovation by considering the determining factors of entrepreneurship as identified in the literature. The authors undertake an empirical analysis with structural equation modeling for ten European Union countries with supportive regulations related to SE: Belgium, Holland, Slovenia, Spain, Finland, Greece, Italy, Luxembourg, Portugal, and Romania. The data used is obtained primarily from the Global Entrepreneurship Monitor-Specific report on SE (GEM), Eurostat Database, and SDG Index database. The findings show that social and economic factors are positively related to SE. The impact of SE on sustainability and innovation is also found to be positive. SE becomes an important asset by creating economic benefits through innovation and sustainable welfare. This research contributes to the gap in current empirical research. The authors identify reasons for these findings and offer some practical insights to design policies, such as an adequate legal and fiscal framework, to promote social entrepreneurship.

Keywords Social entrepreneurship (SE) · Public policy · Global entrepreneurship monitor (GEM) · Innovative impact · Sustainable impact · Sustainable development goals (SDG)

Introduction

In recent years, interest in social entrepreneurship (SE) has increased considerably as a mechanism that can contribute to improving social cohesion and reduce existing imbalances (Krugman, 2023; Chaves Ávila & Monzón Campos, 2018; Fernández-Guadaño

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& López-Millán, 2018), even though there is still not enough empirical evidence and limited comparative cross-country empirical research (Terjersen et al., 2016; Lepoutree et al., 2013; Gupta et al., 2020; Hota et al., 2020; Macke et al., 2018). Many studies on SE focus on individual cases, making it difficult to compare the effectiveness of different initiatives. Comparative studies that examine the effectiveness of social entrepreneurship in different contexts would be useful for identifying best practices. This research aims to address this critical gap in social entrepreneurship knowledge.

The interest in promoting SE resides in its ability to develop innovative solutions to social and environmental problems (Ruiz-Rosa et al., 2020). According to Rey-Martí et al. (2016), the importance of SE lies in its impact on economic and social development, displaying a considerable capacity for innovation while caring for society's needs and well-being. It is important to consider whether the factors and effects cited in the literature on entrepreneurship are equally valid in the context of SE, assuming that they would also have a positive and direct relationship with sustainability and innovation. This focuses on the specific area that SE represents a novel approach in the literature and is of critical importance in the present article.

SE is aligned with some of the Sustainable Development Goals (SDG) of the UN 2030 Agenda, among others, with SDG 8 promoting continuous, inclusive, and sustainable economic growth, full and productive employment, and decent work for all, and SDG 10 helping to reduce inequalities (Fernández-Guadaño et al., 2020). Austin et al. (2006) define social entrepreneurship as an innovative activity that creates social value. In this type of project or organization, regardless of their legal form, social and economic objectives always coexist, and to be achieved, they must be implemented in line with certain guiding principles (Fernández-Guadaño & Lopez-Millán, 2018; Iancu et al., 2021). According to the European Commission (2021), they can be outlined as follows: “the primacy of people as well as social and/or environmental purpose over profit, the reinvestment of most of the profits and surpluses to carry out activities in the interest of members/users (“collective interest”) or society at large (“general interest”), and democratic and/or participatory governance.” Overall, these inspiring principles focus on creating innovative and sustainable solutions to social and environmental challenges, while empowering individuals and communities to become agents of change themselves.

Entrepreneurship in a capitalist economy, where the ultimate strategic objective is maximizing profit and creating shareholder value, is being replaced by a social entrepreneurship model, which aims to create value for all stakeholders. The SE becomes of great importance for the sustainable development of its values and principles and becomes a benchmark for social innovation (Fernández-Guadaño et al., 2020). Bearing in mind the different social and economic factors that have traditionally been shown in the literature to favor entrepreneurship, we contrast whether both effects also have the same influence on social entrepreneurship. Thus, by knowing the variables that influence the development of social entrepreneurship, protocols can be designed to stimulate innovation and sustainability.

This research aims to contribute to the literature to promote SE favoring the design of public policies that make it possible, considering the significant and positive influence factors.

To achieve these aims, we propose a double empirical analysis. Firstly, the relationship of social and economic factors with the SE is analyzed and, secondly, the impact of SE on sustainable development and innovation using a structural equation modeling with PLS will allow the estimation of multiple relationships. For our research, we have selected those countries with a regulation related to SE since they enjoy institutional recognition that homogenizes the sample.

The research has been structured as follows: the “[Literature Review](#)” section presents a review of the main economic literature and the different hypotheses to be tested. The “[Methodology](#)” and “[Data Analysis](#)” sections include the methodology which includes the data source, the description of the main variables, and the PLS method, together with the approach to the model. The “[Discussion](#)” section discusses the results, and finally, the “[Conclusions](#)” section provides the conclusions and future lines of research.

Literature Review

The European Commission (2020) considers social entrepreneurship a strategic factor for the sustainable growth of future generations, to have a positive social impact. However, a review of the literature on social entrepreneurship reveals that, even though this is an expanding area of research, it is also highly fragmented and lacks a unified theoretical framework (Gawell, 2013; Gupta et al., 2020; Haldar, 2019; Hota et al., 2020; Macke et al., 2018). Likewise, there is little empirical evidence that confirms the benefits of social entrepreneurship (Terjersen et al., 2016; Lepoutree et al., 2013).

The theoretical framework is based on SE Theory (Santos, 2012), which conceives SE as an innovative process in the economy, based on value creation and operating according to its principles and values. The main objective of SE is the search for sustainable solutions to different problems of modern society and to improve capitalism.

