

The influence of corporate entrepreneurship strategy on SMEs' internationalization: proposing and testing a model

Corporate
entrepreneurship
strategy

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Abstract

Purpose – This paper aims to propose and test a corporate entrepreneurship strategy (CES) model in small- and medium-sized enterprises (SMEs) with international activity located in Andalusia (Spain) – a peripheral region with high levels of inequality in the European Union (EU).

Design/methodology/approach – A quantitative analysis has been carried out with data from 101 SMEs to contrast and analyze the proposed CES model. The sample data were obtained through questionnaire-guided interviews with chief executive officers. Data processing has been done using partial least squares-path modeling, a variance-based technique for structural equation modeling.

Findings – The results of this study show the positive effect of environmental conditions on the development of CES actions in Andalusian SMEs (Spain) and the positive influence of CES on the results of SMEs' international activity. In turn, environmental conditions do not directly affect the international activity.

Originality/value – Although previous works address the relationship between corporate entrepreneurship (CE) and international enterprise activity, to the best of the authors' knowledge, this work is original in testing a CES model (including CE and the entrepreneurial strategic vision) in SMEs in a region that has one of the lowest levels of development in the EU. The results have important implications for SMEs and policymakers and could be extrapolated to other emerging economies.

Keywords Corporate entrepreneurship strategy, Internationalization, SMEs, Strategic management, Peripheral regions

Paper type Research paper

1. Introduction

The corporate entrepreneurship strategy (CES) aims to generate and maintain competitive advantages (Kantur, 2016). It combines elements from corporate entrepreneurship (CE) and



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strategic management (Ireland *et al.*, 2009). It is, therefore, more encompassing than either of them. Despite increasing academic interest (Tavassoli *et al.*, 2017), knowledge about the interrelationships between CES elements and their influence on firm outcomes still needs to be improved, especially concerning internationalization. The CES favors internationalization, particularly the results of small- and medium-sized enterprises (SMEs) (Bierwerth *et al.*, 2015; Cabral *et al.*, 2020), although it requires the strategic and organizational adaptation of the firm (Dominguez and Mayrhofer, 2017).

Internationalization has attracted the research community's attention due to its impact on the economy and business activity (Ganvir and Dwivedi, 2017). It was initially conceived as a sequential opening to new markets (Autio, 2017; Vahlne and Johanson, 2017). In this line, internationalization studies have evolved through various approaches, demonstrating its ability to transform the economy (Vahlne and Johanson, 2017). This is important because SMEs face intense global competition (Liñán *et al.*, 2020).

It has long been recognized that SMEs must base their international competitiveness on innovation, product differentiation and new production technologies and distribution channels (Julien *et al.*, 1994). They also need a long-term internationalization strategy (Levy and Powell, 1998). The importance of intangible assets has recently been confirmed (Mansion and Bausch, 2019). These comprise the CES elements (Ireland *et al.*, 2009). Thus, a better understanding of the mechanisms through which the CES affects internationalization in SMEs would contribute to the identification of its critical success factors in the face of specific environmental conditions.

In this study, the effect of environmental conditions on the elements of the CES and their relationship to internationalization is modeled and analyzed in SMEs from Andalusia (Spain). To do so, the structural relationships between the internal elements of the CES are quantified and analyzed, as well as their direct and indirect influence on the internationalization of firms.

Some previous works can be found proposing a theoretical CES model and connecting it with the management and organizational performance of firms (e.g. Ireland *et al.*, 2009; Kuratko *et al.*, 1990) or within the public sector (Kearney and Meynhardt, 2016). More recently, Kreiser *et al.* (2021) analyzed a CES model's influence on the enterprise's financial results. On the other hand, some research has addressed the connection between CE and the firm's international activity (e.g. Jantunen *et al.*, 2008; Setiawan and Erdogan, 2020), but did not include the entrepreneurial strategic vision (ESV) dimension. Our work is probably the first one connecting the CES with international activity. This is in line with the idea that the international activity can represent one of the fundamental economic activities for the success of SMEs, as proposed by Audretsch and Guenther (2023).

To evaluate the hypotheses of this work, we use quantitative information concerning 101 enterprises with head offices in Andalusia (Spain). The Spanish region of Andalusia is considered one of the peripheral regions of the European Union (EU). It is characterized by low levels of development and a marked tendency toward inequality, with a gross domestic product (GDP) per capita below 75 % of the EU average, according to the ninth report on cohesion in the EU (European Commission, 2024).

The results generally support the theorization presented in this work, deriving its discussion and the main conclusions obtained in relevant contributions to different streams of related literature in conjunction with practical implications in policy design and management, opening promising lines of research. The results derived from this study will also allow us to answer the following research question: how do the environmental conditions influence the relationships of the CES elements, and how do these relationships affect internationalization?

2. The corporate entrepreneurship strategy

Ireland *et al.* (2003:1) state that the CES is;

A set of commitments and actions framed around entrepreneurial behavior and processes that the firm designs and uses to develop current and future competitive advantages in promising technological or product-market arenas.

The CES emerges from the need to align entrepreneurial action with strategy, guiding objectives and action in the medium and long term (Ireland *et al.*, 2009; Kreiser *et al.*, 2021) and rejuvenates enterprises to achieve competitive advantage in markets. It effectively shapes CE and involves firms' simultaneous opportunity-seeking and advantage-seeking behaviors (Ziyae and Sadeghi, 2021). The CES is based on the existence of "an entrepreneurial strategic vision, a pro-entrepreneurship organizational architecture, and entrepreneurial processes (EPs) as exhibited across the organizational hierarchy" (Ireland *et al.*, 2009: 25). These three elements must be oriented toward the generation of competitive advantages (Dogan, 2015; Ireland *et al.*, 2009). An ESV conceptual integration is based on the planning and structuring needs of tasks and behaviors that favor organizational results (Burgelman, 1983).

These internal factors are affected by some environmental elements, and their interrelationships determine the CES results. Environmental conditions influence organizations' entrepreneurial activity (Khalil *et al.*, 2022). Acting in a context characterized by rivalry and dynamism will promote innovation and entrepreneurial action (Kuratko *et al.*, 2017). Similarly, perceived institutional support and the importance of the technological factor (Debrulle, 2012) force organizations to identify and exploit opportunities efficiently (Abrell and Karjalainen, 2017), often in uncertain scenarios and without adequate resources (Boone *et al.*, 2019). Figure 1 summarizes all essential elements included in the main CES models.

External elements CES	Internal elements CES	Outcomes CES
External Environment	Entrepreneurial Strategic Vision (Ireland <i>et al.</i> , 2003, Ireland <i>et al.</i> , 2009; Kearney & Meynhardt, 2016)	Managerial Outcomes
Competitive intensity, Technological change, Product-market fragmentation, Product-market emergence (Ireland <i>et al.</i> , 2009)	Flexibility, Clarity, Commitment (Kreiser <i>et al.</i> , 2021)	Individual Knowledge and Skills development Contribution made to the implementation of CES (Ireland <i>et al.</i> , 2003)
Transformational triggers (Ireland <i>et al.</i> , 2003)	Entrepreneurial Processes	Organizational Outcomes
Hostility (Kearney & Meynhardt, 2016; Kreiser <i>et al.</i> , 2021)	Opportunity recognition, Opportunity exploitation (Ireland <i>et al.</i> , 2009)	Organizational learning and competence development (Ireland <i>et al.</i> , 2003)
Technological Sophistication (Kreiser <i>et al.</i> , 2021)	Alertness, Self-efficacy, Effectuation (Kearney & Meynhardt, 2016)	Competitive capability and Strategic repositioning (Ireland <i>et al.</i> , 2003; Ireland <i>et al.</i> , 2009)
Munificence, Dynamism and Embeddedness (Kearney & Meynhardt, 2016)	Innovativeness, Proactiveness, Risk-Taking (Kearney & Meynhardt, 2016; Kreiser <i>et al.</i> , 2021)	Financial performance (Kreiser <i>et al.</i> , 2021)
Individual Entrepreneurial Cognitions	Entrepreneurial Climate	Venturing and renewal (Kearney & Meynhardt, 2016)
Beliefs, Attitudes, Values (Ireland <i>et al.</i> , 2009)	Structure, Culture, Resources/ capabilities, Reward system (Ireland, Kuratko <i>et al.</i> , 2003 ; Ireland <i>et al.</i> , 2009)	Instrumental utilitarianism, Moral- Ethical, Political-Social and Hedonism-Antiesthetical (Kearney & Meynhardt, 2016)
	Management Support, Work Discretion, Rewards, Time Availability (Kearney & Meynhardt, 2016; Kreiser <i>et al.</i> , 2021), Organizational Boundaries (Kearney & Meynhardt, 2016)	

Figure 1. Corporate entrepreneurship strategy model elements compilation

Source: Authors' own elaboration

Among the studies that propose a CES model, Ireland *et al.* (2003) highlight the importance of an ESV that supports the proentrepreneurial organizational structure (Zali *et al.*, 2024) and favors EP to obtain better results (Kuratko *et al.*, 2023). Ireland *et al.* (2009) stress the importance of aligning entrepreneurial actions with strategic direction. Kearney and Meynhardt (2016) link the ESV with organizational conditions, entrepreneurial orientation and individual levels of entrepreneurial behavior, highlighting the relevance of an environment characterized by dynamism, hostility and integration. Finally, Kreiser *et al.* (2021) characterize the environmental conditions by their hostility and technological sophistication, reducing internal elements into three categories:

- (1) entrepreneurial strategic vision (ESV);
- (2) entrepreneurial climate (EC); and
- (3) entrepreneurial processes (EPs).

2.1 The influence of the corporate entrepreneurship strategy on internationalization

Internationalization can generate competitive advantages (Cabral *et al.*, 2020; Chen *et al.*, 2014), exposing the firm to competitive markets and environments that facilitate learning and developing skills (Autio, 2017). Along with gaining experience, the firm will experience organizational and strategic changes (Calof and Beamish, 1995), especially in the case of SMEs (Dominguez and Mayrhofer, 2017).

Entrepreneurial and strategic actions usually aim to identify new growth markets (Hitt *et al.*, 2001). From this perspective, the study of internationalization highlights the need for organizational transformation to transfer competitive advantages to new markets. Scholars have frequently argued that internationalization reflects a combination of behaviors, including entrepreneurial actions (Jin *et al.*, 2018).

2.2. A model of corporate entrepreneurship strategy and internationalization

Environmental conditions encompass the different dynamics that can influence the actions of the enterprise (Crawford and Kreiser, 2015) and determine the firm's entrepreneurial behavior (Covin and Slevin, 1991; Kuratko *et al.*, 2023). The most relevant elements are the intensity of competition, technological change and the dynamism of the market (Ireland *et al.*, 2009). The presence of these elements impels firms to search for new opportunities to exploit (Setiawan and Erdogan, 2020), together with the need for evolution in the technology used and investment in research and development (R&D) (Kreiser *et al.*, 2021).

At least two context elements influence the ESV (Ireland *et al.*, 2009). First, we refer to competitive dynamism and technological change. Competitive dynamism provides information about the rivalry and dynamism in the market perceived by firms (Kim and Kim, 2016) and technological change that dramatically influences the organization and its results (Ireland *et al.*, 2009; Sahi *et al.*, 2019). These promote awareness of the need for an ESV (Ireland *et al.*, 2003), favoring flexibility in continuous technological evolution. Flexibility manifests when managerial staff modifies the goals and regularly redefines the firm's strategy (Kreiser *et al.*, 2021; Nkongolo-Bakenda and Chrysostome, 2013).