In response to increasing societal demands on business operations, sustainability and innovation are a big challenge for companies (Dubey et al., 2019) and are central to the Theory of SE (Santos, 2012). To achieve a sustainable impact, companies should follow the guiding principles of social entrepreneurship.

Although definitions of SE are abundant and reflect regional differences (Kerlin, 2010), this study looks at SE in a broader sense according to GEM categories where the social mission predominates (Lepoutree et al. (2013).

In Europe, twelve countries have regulations related to SE and, therefore, have an ecosystem that promotes their creation and development in comparison to those countries that do not have regulations in this regard, because sustainability and innovation are not achieved automatically. A favorable context creates better conditions for higher levels of sustainable and economic development

(Erdogan & Acaravci, 2021). This study focuses on the effects of some of the main social and economic factors as drivers of SE. This choice is essentially due to its ability to influence business activity as demonstrated in previous studies (Mendez-Picazo et al., 2021). We aim to understand their impact on sustainability and innovation and thus promote and make visible the model that SE represents due to the lack of knowledge that exists in a broad layer of society, as found by Bosma et al. (2015).

(a) Social factors

In the first group of social factors, education plays a fundamental role. Although the relationship between education level and entrepreneurship has been shown to be complex (Allen et al., 2007), the economic literature has also widely documented the importance of education (Davidsson & Honig, 2003; De Clerq & Arenius, 2006), while Bosma et al. (2015) conclude that social entrepreneurs usually have higher levels of education than both conventional entrepreneurs and the adult population as a whole. Moreover, according to Mendez-Picazo et al. (2021), higher educational levels make it easier for individuals to favor the introduction and desire for innovations. Therefore, it is presumed that education will have a significant and positive effect on SE and, in turn, a positive indirect effect on innovation. In the same way, persons employed directly in R&D have been included in our model as an indicator that its influence in a country that has a higher level could have a positive effect on the SE that will indirectly impact innovation and sustainability. It has also been found that countries with greater social protection coverage favor the development of an entrepreneurial ecosystem than those that do not, because entrepreneurs feel supported by social coverage in case of bankruptcy (Castaño et al., 2016). Consequently, the following hypothesis is raised:

H₁: There is a positive effect of Social Factors on social entrepreneurship.

(b) Economic factors

The second group of factors is economic. Firstly, the economic development of the country (GDP) plays a decisive role in favor of general entrepreneurship and social entrepreneurship (Fernández-Laviada et al., 2020; Liñán & Fernández-Serrano, 2014). Secondly, government policies can also stimulate SE through employment policy and investing in R&D in all sectors of the economy (McMullen et al., 2008; Mendez-Picazo et al., 2021). These possibilities are considered in the model analyzed in the following section and will be contrasted with the statement of the following hypothesis:

H₂: There is a positive effect of economic factors on social entrepreneurship.

(c) Impact on innovation

SE plays an important role in solving social and environmental problems in an innovative way this is justified because can this provide solutions in ways that are often more efficient and sustainable than those developed by the public sector (Ruiz-Rosa et al., 2020), and based on the European Commission (2020),

innovation refers to developing new ideas, services, and models to better address social issues.

An analysis of the literature has shown that in the study of the innovation development process, the structure and institutional contexts are causal factors (Cajaiba-Santana, 2014; Carayannis & Campbell, 2012), and societies with a greater number of innovative enterprises present higher economic growth (Castaño et al., 2016). Innovation is understood as new creative ways of meeting social demands (Light, 2006) or innovative solutions in society. Recently, European Commission (2021) has recognized that SE in Europe offers concrete and innovative solutions to key challenges we are facing. A recent study has proved that innovation mediated the relationship between social entrepreneurship and sustainable economic growth and between social entrepreneurship and value creation (Wang, 2022). According to Galindo-Martín et al. (2020) regarding SE, innovations play a relevant role when entrepreneurs implement and develop their activity. Social entrepreneurship can have a significant impact on innovation through the identification of unmet needs, collaboration with diverse stakeholders, experimentation and iteration, and the development of new business models that prioritize social and environmental impact. Therefore, the following hypothesis will be tested:

H₃: There is a positive impact of social entrepreneurship on innovation.

(d) Impact on sustainability

Although the concept of sustainability has been discussed by many scholars, over the last decades, the sustainable effect is considered to focus on securing environmental and social objectives in addition to the traditional economic ones. Sustainable entrepreneurship can be seen as an opportunity for business development (Moya-Clemente et al., 2020; Al-Qudah et al., 2022) since according to Avery and Bergsteiner (2011), opting for a more sustainable business strategy often leads to greater resilience and long-term performance.

The guiding principles of SE contribute to achieving sustainable development. Therefore, SE has great potential to contribute to the SDG goals that constitute the most widely accepted agenda for sustainable development today (Ruiz-Rosa et al., 2020); in a recent research, Galindo-Martín et al. (2020) found that in the case of 20 OECD countries, both social entrepreneurship and traditional entrepreneurship had a positive and significant relationship with sustainable development, but SE had a greater influence; this result is important because, according to the authors, the goal of sustainability is gaining recognition compared to the goal of traditional economic profit. Other recent research revealed that SE had a significant and positive effect on sustainable economic growth and value creation (Wang, 2022). Recently, SE has been recognized as a model of great importance for the achievement of sustainable development, taking into account the special alignment of their principles with the UN Sustainable Development Goals (SDGs) (Fernández-Guadaño et al., 2020). Subsequently, we test the following hypothesis.