Second, we can discuss integration into the system in the commercial context (value chain). This second set of external variables influences the ESV mainly through the relationships with the agents in their value chain and the perceived institutional support through the level of access to information and collaboration with public and private research centers (Kearney and Meynhardt, 2016; Martínez-Román *et al.*, 2019).

Therefore, the ESV emerges as a response to the action of external elements (Kearney and Meynhardt, 2016). It also provides the necessary clarity, referring to the extent to which the organization formally transfers the vision, mission and overall goals to its members (Kreiser *et al.*, 2021), and commitment and the ability to adapt to conditions and challenges arising from market pressures and the external environment, thanks to the fact that provides information on the regular assessments of the strategy's results and the achievement of the strategic goals (Jafari-Sadeghi *et al.*, 2019; Kreiser *et al.*, 2021).

Thus, we formulate the following research hypothesis:

H1a. The environmental conditions (dynamism and technological change, as well as institutional and commercial integration) positively influence the entrepreneurial strategic vision (ESV).

EPs are closely related to the inclination toward innovation, which is a concept related to creativity, generating ideas, experimentation (Celenta *et al.*, 2024) and introducing new market features closely linked to corporate entrepreneurial behavior (Covin and Slevin, 1991; Lumpkin and Dess, 1996) and risk-taking, associated with entrepreneurial action (Zahra, 2015). EPs manifest themselves through the identification and exploitation of opportunities. The external environment influences EPs, as it conditions the identification and acquisition of the resources and abilities needed to develop the activity (Martin and Javalgi, 2016). Something similar occurs with the necessary customer focus and the perceived institutional support (Luo *et al.*, 2005). Moreover, international institutional hostility will affect both the EPs and the internationalization process (Thanos *et al.*, 2017). This leads to the formulation of the following hypothesis:

H1b. The environmental conditions (dynamism and technological change, as well as institutional and commercial integration) positively influence entrepreneurial processes (EPs).

Generating and maintaining competitive advantages requires an entrepreneurial climate (EC) that promotes these behaviors (Kreiser *et al.*, 2021). This entails strong support from the management regarding the staff's entrepreneurial behaviors (Kuratko *et al.*, 2014b), both in terms of entrepreneurial actions and the proposal of innovative ideas (Hornsby *et al.*, 2002). An identifiable rewards and recognition system, through the perception of rewards according to performance, increased responsibilities, recognition of a well-done job and awareness of achievements by senior management, the staff's perceived autonomy in tasks (Kuratko *et al.*, 2014a) and also the organizational boundaries perceived for the staff, about the quantity and definition of rules and procedures for tasks, staff understanding of management expectations and the specific description and performance level expected from each position (Janićijević and Kontić, 2023). The generation of an EC is ordinary in response to external environmental conditions, such as solid rivalry, dynamism and high technological sophistication (Gupta and Pandit, 2012; Kreiser *et al.*, 2021).

This leads to the third hypothesis:

H1c. The environment (dynamism, technological change and institutional and commercial integration) positively influences the entrepreneurial climate (EC).

The interrelationships between internal elements are decisive in understanding the development and results of the CES. The ESV implies strong support for innovative and entrepreneurial behaviors (Ireland, *et al.*, 2003) through flexibility, clarity and commitment (Kreiser *et al.*, 2021). EPs emerge as a clear expression of the actions promoted by the ESV

(Ireland *et al.*, 2009; Kreiser *et al.*, 2021). These EPs should avoid complacency and rigidity and highlight the importance of identifying and exploiting opportunities (Genc *et al.*, 2019). Thus, we formulate the following hypothesis:

H2a. The entrepreneurial strategic vision (ESV) positively influences entrepreneurial processes (EPs).

The ESV focuses on generating entrepreneurial actions (Ireland *et al.*, 2009). The EC is the organizational context through which the ESV promotes EPs at the firm. This EC materializes through the organization's structure, culture, resources, abilities and promotion and rewards systems (Kreiser *et al.*, 2021).

Different research studies recognize the organization's internal conditions' fundamental role in promoting entrepreneurial actions (Kearney and Meynhardt, 2016). According to the ESV, the actions related to management support, autonomy in the job position, the rewards and reinforcements system and organizational boundaries serve to characterize entrepreneurial action (Kuratko *et al.*, 2014a, 2014b). It is implemented through coordinated individual and group behaviors (Kreiser *et al.*, 2021). This leads us to propose the following hypothesis:

H2b. The entrepreneurial strategic vision (ESV) positively influences the entrepreneurial climate (EC).

Some enterprises promote the development of the EC (Hornsby *et al.*, 2008) through EPs. The relationship between EPs and EC is most relevant due to its importance on performance (Bayarçelik and Özşahin, 2014). The literature shows that promoting innovation and risk-taking tends (Marques *et al.*, 2022) to be associated with developing proentrepreneurial rewards, recognition and autonomy in decision-making (Brazeal *et al.*, 2014). The relevance of EPs in the CES and their direct influence on the EC allows us to propose the following hypothesis:

H2c. Entrepreneurial processes (EPs) positively influence the entrepreneurial climate (EC).

The search for and exploitation of international opportunities, network formation and knowledge acquisition (Liñán *et al.*, 2020) require EPs. This new knowledge facilitates expanding to increasingly distant destinations (Zahra, 2015). Moreover, the elements of EPs encourage early internationalization, achieving superior performance (Falahat *et al.*, 2018).