H₄: There is a positive impact of social entrepreneurship on sustainability.

Methodology

Data and Variables

The empirical analysis is carried out using data from Global Entrepreneurship Monitor (GEM), the Eurostat Database, and the SDG Index database, concerning ten European countries. We have selected those countries that have legislation related to SE in the EU: Belgium, Holland, Slovenia, Spain, Finland, Greece, Italy, Luxembourg, Portugal, and Romania. Although France and Lithuania also have regulations, they had to be excluded, as there is no data in the GEM special topic SE.

This study uses data from the 2015 survey when a specific section related to social entrepreneurship was included, which has great potential because it allows for a comparative analysis between countries that were difficult to date due to the lack of homogenized data. Social factors and economic factors have to be in the same period as SE. However, following Mendez-Picazo et al. (2021), sustainability and innovation must be delayed 2 years due to SE needing some time to influence.

To identify the SE, we follow the proposal made in the special issue of the GEM report (Bosma et al., 2015), which provides a specific classification for social entrepreneurship, defined as *social entrepreneurial activity* (SEA) in a broader sense where the social mission predominates.

Table 1 shows the indicators assigned to each of the latent variables. These constructs were measured using various indicators. For the main latent variable social entrepreneurship, the GEM (Bosma et al., 2015) differentiates between SEA-SU-BRD: involved in social entrepreneurial activity, start-up phase, and SEA-OP-BRD: involved in social entrepreneurial activity, operational phase.

Table 1 Variables and indicators

Latent variable	Nomenclature and definition
Social entrepreneurship (SE)	SEA-SU-BRD: involved in social entrepreneurial activity, start-up phase, and broad measure (GEM SE special topic (Bosma et al., 2015)) SEA-OP-BRD: involved in social entrepreneurial activity, operational phase, and broad measure (GEM SE special topic (Bosma et al., 2015))
Social factors	InnoR&D: R&D personnel by sectors of performance (Eurostat) SPR: Social Protection Expenditure per habitant (Eurostat)
Economic factors	GDP: gross domestic product aggregates per capita (Eurostat)
Innovation impact	Inno1: product innovation new to the market (Eurostat) Inno2: product innovation new to the enterprise (Eurostat)
Sustainable impact	SDG1. Sustainable development indicator. No poverty (SDG Index database) SDG5. Sustainable development indicator. Gender equality (SDG Index database) SDG8: Sustainable development indicator. Decent work and economic growth (SDG Index database) SDG10. Sustainable development indicator. Reduce inequalities. Income distribution (SDG Index database)

Source: own elaboration

The latent variable social factors are comprised of two indicators from the Eurostat database: R&D personnel by sector of performance (InnoR&D) and Social Protection Expenditure per habitant (SPR). Although other variables previously found significant in the literature, such as Public Expenditure on Education as a percentage of GDP (World Bank), Human Development Index (UN), visibility of the SE (GEM special topic), and gross fixed capital formation (World Bank), were also considered, they were not included in this research since they did not reach the appropriate factor load (>0.7).

The latent variable economic factors were defined by different indicators which already been found to be significant in other studies (Mendez-Picazo et al., 2021) such as employment to population ratio (World Bank), income distribution (World Bank), gross national income per capita, and gross domestic product aggregates per capita (GDP) from Eurostat database but only GDP has been considered because the other variables did not have enough factor load.

To capture the innovative nature of the organization, we consider different variables that in the economic literature had been relevant (Castaño et al., 2016) such as product innovative enterprises in proportion to innovative enterprises, product innovative enterprises in proportion to total enterprises (Eurostat), and total patents per capita but only two variables did meet the thresholds for be included according to the confirmatory factor analysis (>0.7): product innovation new to the market (Inno1) and product innovation new to the Enterprise (Inno2) from Eurostat.

Finally, different indicators have been used to measure the latent variable sustainable impact, according to sustainable development indicators from the SDG Index database (available online) that measures the progress of the SDGs in different countries obtained from data prepared by the Bertelsmann Stiftung and Sustainable Development Solutions Network (Sachs et al., 2019). In this case, we have taken into account all those that the literature examined had considered influencing SE and, specifically, SDG1: no poverty; SDG5: gender equality; SDG8: decent work and economic growth; and SDG10: reduce inequalities (Fernández-Guadaño et al., 2020).

Method

This study uses structural equation models (SEM) and, specifically, the partial least square (PLS) technique for the evaluation of the proposed model. The SEM models are considered second-generation multivariate analyses (Hair et al., 2017a, b), and following Chin (1998), they allow (i) on the one hand, measurement of the quality of the latent variables of the model (which represent theoretical concepts), explained by various indicators, and (ii) on the other hand, predict the relationships between the latent constructs.

The main objective for the use of PLS-SEM is the prediction of the dependent variables, through obtaining the maximum explained variance of them. Wold (1980) states that PLS is oriented to the predictive causal analysis of complex models based on poorly developed theoretical knowledge, with a more flexible modeling methodology by not require rigorous parametric assumptions. According to Hair et al.

(2017a), this technique can use small sample sizes, although larger sample sizes increase precision, and it is not necessary to assume a normal distribution of the data.

The proposed model is a reflective model given the fact that the latent variables are the cause of the observed measurements. The model is made up of two elements: (1) the structural model which describes the relationships between the latent variables and (2) the measurement model, which defines the relationships between the latent variables and indicators. The software used for the analysis has been Smart PLS 3.

Data Analysis

Figure 1 represents the reflective model, as is common in social sciences (Méndez-Picazo et al., 2021). The proposed model examines, on the one hand, the effect that certain social and economic factors have on the SE and, on the other hand, the impact of the latter on innovation and sustainability. Indirect effects are also analyzed. For this purpose, variables that have proven to be significant indicators in previous studies have been used for each of the latent variables.

Testing the Measurement Model

The evaluation of the model began with reflective measures, assessed by using both convergent and discriminant validity analyses. The extracted factor loadings, composite reliability (CR), and average variance extracted (AVE) were required to assess convergent validity. Following an examination of the outer loadings for all latent variables, different items were excluded from the research model due to unsatisfied loading values.

Following Hair et al. (2019), the first step in the assessment of the reflective measurement model is to review the loadings of the indicators. Loadings above 0.7

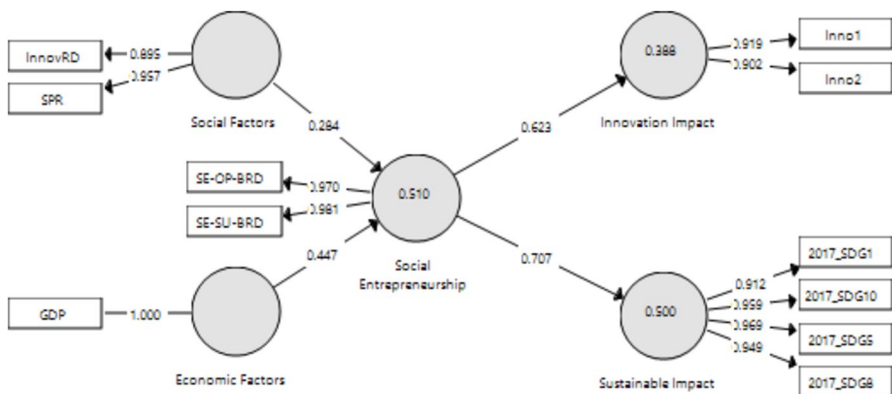


Fig. 1 Model research. Source: own elaboration

Table 2 Cross-loads for convergent validity

	Economic factors		Social entrepreneurship		Social factors	Sustainable impact
	Innovation impact	Social entrepreneurship	Innovation impact	Social entrepreneurship	Social factors	Sustainable impact
Sustainable impact	SDG1	0.257	0.751	0.583	0.299	0.912
	SDG10	0.200	0.747	0.675	0.333	0.959
	SDG5	0.191	0.639	0.601	0.221	0.969
	SDG8	0.335	0.729	0.784	0.464	0.949
Economic factor	GDP	1.000	0.482	0.703	0.903	0.264
Innovation impact	Inno1	0.482	0.919	0.592	0.712	0.684
	Inno2	0.392	0.902	0.540	0.532	0.695
SE	SE-OP-BRD	0.656	0.490	0.970	0.593	0.623
	SE-SU-BRD	0.711	0.703	0.981	0.734	0.744
Social factors	SPR	0.898	0.721	0.742	0.957	0.433
	InnovRD	0.755	0.518	0.485	0.895	0.180

Source: own elaboration

are suggested, as they indicate that the construct explains more than 50% of the variance of the indicator. Table 2 shows that the cross-loads are all greater for the latent variables on their respective items.

A second step would involve assessing internal consistency reliability, most often using composite reliability describing the degree to which the items indicated the latent construct. The composite reliability values (see Table 3) varied from 1 to 0.906, above the 0.70 threshold value recommended by previous research (Hair et al., 2019). The reliability of the construct is analyzed, and it is observed that all the values of Cronbach's alpha and the composite reliability are above the minimum cut-off point of 0.70 (Hair et al., 2019).

The third step of the reflective measurement model assessment addresses convergent validity. The metric used for evaluating a construct's convergent validity is the average variance extracted (AVE). It is also important to notice that all values lie between 0.858 and 1, which surpassed the threshold of 0.5, suggested by Hair et al. (2017b).

Last step, discriminant validity was confirmed with the Fornell-Larcker criterion; the AVE square root of each latent variable was higher than the correlation coefficients between the other latent variables (see Table 4). The Fornell-Larcker criterion is a useful tool for evaluating the convergent validity of constructs by comparing the strength of a construct's indicators to other constructs in the model. In our case, the confirmation of discriminant validity reflected that the five constructs differed from one another, which thus verified the reliable constructs' measurements.

Testing the Structural Model

The results of the PLS estimation contrast the hypotheses of the research using the bootstrapping technique, providing the significance of the relationships between the variables. Bootstrapping is a robust method that does not rely on assumptions about the underlying data distribution and is often chosen in PLS because it can provide more accurate estimates of standard errors and confidence intervals than traditional methods. Table 5 shows the results of testing the structural model.