The EPs promote the results of internationalization by implementing new commercial strategies (Gerschewski *et al.*, 2015). This positive effect can be measured through the enterprise's degree of internationalization (Jin *et al.*, 2018), the intensity of international activity (Jafari-Sadeghi *et al.*, 2019) and the number of new foreign markets in recent years (Freiling and Lütke-Schelhowe, 2014). The following hypothesis is, therefore, proposed:

H3a. Entrepreneurial processes (EPs) positively influence internationalization.

The EC promotes decision-making and the adoption of new business approaches (Kuratko *et al.*, 2014a, 2014b). This positively influences internationalization thanks to the management support of innovative and entrepreneurial actions, work discretion, the rewards and reinforcements system and organizational boundaries. The EC also favors the economic results of internationalization (volume, sales growth and profitability (Nkongolo-Bakenda and Chrysostome, 2013; Rua, 2018). This reasoning leads us to formulate the following research hypothesis:

H3b. The Entrepreneurial climate (EC) positively influences internationalization.

The literature highlights the importance of external factors when starting an internationalization process (Perks and Hughes, 2008). Changes in environmental conditions can bring new opportunities that will affect the results of internationalization (Baum *et al.*, 2013; Javalgi and Todd, 2011). The complexity of the environmental conditions is determined by competitive conditions and technological and institutional hostility (Knight and Cavusgil, 1996; Zahra and Garvis, 2000), which influence the results of internationalization (Javalgi and Todd, 2011; Zahra, 2003). Thus, the greater the competition, the more influence it will have on internationalization results (Martin and Javalgi, 2016). Technological, institutional and political factors and their possible hostility will also positively affect internationalization (Elbanna *et al.*, 2020). The importance of the environmental conditions allows us to formulate this final research hypothesis.

H4. The environmental conditions (dynamism and change, as well as institutional and commercial integration) positively influence internationalization.

The hypotheses of this work are shown in the proposed CES and internationalization model (Figure 2).

3. Empirical research

3.1 Data collection and sample

Our population comprises SMEs included in the public directory of the Andalusian Foreign Promotion Agency, all of them based in the region and with international activity. A nonprobability sample (Buelens *et al.*, 2018; Etikan *et al.*, 2016) of firms below 250 employees was selected to ensure representativeness regarding the main economic sectors and geographically distributed throughout Andalusia. Five hundred SMEs were contacted by e-mail to arrange an online questionnaire-guided interview with their chief executive officers (CEOs) (see Table 1). In

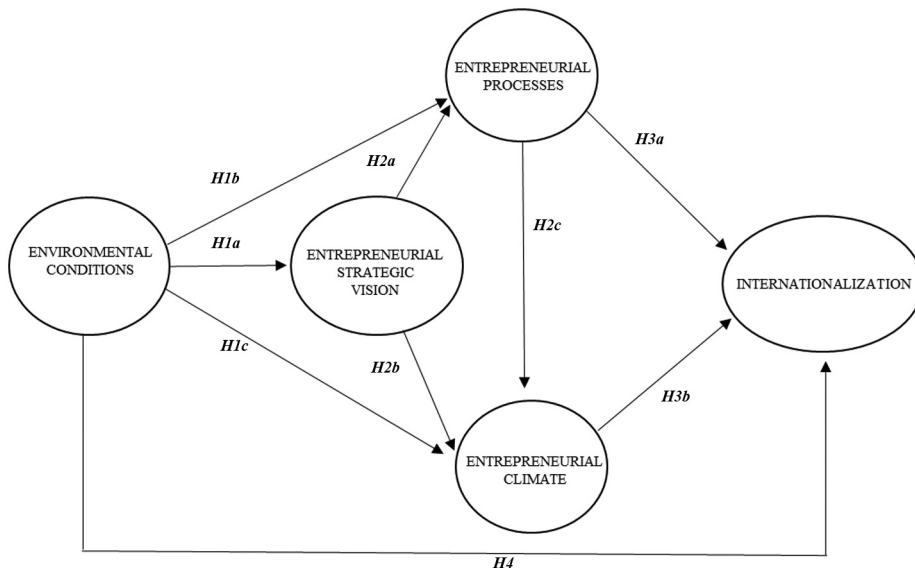


Figure 2. Model of corporate entrepreneurship strategy and internationalization

Source: Authors' own elaboration

Distribution of CEOs	%
<i>(1) Gender</i>	
Male	89.58
Female	10.42
<i>(2) Age (years)</i>	
≤35	17.15
>35 ≤ 45	49.52
>45 ≤ 55	25.71
>55	7.62
<i>(3) Level of education</i>	
Primary school	2.85
University degree	58.09
Postgraduate studies	39.06
<i>(4) Seniority in the position (years)</i>	
≤5	50.50
>5 < 10	25.70
≥10	23.80
<i>(5) Familiar with the CE concept?</i>	
Yes	66.66
No	33.34
<i>(6) Have you been trained in CE or entrepreneurship?</i>	
Yes	36.80
No	63.20
Note: CE = corporate entrepreneurship	
Source: Authors' own	

Table 1.
Respondent
characteristics
(CEOs)

this way, we ensured that all items in the questionnaire were understood correctly. In the case of SMEs, the CEO has a global vision of the firm (Puthusserry *et al.*, 2022).

A total of 121 firms replied to the invitation message, representing a 30.25% response rate. Thirteen firms did not fit the established enterprise profile, and three refused to participate due to lack of time. Finally, data from 101 SMEs with head offices in Andalusia and international activity were collected. Four firms were used to conduct a pretest. The choice of this target group responds to the recommendation to establish a sample element of a similar geographical, cultural, political and legal environment, as this favors homogeneity (Gómez-Haro *et al.*, 2011).

This final 101 SMEs represent 25.25% of the total participation requests sent. This response rate is comparable to that of other works in the social sciences, specifically on our research topics (e.g. Zahra, 2003; Zucchella *et al.*, 2007). The questionnaire-guided interview began by presenting the research work and its purpose. The person was then informed that under no circumstances would the information collected be used for purposes unrelated to the research. Answers to all 46 items were collected for the 101 respondents (no missing data). The sample structure appears in Table 2.