This study found that the relationship between social factors and SE ($\beta = 0.284$) as well as economic factors and SE ($\beta = 0.447$) was positive and significant at

Table 3 Reliability and validity of the outer model

	Cronbach's alpha	rho_A	Composite reliability	Average variance extracted (AVE)
Economic factors	1.000	1.000	1.000	1.000
Innovation impact	0.794	0.798	0.906	0.829
Social entrepreneurship	0.950	0.981	0.975	0.952
Social factors	0.841	0.952	0.924	0.858
Sustainable impact	0.962	0.977	0.972	0.898

Source: own elaboration

Table 4 Discriminant validity. Fornell-Larcker criterion

	Economic factors	Innovation impact	Social entrepreneurship	Social factors	Sustainable impact
Economic factors	1.000				
Innovation impact	0.482	0.910			
Social entrepreneurship	0.703	0.623	0.975		
Social factors	0.903	0.687	0.687	0.926	
Sustainable impact	0.264	0.757	0.707	0.358	0.948

Source: own elaboration

ρ value < 0.01 , confirming then hypotheses 1 and 2. Similarly, we can conclude that hypothesis H_3 is also satisfied as there is a positive and significant impact of social entrepreneurship on innovation ($\beta = 0.623$, with p value ≤ 0.01), and hypothesis 4 is accepted since there is a significant positive impact ($\beta = 0.707$, with p value ≤ 0.01) of SE on sustainability. Note that the impact is greater on sustainability than innovation.

R^2 indicates the construct's variance explained by the model. All the endogenous latent variables exhibit reliability and an adequate fit, with values between 0.388 and 0.510 (see Fig. 1). According to Hair et al. (2019), R^2 values above 0.5 represent a moderate explanatory power of the model.

It is important to notice that PLS also calculates specific indirect effects between latent variables using the bootstrapping method to verify the significance. The results in Table 6 suggest that SE significantly mediates the effects of social and economic factors on innovation impact and sustainable impact. And in both cases, the mediated effect of the SE is greater for sustainability than for innovation.

Table 5 Regression coefficient of the structural model

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (IO/STDEVI)	p values
Economic factors—> social entrepreneurship	0.447	0.447	0.013	35.625	0.000
Social entrepreneurship—> innovation impact	0.623	0.623	0.002	309.259	0.000
Social entrepreneurship—> sustainable impact	0.707	0.707	0.001	623.281	0.000
Social factors—> social entrepreneurship	0.284	0.284	0.010	28.241	0.005

Significant at ρ value * < 0.1 ; ** < 0.05 ; *** < 0.01

Source: own elaboration

Table 6 Specific indirect effects

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/ STDEV)	p values
Economic factors—> social entrepreneurship—> sustainable impact	0.316	0.316	0.009	36.769	0.000
Economic factors—> social entrepreneurship—> innovation impact	0.279	0.279	0.008	36.916	0.000
Social factors—> social entrepreneurship—> innovation impact	0.177	0.177	0.007	26.861	0.000
Social factors—> social entrepreneurship—> sustainable impact	0.201	0.200	0.007	27.562	0.000

Significant at ρ value * < 0.1; ** < 0.05; *** < 0.01

Source: own elaboration

Discussion

The previous section confirms our hypotheses H1 and H2, which means we can conclude that social and economic factors positively affect SE, but economic factors show a greater impact than social factors. We argue that this is due to two causes: (i) greater public investment in research and social protection are important triggers of SE and (ii) public spending policies that support employment and investment, then GDP, boost social entrepreneurship.

If the impact of SE activity on innovation is analyzed, it can be observed that it has positive and significant effects, confirming hypothesis H3, in the same way, that can be found in other previous studies (Alfalih, 2022; Galindo-Martín et al., 2020; Wang, 2022). This is a relevant finding because there is previous evidence that innovation is a relevant factor for the development of business activity which, in turn, has direct and indirect positive effects on a country's economic growth (Galindo & Méndez-Picazo, 2013). Social entrepreneurship has already gained momentum in the business and social paradigm, where innovation is a dominant factor (Wang, 2022). Social entrepreneurship brings innovation for the welfare of society (Ahlstrom et al., 2018) by fostering the development of creative and sustainable solutions to address social and environmental problems. Moreover, SE can drive innovation by creating new business models that prioritize social and environmental impact alongside financial sustainability. By demonstrating that it is possible to create profitable businesses that also create social and environmental value, social entrepreneurs can inspire and motivate others to pursue similar goals.

Similarly, our results accepted hypothesis H4, since a positive impact of SE on sustainability has been found like the findings of previous studies such as that of Mendez-Picazo et al. (2021) and Liao (2018), and this impact is greater than the innovation one. Therefore, SE stimulates sustainable development. Specifically, a significant and positive impact of SE has been found on its contribution to progress in reducing poverty (SDG1): improving education and fostering innovation; in boosting Gender equality (SDG 5): the economics literature has confirmed that women are more motivated by the social goals inherent in SE (Fernández-Guadaño & Martín-López, 2023; Themudo, 2009); moreover, in most regions globally, the gender gap is much less pronounced for SE than for other types of entrepreneurial activity (Bosma et al., 2015); in promoting Decent work and Economic Growth (SDG8): the different organizations that make up the SE are characterized by the creation of jobs with decent working conditions and fair wages (Moya-Clemente et al., 2020); and in the reduction of inequalities (SDG10): SE has been considered as a solution for social inequality through different types of organizations in different countries, such as, integration companies and special employment centers, has become vehicles of social integration for disadvantaged groups.

Social entrepreneurship and conventional entrepreneurship both have an impact on innovation and sustainability (Mendez-Picazo et al., 2021; Galindo-Martín et al., 2020; Bataineh et al., 2023), but they differ in their objectives and approaches. SE is focused on creating sustainable social impact and addressing social and environmental challenges. It is driven by a social mission, and financial sustainability is

often seen as a means to achieve that mission, while conventional entrepreneurship can also drive innovation and sustainability but its focus is primarily on financial returns for shareholders.