3.2 Variables

The questionnaire was structured in two parts. The first one includes the constructs related to the explanatory variables of this study (the environmental conditions and the internal

Distribtuion of firms		%	Corporate entrepreneurship strategy
(1) Legal form	Public limited company (PLC)	16.84	
	Private limited company (Ltd)	83.16	
(2) Activity sector NACE (Eurostat, 2008)	A. Agriculture, forestry and fishing	3.96	
	B. Mining and quarrying	1.98	
	C. Manufacturing	15.84	
	F. Construction	6.93	
	G. Wholesale and retail trade; repair of motor vehicles and motorcycles	14.85	
	J. Information and communication	25.74	
	M. Professional, scientific and technical activities	21.78	
	N. Administrative and support service activities	4.95	
	Q. Human health and social work activities	1.98	
	Others	1.90	
(3) Volume of turnover (EU, 2013)	≤10,000,000 euros	83.16	
	≤50,000,000 euros	12.87	
	>50,000,000 euros	3.97	
(4) Age	0–10 years	64.36	
	More than 10 years	35.64	
(5) Years of international activity	<four years	19.81	
	≥four years	80.19	

Notes: EU = European Union, NACE= Statical Classification of Economic Activities in the European Community

Source: Authors' own

Table 2.
Structure of the sample

scope of the organization – ESV, EC, EPs). For these explanatory variables, an ordinal 0–6 scale was used, where 0 means not applicable, 1 means very low and 6 means very high. For the dependent variable related to internationalization, an ordinal 0–4 scale was used, where 0 means not applicable, 1 means very low and 4 means very high. The second part includes the respondents' sociodemographic data, namely, gender, age, level of education, seniority in the position, and two questions about their training and knowledge of the CE phenomenon. The request for sociodemographic data was considered necessary because the differences between citizens could help us improve our knowledge (Shareef *et al.*, 2014). Table 3 presents all the variables used in this model, their background information in the literature and the scales used.

3.2.1 Environmental conditions. Competitive dynamism: the speed of innovation in products and processes and the level of business failure in the sector are measured (Kreiser *et al.*, 2021). **Technological change:** the variable includes information about the expected technological evolution, the new business ideas and opportunities generated by technological change and the level of investment in R&D (Kreiser *et al.*, 2021). **Integration into the value chain:** measured through the level of access to information and collaboration with suppliers and customers, finally, **Integration with institutional support** through access to information and collaboration with public and private research centers, and also includes enterprises' public financial support level (Martínez-Román *et al.*, 2019).

3.2.2 Entrepreneurial strategic vision. The construct is measured through three variables according to Kreiser *et al.* (2021). **Flexibility** manifests when managerial staff modifies the goals and regularly redefines the firm's strategy. **Clarity** was measured by the management's understanding of achieving the firm's strategic objectives. Finally, in the cause of **commitment**, the use of the mission or vision to assess strategic decisions and the degree of achievement of the strategic goals was measured.

<i>Environmental conditions</i>		
Competitive dynamics		
CD 01	Innovation speed	Kreiser <i>et al.</i> (2021), Martinez-Román <i>et al.</i> (2019)
CD 02	Failure rate	
Technological change		
TC 01	Orientation toward technological change	
TC 02	Opportunities for technological change	
TC 03	Importance of technological development	
TC 04	Investment in R&D	
Integration into the value chain		
EM 01	Importance of supplier information	
EM 02	Importance of customer information	
EM 03	Collaboration with suppliers	
EM 04	Collaboration with customers or consumers	
Integration with institutional support		
IP 01	Access to information at universities, public research centers, etc.	
IP 02	Access to information from consultants, private research centers	
IP 03	Cooperation with universities, public research centers, etc.	
IP 04	Cooperation with consultants, private research centers, etc.	
IP 05	Financial support from the public sector	
<i>Entrepreneurial strategic vision</i>		
Flexibility		Kreiser <i>et al.</i> (2021)
FX 01	Strategic control and evaluation	
Clarity		
CL 01	Vision/mission	
CL 02	Knowledge of the goals	
<i>Commitment</i>		
CM 01	Assessment of strategies	
CM 02	Control of the strategic goals	
<i>Entrepreneurial climate</i>		
Management support		Kuratko <i>et al.</i> (2014b)
MAN 01	Acknowledgment of the assumption of risks	
MAN 02	Risk assumption incentive	
MAN 03	Speed in the incorporation of new work methods	
MAN 04	Support to experimental projects	
Work discretion		
WD 01	Freedom to organize the task	
WD 02	Autonomy in the job position	
WD 03	Freedom to make decisions	
Rewards/reinforcement		
RW 01	Rewards for results	
RW 02	Responsibility in results	
RW 03	Recognition of success	
RW 04	Communication of achievements	
Organizational boundaries		
OB 01	Rules and procedures	
OB 02	Understanding of expectations	
OB 03	Clarity in the assessment of results	
OB 04	Understanding of expected performance	

Table 3.
Description of the variables

(continued)

<i>Entrepreneurial process</i>		
Innovation		Covin and Slevin (1991, 1989)
IN 01	Importance of R&D, technological leadership and innovation	
IN 02	Proportion of radical innovations	
Risk-taking		
RK 01	Predisposition to risk	
RK 02	Boldness in decision-making	
RK 03	Aggressiveness in the exploitation of opportunities	
<i>Internationalization</i>		
Degree of internationalization		Segaro <i>et al.</i> (2014)
DOI 01	Proportion of international sales	
DOI 02	Proportion of employees in international activity	
Degree of satisfaction		Jantunen <i>et al.</i> (2008)
SD 01	Knowledge generated	
Performance of internationalization		Swoboda and Olejnik (2016)
IPF 01	Sales growth	
IPF 02	Profitability	
IPF 03	Foreign market share	

Source: Authors' own work

Table 3.