Finally, these results must be compared with caution because, not in all reviewed papers, the same items have been used as indicators of the impact on sustainability and innovation. In this research, we select those indicators that had an adequate factorial load.

Conclusions

As recently recognized by the European Commission (2020), social entrepreneurship contributes to important policy objectives, such as job creation, inclusiveness, equal opportunities, sustainability, and civic participation. For this reason, the main objective of this study is to detect if those factors which have traditionally been drivers of entrepreneurship, in general, are also drivers of social entrepreneurship. We have also analyzed the effect it has on sustainable development and innovation. The main finding of this research is that the economic and social factors analyzed are drivers of SE and, in turn, the latter contributes to the achievement of innovation and sustainability, as positive and significant relationships have been found in both cases.

We used as a basis those countries that have their regulation related to social entrepreneurship in the EU, understanding that they enjoy a more developed third-sector ecosystem. Recently, European Commission (2021) has recognized the need for quantitative studies contrasting the benefits of SE in EU countries to make the model better understood and ensure evidence-based policy. This research is also aligned with the EU objective and fills the gap in the literature by analyzing different countries examining the impact of SE on innovation and sustainability.

The results obtained show that both groups of factors, social and economic, are positively related to SE. Therefore, policies aimed at promoting employment, investment in R&D, and increased social protection would favor more social entrepreneurship.

Furthermore, considering the positive and significant relationship between SE and innovation that has been found in this research, it is recommended to countries that do not have regulations related to these companies implementing a specific ecosystem or legal status for SE that recognizes the duality between social and economic objectives. It is also recommended to address, shortly, a European regulation that favors an ecosystem of social entrepreneurship in the EU so that the scope of action of SE is specified to establish an adequate legal and fiscal framework for this type of enterprise, which unifies criteria among the different member countries, and that it takes into account their characteristics and objectives. According to Cumming et al. (2010), better-quality legal systems are beneficial for more entrepreneurial activity. Legal, administrative, and fiscal burdens should not be too onerous to make it easier for enterprises to focus on both social and economic activities.

Considering the positive relationship between SE and sustainability, taking into account that our finding may be due to the way indicators have been selected, it would be recommended to stimulate SE because it directly favors the achievement

of greater sustainable development to improve well-being by reducing poverty (SDG1), reducing the gender gap (SDG5), enhancing Decent Work and Economic Growth (SDG8), and boosting to reduce inequalities (SDG 10) in the different countries analyzed.

This study's findings have significant implications, for academics and practitioners in the social field. It highlights the role of social entrepreneurship and as a driver of sustainable development and innovation generating greater social welfare. It would be convenient to continue promoting SE from different spheres, institutions, and levels. In this sense, the recent UN resolution (2023) has valued the role of the SE to promote sustainability. From a practical point of view, the UN resolution urges member states to incorporate the SE into their national plans and urges international organizations and international financial organizations to promote and reinforce it.

These results must be interpreted with caution, as they are not without limitations. The first limitation is the sample chosen about the concept of SE; in this study, it has taken a broader view of it (used by GEM). The second limitation is the database itself. Temporal analysis was not possible because the GEM SE does not provide panel data. Third, it was not possible to include variables whose explanatory capability has been confirmed by prior economics literature.

In future research, the results of the sample analyzed here will be compared with a sample of countries that do not have regulations related to SE companies to determine if there are significant institutional differences. Further study would also facilitate the design of new constructs that cover both quantitative and qualitative aspects of the topic. In addition, the study could be improved by including more factors and other effects that could affect the SE. Overall, additional data—countries, years, and factors—are likely to provide more robust estimates and richer discussions, especially in terms of cross-country analysis.

Funding Open Access funding provided thanks to the CRUE-CSIC agreement with Springer Nature.

Data Availability Reference to a dataset: Data Set: GEM Data Base <https://www.gemconsortium.org/data>. Data Set: SDG Index Data Base <https://www.sdgindex.org/reports/sdg-index-and-dashboards/>. Data set: Eurostat Data Base. <https://ec.europa.eu/eurostat/web/main/data>.

Declarations

Competing Interests The authors declare no competing interests.