3.2.3 Entrepreneurial processes. According to Covin and Slevin (1989, 1991), *innovation* is measured through R&D efforts, technological leadership and the radical nature of the products and services introduced into the market. *Risk-taking* measures behavior in search of new opportunities. The variable is formed by the tendency toward high-risk projects, boldness in the face of the environment and the exploitation of potential opportunities.

3.2.4 Entrepreneurial climate. According to Kuratko *et al.* (2014a, 2014b), *management support* has been measured through the employees' recognition of the risk assumption, the encouragement to take calculated risks to generate innovative ideas, the incorporation of improvements proposed by the staff and the expressed support to small experimental projects within the organization. *Autonomy in the job position*, the employees' freedom, and the degree of autonomy in their daily work performance are measured as the discretionary use of their criteria at work. *Rewards and reinforcements* are measured through the perception of rewards according to performance, increased responsibilities and recognition of a well-done job. *Organizational boundaries* were measured through the perception of the number of task rules and procedures, staff understanding of management expectations and the specific description and performance level expected from each position.

3.2.5 Internationalization. *Degree of internationalization* is measured through the percentage of sales in the international market concerning the total and from the proportion of employees in activities related to internationalization (Segaro *et al.*, 2014). *Degree of satisfaction*, measured through the perception of the enterprise's level of satisfaction concerning the understanding obtained, was used (Jantunen *et al.*, 2008) and *Economic results*, measured by the level of international growth, profitability level and international market share (Swoboda and Olejnik, 2016).

3.3 Statistical methods

The data collected were analyzed using the partial least squares path modeling (PLS-PM) as a variance-based technique for modeling structural equations. This technique is particularly suitable for studying organizations (Sosik *et al.*, 2009). PLS-PM is an iterative algorithm that

acts on observable variables and allows estimates and hypotheses to be compared (Hair *et al.*, 2019; Rigdon *et al.*, 2017). In management and social science research, PLS has become an increasingly used technique in recent years (Nitzl *et al.*, 2016).

Different authors recommend analyzing the model's predictive capability using PLS-SEM. Within PLS-SEM, several essential tools are suitable for fitting complex model structures or handling data deficiencies, such as heterogeneity (Hair *et al.*, 2014).

The software used was SMART PLS, version 3.3.2. Beforehand, we checked that there was no error due to measurement bias or common method bias, following the steps proposed by (Kock, 2015). To confirm that the sample did not contain any error due to measurement bias, the variance inflation factors (VIF) achieved had to be below a value of 3.3, which was verified.

4. Results

The empirical study implied the need to develop latent variables of up to three orders. Table 4 presents the sequential process for obtaining the proposed structural CES model, from a first-order model to a higher-order model like the one proposed in this study. The validity of a hierarchical component model with several orders is carried out in two stages: the first consists of checking the validity of the measurement models of all orders. The second stage consists of analyzing the results of the structural model with the highest order (Sarstedt *et al.*, 2019).

Table 5 shows the reliability results for the different constructs, whereas Table 6 offers indicators of discriminant validity. Only order three measurement model results are shown (lower order results available upon request). Once confirmed that the measurement model is satisfactory, the results of the structural model (our research model) are analyzed. Table 7 shows the final structural model's path coefficients (direct impacts).

5. Discussion

This study has evidenced the CES's positive impact on the internationalization process of SMEs. The results support most of the hypothesized relationships in our research model.

Order 1 model	Order 2 model	Order 3 model	CES categories
CD TC	CD_TC	CD_TC	Environmental conditions
EM customer EM suppliers	EM	EM_IP	
IP private IP public	IP		
ESV MAN, RW	ESV MS	ESV MS	Entrepreneurial strategic vision Entrepreneurial climate
WD OB RK IN	OB EPs	OB EPs	Entrepreneurial processes
Internationalization	Internationalization	Internationalization	Internationalization

Notes: CD = competitive dynamics; TC = technological change; EM = integration into the value chain; IP = integration with institutional support; ESV = entrepreneurial strategic vision; MAN = management support; RW = rewards/reinforcement; WD = work discretion; OB = organizational boundaries; RK = risk-taking; IN = innovation; EPs = entrepreneurial process

Source: Authors' own work

Table 4.
Sequential process
structural CES model

Construct/dimension/indicator	Loadings O3	CR	AVE	Corporate entrepreneurship strategy
CD, TC (composite Mode A)		0.865	0.762	
EM, IP (composite Mode A)		0.759	0.623	
ESV (composite Mode A)		0.914	0.682	
CLA 01	0.875			
CLA 02	0.823			
COM 01	0.878			
COM 02	0.886			
FX 01	0.642			
MS O3 (composite Mode A)		0.920	0.851	
OB O3 (composite Mode A)		0.865	0.762	
OB 01	0.874			
OB 02	0.742			
OB 03	0.888			
OB 04	0.661			
Internationalization O3 (composite Mode A)		0.915	0.642	
DOI 01	0.828			
DOI 02	0.758			
SD 01	0.768			
IPF 01	0.823			
IPF 02	0.752			
IPF 03	0.872			
Construct/Dimension/Indicator	Weights	VIF	<i>p</i> -values	
RK (composite Mode B)	0.587	1.055	0.000	
IN (composite Mode B)	0.686	1.055	0.000	

Notes: CR = construct reliability (composite reliability); AVE = average variance extracted and VIF = variance inflation factor; CD = competitive dynamics; TC = technological Change; EM: Integration into the value chain; IP = integration with institutional support; ESV = entrepreneurial strategic vision; CLA = clarity; COM = commitment; FX = flexibility; MS: management style, OB = organizational boundaries; DOI = degree of internationalization; IPF = performance of internationalization; SD = degree of satisfaction of internationalization
Source: Authors' own work

Table 5. Measurement model for Mode A and Mode B composites (order three models)

Variables	Internat	OB	CD_TD	EM_IP	MS	ESV	EPs
Internationalization	<i>0.801</i>	0.268	0.198	0.391	0.272	0.217	
OB	0.213	<i>0.797</i>	0.293	0.571	0.277	0.589	
CD, TC	-0.102	0.067	<i>0.873</i>	0.319	0.770	0.105	
EM, IP	0.191	0.365	0.116	<i>0.789</i>	0.277	0.499	
MS	0.230	0.076	0.581	0.107	<i>0.923</i>	0.090	
ESV	0.186	0.502	-0.045	0.305	0.049	<i>0.826</i>	
EPs	0.204	0.027	0.620	0.147	0.504	0.215	

Notes: Fornell-Larcker criterion (diagonal and lower triangular) and discriminant validity | Heterotrait-Monotrait.85 criterion (upper triangular) OB = organizational boundaries; CD = competitive dynamics; TC = technological change; EM = integration into the value chain; IP = integration with institutional support; MS = management style; ESV = entrepreneurial strategic vision; EPs = entrepreneurial process
Source: Authors' own work

Table 6. Discriminant validity order Model 3

Table 7.
Results of the
structural model
hypothesis

Hypothesis	Hypothesized effect	Path coefficients	Statistics	p-values	Supported / not supported
<i>H1a</i>	Env. Cond. (CD, TC) → ESV	-0.081			Not supported
	Env. Cond. (EM, IP) → ESV	0.314	3.090	0.001	Supported **
<i>H1b</i>	Env. Cond. (CD, TC) → EP	0.631	9.190	0.000	Supported***
	Env. Cond. (EM, IP) → EP	0.000	0.004	0.498	Not supported
<i>H1c</i>	Env. Cond. (CD, TC) → EC (OB)ss(hdhdh)(OB)(OB)	0.216	1.667	0.048	Supported *
	Env. Cond. (CD, TC) → EC (MAN, WD, RW)	0.439	3.469	0.000	Supported***
	Env. Cond. (EM, IP) → EC (OB)	0.225	2.505	0.006	Supported **
	Env. Cond. (EM, IP) → EC (MAN, WD, RW)	0.019	0.165	0.435	Not supported
<i>H2a</i>	ESV → EP	0.244	3.091	0.001	Supported **
<i>H2b</i>	ESV → EC (OB)	0.496	5.083	0.000	Supported***
	ESV → EC (MAN, WD, RW)	0.014	0.161	0.436	Not supported
<i>H2c</i>	EP → EC (OB)	-0.247			Not supported
	EP → EC (MAN, WD, RW)	0.227	1.739	0.041	Supported *
<i>H3a</i>	EP → Internationalization	0.346	3.063	0.001	Supported **
<i>H3b</i>	EC (OB) → Internationalization	0.177	1.804	0.036	Supported *
	EC (MAN, WD, RW) → Internationalization	0.345	3.115	0.001	Supported ***
<i>H4</i>	Env. Cond. (CD, TC) → Internationalization	-0.541			Not supported
	Env. Cond. (EM, IP) → Internationalization	0.101	0.817	0.207	Not supported

Notes: Env. Cond = environmental conditions; CD = competitive dynamics; TC = technological change; EM = integration into the value chain; IP = integration with institutional support; EC = entrepreneurial climate; ESV = entrepreneurial strategic vision; MAN = management support; RW = rewards/reinforcement; WD: work discretion; OB = organizational boundaries; RK = risk-taking; IN = innovation; EPs = entrepreneurial process; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Source: Authors' own work

The robustness of the interrelationships between the internal variables confirms the phenomenon's complexity, revealing the need for more research on this system of relationships.

The results corroborate the importance of environmental conditions on the SME's entrepreneurial behaviors (Covin and Slevin, 1991). The positive influence of the environmental conditions on the ESV is confirmed in the case of public-private institutional support (Kearney and Meynhardt, 2016; Martínez-Román *et al.*, 2019) and the degree of integration into its value chain (Schindehutte *et al.*, 2000). According to the literature, the irrelevance of competitive dynamism and technological change on the ESV is surprising (Ireland *et al.*, 2009), probably due to the predominance in Andalusia of small enterprises in low-technology sectors. The results from *H1a* support the implementation of policies reinforcing institutional support and sustaining the establishment of close ties with suppliers and customers. However, the low value of the coefficient of determination ($R^2 = 0.10$) indicates a marginal importance to the environmental effect on the ESV.

EPs are determined by environmental technology change, proving the importance of adopting new technologies, R&D and the technological qualification of labor to exploit business opportunities within this context (Debrulle, 2012). The same does not occur with the firm's institutional relationships and value chain; its irrelevant influence on EPs is striking in the literature (Ireland *et al.*, 2009; Kearney and Meynhardt, 2016). This result reveals a certain disconnection of local SMEs with institutional support for innovation and a weak link with the value chain, measured in terms of information exchange and collaboration with customers and suppliers. This is typical of the thin business structure that characterizes peripheral regions. The results of *H1b* reveal the need for decisive political action against this disconnection in the competitive and institutional environments while encouraging an educational offer according to the current challenges of technological transformation.

The influence of environmental conditions variables on the EC is evident in the results (Gupta and Pandit, 2012; Kreiser *et al.*, 2021). Competitive dynamism and technological change positively affect the precision of organizational boundaries, job autonomy and the firmness of management in supporting and recognizing the innovative and entrepreneurial behaviors of staff. Institutional integration and integration in the value chain increase the precision of the organizational boundaries, but without transcending this effect to management style. The results of *H1c* highlight the beneficial effect of an environment characterized by technological change and competitive dynamism on developing an organic structure that facilitates change and transformation (Celenta *et al.*, 2024).