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References

- Alfalih, A. A. (2022). The role of sustainable entrepreneurship and corporate social performance on social innovation: The case of the private industrial sector in Saudi Arabia. *Journal of the Knowledge Economy*, 13(3), 1928–1943.
- Ahlstrom, D., Yang, X., Wang, L., & Wu, C. (2018). A global perspective of entrepreneurship and innovation in China. *Multinational Business Review*, 26, 302–318. <https://doi.org/10.1108/MBR-08-2018-0058/FULL/XM>
- Al-Qudah, A. A., Al-Okaily, M., & Alqudah, H. (2022). The relationship between social entrepreneurship and sustainable development from economic growth perspective: 15 ‘RCEP’ countries. *Journal of Sustainable Finance & Investment*, 12(1), 44–61.
- Allen, I. E., Elam, A., Langowitz, N., & Dean, M. (2007). *Global entrepreneurship monitor (GEM) report on women and entrepreneurship*. Wellesley (MA), USA: The Center for Women’s Leadership at Babson College.
- Austin, J., Stevenson, H., & Wei-Skillern, J. (2006). Social and commercial entrepreneurship: Same, different, or both? *Entrepreneurship Theory and Practice*, 30(1), 1–22.
- Avery, G. C., & Bergsteiner, H. (2011). Sustainable leadership practices for enhancing business resilience and performance. *Strategy & Leadership*, 39(3), 5–15. <https://doi.org/10.1108/10878571111128766>
- Bataineh, M. J., Marcuello, C., & Sánchez-Sellero, P. (2023). Toward sustainability: The role of social entrepreneurship in creating social-economic value in renewable energy social enterprises. *REVESCO. Revista De Estudios Cooperativos*, 1(143), e85561. <https://doi.org/10.5209/reve.85561>
- Bosma, N., Schøtt, T., Terjesen, S., & Kew, P. (2015). *Global entrepreneurship monitor special topic report – social entrepreneurship*. Londres: Global Entrepreneurship Research Association, London Business School.
- Cajaiba-Santana, G. (2014). Social innovation: Moving the field forward. A Conceptual Framework. *Technological Forecasting and Social Change*, 82, 42–51.
- Carayannis, E. G., & Campbell, D. F. (2012). *Mode 3 knowledge production in quadruple helix innovation systems: Twenty-first-century democracy, innovation, and entrepreneurship for development* (pp. 1–63). New York: Springer.
- Castaño, M. S., Méndez, M. T., & Galindo, M. A. (2016). The effect of public policies on entrepreneurial activity and economic growth. *Journal of Business Research*, 69(11), 5280–5285.
- Chaves Ávila, R., & Monzón Campos, J. L. (2018). The social economy in the face of emerging economic paradigms: Social innovation, collaborative economy, circular economy, corporate social responsibility, the economy of the common good, social enterprise and solidarity economy. *CIRIEC-España Revista De Economía Pública, Social y Cooperativa*, 93, 5–50.
- Chin, W. W. (1998). The partial least squares approach to structural equation modeling. *Modern Methods for Business Research*, 295(2), 295–336.
- Cumming, D., Schmidt, D., & Walz, U. (2010). Legality and venture capital governance around the world. *Journal of Business Venturing*, 25(1), 54–72.
- Davidsson, P., & Honig, B. (2003). The role of social and human capital among nascent entrepreneurs. *Journal of Business Venturing*, 18, 301–331.
- De Clercq, D., & Arenius, P. (2006). The role of knowledge in business start-up activity. *International Small Business Journal*, 24(4), 339–358.
- Dubey, R., Gunasekaran, A., Childe, S. J., Papadopoulos, T., Luo, Z., Wamba, S. F., & Roubaud, D. (2019). Can big data and predictive analytics improve social and environmental sustainability? *Technological Forecasting and Social Change*, 144, 534–545.
- European Commission. (2021). Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee, and the Committee of the Regions. Building an Economy that Works for People: an action plan for the social economy. Brussels, 9.12.2021 COM(2021) 778 final.
- European Commission. (2020). Social enterprises and their ecosystems in Europe. Comparative synthesis report. Authors: Carlo Borzaga, Giulia Galera, Barbara Franchini, Stefania Chiomento, Rocío Nogales and Chiara Carini. Luxembourg: Publications Office of the European Union. Available at <https://europa.eu/!Qq64ny>
- Erdogan, S., & Acaravci, A. (2021). On the nexus between institutions and economic development: an empirical analysis for Sub-Saharan African Countries. *The European Journal of Development Research*, 1–36.

- Fernández-Guadaño, J., & López-Millán, M. (2018). Employee-owned firms from a stakeholder perspective. *Journal of International Development*, 30(6), 1044–1059.
- Fernandez-Guadaño, J., Lopez-Millan, M., & Sarria-Pedroza, J. (2020). Cooperative entrepreneurship model for sustainable development. *Sustainability*, 12(13), 5462.
- Fernández-Guadaño, J., & Martín-López, S. (2023). Gender differences in social entrepreneurship: Evidence from Spain. *Women's Studies International Forum*, 96, 102663.
- Fernández-Laviada, A., López-Gutiérrez, C., & San-Martín, P. (2020). The moderating effect of countries' development on the characterization of the social entrepreneur: An empirical analysis with GEM data. *Voluntas: International Journal of Voluntary and Nonprofit Organizations*, 31(3), 1–18.
- Galindo-Martín, M. A., Castaño-Martínez, M. S., & Méndez-Picazo, M. T. (2020). The relationship between green innovation, social entrepreneurship, and sustainable development. *Sustainability*, 12(11), 4467.
- Galindo, M. Á., & Méndez-Picazo, M. T. (2013). Innovation, entrepreneurship, and economic growth. *Management Decision*, 51, 501–514.
- Gawell, M. (2013). Social entrepreneurship: Action grounded in needs, opportunities, and/or perceived necessities? *Voluntas. International Journal of Voluntary and Nonprofit Organizations*, 24, 1071–1090. <https://doi.org/10.1007/s11266-012-9301-1>
- Gupta, P., Chauhan, S., Paul, J., & Jaiswal, M. P. (2020). Social entrepreneurship research: A review and future research agenda. *Journal of Business Research*, 113, 209–229. <https://doi.org/10.1016/j.jbusres.2020.03.032>
- 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.
- Hair, J. F., Matthews, L. M., Matthews, R. L., & Sarstedt, M. (2017a). PLS-SEM or CB-SEM: Updated guidelines on which method to use. *International Journal of Multivariate Data Analysis*, 1(2), 107–123.
- Hair, J., Hollingsworth, C. L., Randolph, A. B., & Chong, A. Y. L. (2017b). An updated and expanded assessment of PLS-SEM in information systems research. *Industrial Management & Data System*, 117(3), 442–458. <https://doi.org/10.1108/IMDS-04-2016-0130>
- Haldar, S. (2019). Towards a conceptual understanding of sustainability-driven entrepreneurship. *Corporate Social Responsibility and Environmental Management*, 26(6), 1157–1170.
- Hota, P. K., Subramanian, B., & Narayanamurthy, G. (2020). Mapping the intellectual structure of social entrepreneurship research: A citation/co-citation analysis. *Journal of Business Ethics*, 166, 89–114. <https://doi.org/10.1007/s10551-019-04129-4>
- Iancu, A., Popescu, L., & Popescu, V. (2021). Factors influencing social entrepreneurship intentions in Romania. *Economic Research-Ekonomska Istraživanja*, 34(1), 1190–1201.
- Kerlin, J. A. (2010). A comparative analysis of the global emergence of social enterprise. *Voluntas*, 21, 162–179. <https://doi.org/10.1007/s11266-010-9126-8>
- Krugman, P. (2023). Cooperating for a better future. *CIRIEC-España, Revista De Economía Pública, Social y Cooperativa*, 107, 5–14. <https://doi.org/10.7203/CIRIEC-E.107.26369>
- Light, P. C. (2006). Reshaping social entrepreneurship. *Stanford Social Innovation Review*, 4, 47–51.
- Lepoutre, J., Justo, R., Terjesen, S., & Bosma, N. (2013). Designing a global standardized methodology for measuring social entrepreneurship activity: The Global Entrepreneurship Monitor social entrepreneurship study. *Small Business Economics*, 40(3), 693–714.
- Liao, Z. (2018). Environmental policy instruments, environmental innovation, and the reputation of enterprises. *Journal of Cleaner Production*, 171, 1111–1117.
- Liñán, F., & Fernández-Serrano, J. (2014). National culture, entrepreneurship, and economic development: Different patterns across the European Union. *Small Business Economics*, 42, 685–701.
- Macke, J., Sarate, J. A. R., Domeneghini, J., & da Silva, K. A. (2018). Where do we go from now? A research framework for social entrepreneurship. *Journal of Cleaner Production*, 183, 677–685.
- McMullen, J. S., Bagby, D. R., & Palich, L. E. (2008). Economic freedom and the motivation to engage in entrepreneurial action. *Entrepreneurship: Theory and Practice*, 32(5), 875–895.
- Méndez-Picazo, M. T., Galindo-Martín, M. A., & Castaño-Martínez, M. S. (2021). Effects of socio-cultural and economic factors on social entrepreneurship and sustainable development. *Journal of Innovation & Knowledge*, 6(2), 69–77. <https://doi.org/10.1016/j.jik.2020.06.001>
- Moya-Clemente, I., Ribes-Giner, G., & Pantoja-Díaz, O. (2020). Configurations of sustainable development goals that promote sustainable entrepreneurship over time. *Sustainable Development*, 28(4), 572–584.

- Rey-Martí, A., Ribeiro-Soriano, D., & Palacios-Marqués, D. (2016). A bibliometric analysis of social entrepreneurship. *Journal of Business Research*, 69(5), 1651–1655.
- Ruiz-Rosa, I., Gutierrez-Taño, D., & Garcia-Rodríguez, F. J. (2020). Social entrepreneurial intention and the impact of COVID-19 pandemic: A structural model. *Sustainability*, 12(17), 6970.
- Santos, F. M. (2012). A positive theory of social entrepreneurship. *Journal of Business Ethics*, 111, 335–351. <https://doi.org/10.1007/s10551-012-1413-4>
- Sachs, J., Schmidt-Traub, G., Kroll, C., Lafortune, G., & Fuller, G. (2019) Transformations to achieve the sustainable development goals includes the SDG Index and dashboards. *Sustainable Development Report*, 2019.
- Terjesen, S., Bosma, N., & Stam, E. (2016). Advancing public policy for high-growth, female, and social entrepreneurs. *Public Administration Review*, 76(2), 230–239.
- Themudo, N. S. (2009). Gender and the nonprofit sector. *Nonprofit and Voluntary Sector Quarterly*, 38(4), 663–683.
- United Nations. (2023). Resolution “Promoting the social and solidarity economy for sustainable development” (A/77/L.60).
- Wang, W. (2022). Toward economic growth and value creation through social entrepreneurship: modeling the mediating role of innovation. *Frontiers in Psychology*, 3323.
- Wold, H. (1980). Model construction and evaluation when theoretical knowledge is scarce: theory and application of partial least squares. *Evaluation of econometric models* (pp. 47–74). Academic Press.

Reference to a Dataset

- Data Set: Bosma, N., Schøtt, T., Terjesen, S., Kew, P. 2015. Global entrepreneurship monitor special topic report – social entrepreneurship. Londres: Global Entrepreneurship Research Association, London Business School. <https://www.gemconsortium.org/data>
- Data Set: Sachs, J., Schmidt-Traub, G., Kroll, C., Lafortune, G., Fuller, G. 2019. Transformations to achieve sustainable development goals include the SDG Index and dashboards. Sustainable Development Report 2019. <https://www.sdgindex.org/reports/sdg-index-and-dashboards/>
- Data set: Eurostat. <https://ec.europa.eu/eurostat/web/main/data>

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