The empirical contrast has revealed links between the internal components of the proposed model (Kuratko *et al.*, 2023). The support found for *H2a* confirms the positive impact that the ESV has on EPs (Kreiser *et al.*, 2021). Likewise, the results of *H2b* prove the direct influence of the ESV on the precision of rules, procedures and job positions (Kuratko *et al.*, 2014a, 2014b).

On the other hand, it is worth mentioning the negative influence of EPs on the organizational boundaries of the EC. This result coincides with the need to make the rules, procedures and task descriptions flexible to implement an internal context conducive to entrepreneurship. In contrast, EPs positively influence management initiatives supporting risk and experimentation, the level of job autonomy and rewards and recognition for the staff's entrepreneurial efforts (*H2c* supported).

EPs have proven to be one of the driving forces of the internationalization of SMEs in the region. The support for *H3a* highlights the positive influence of the EPs on

internationalization, as revealed in the literature (Freiling and Lütke-Schelhowe, 2014; Swoboda and Olejnik, 2016). In this way, innovation and the assumption of risks provide the knowledge, skills and attitudes necessary for internationalization (Falahat *et al.*, 2018), even in nonhigh-tech sectors (Booltink and Saka-Helmhout, 2018). They also facilitate the improvement of results and the opening of new foreign markets (Gerschewski *et al.*, 2015). These results are the literature highlighting the favorable relationship between innovation and internationalization in SMEs (Crowley and Jordan, 2017; Celenta *et al.*, 2024). Therefore, encouraging innovative behavior must be a high-priority political objective for SMEs' internationalization in peripheral regions such as Andalusia.

The support for *H3b* confirms the EC's favorable impact on internationalization (Falahat *et al.*, 2018). This occurs through management support for experimentation, risk assumption, innovative behavior and an appropriate promotions and rewards system. On the contrary, the rigidity of organizational boundaries has a less critical effect on the internationalization goal, probably due to the contradictory effects of such a broad range of firms and sectors.

The direct influence of the environmental conditions on internationalization has been ruled out in this regional context (*H4*). This means that changes in the environmental conditions do not directly lead to the external projection of Andalusian SMEs (Westhead *et al.*, 2001). The segmented analysis of environmental variables offers interestingly disparate results. Thus, the notable negative effect of competitive dynamism and technological change on internationalization contradicts a broad opinion supported in previous studies (Boso *et al.*, 2013; Martin and Javalgi, 2016; Zahra, 2003). This negative relationship may be due to a need for more technological capacity, low investment and the low innovative rate of a regional productive structure dominated by traditional industries and low-tech services.

Finally, institutional integration and integration into the enterprise's value chain do not seem to have any relevant impact. In this sense, information channels and collaboration with customers and suppliers do not significantly stimulate commercial expansion, perhaps because the surveyed SMEs mainly belong to local value chains with minimal foreign contact. Similarly, access to information and cooperation with public-private institutional support does not constitute a support network that favors the internationalization of the local productive system. In short, the environmental conditions do not seem to offer the best context for the internationalization of Andalusian SMEs. This problematic situation requires research to frame a practical and imaginative political action at the regional level.

5.1 Theoretical implications

From a theoretical point of view, this research contributes to improving knowledge about the elements that, in the case of CES, exert a significant and positive influence on the international activity of SMEs. Empirically, this paper expands some previous works focusing on the effect of CE on the enterprise performance (Ziyae and Sadeghi, 2021). Specifically, we confirm the relevance of the strategic vision in CE actions and how it can favor the results of international activity in SMEs.

One of the main contributions to the theory is the mediating role that CES plays in the relationship between environmental conditions and internationalization. In the case of Andalusian SMEs, environmental dynamism is not a direct spark for internationalization, nor does it promote the conscious development of an ESV. In turn, SMEs react to a (technologically and competitively) dynamic environment by putting their EPs into operation and establishing an EC, even if an ESV has yet to be developed within the firm. And it is the implementation of those EPs and EC together that could significantly

contribute to successful internationalization. However, the strength and completeness of these EPs and EC will only be fully achieved when an ESV supports them. These results contribute to a better understanding of the internal processes and relationships among the CES elements. Likewise, they provide a clearer picture of how CES reflects itself on the results of SME internationalization.

5.2 Implications for practice

No less important are the practical implications of this work for business management and policy-making to improve the entrepreneurial ecosystem and contribute to the economic development of emerging territories. In the case of SMEs trying to develop internationalization processes or improve existing ones, it is essential to strengthen the internal entrepreneurial elements (ESV, EC and EPs), independently from the level of dynamism and change in the environment.

On the other hand, and especially in the specific case of developing regions or emerging economies, policymakers should design and implement actions to favor those internal elements of the SMEs. Based on our results, incentives for internationalizing firms to develop EPs and an EC should be especially effective to cope with external conditions and as elements that favor the results of the firm's international activity.

5.3 Limitations and future research

Like any other study, this one has some limitations. On the one hand, the characteristics of the population and the sample analyzed could have conditioned the results. Therefore, their generalization must be cautiously implemented until new studies confirm ours. Nevertheless, we could expect similar results in regions with the characteristics of Andalusia (e.g. emerging economies). On the other hand, this is a cross-sectional study. Only longitudinal studies can ensure causal relationships between the realities under study.

New lines of research are opened from this study. First, the characteristics of the environment and the resources available are not favorable in this region. Testing this model on SMEs from other emerging economies would be exciting. This way, we could understand how the different environmental conditions determine this CES-internationalization relationship for SMEs. Second, a dynamic analysis of the evolution of those enterprises and their internationalization over time would be very revealing. This could shed some light on the time lag between implementing a CES and its reflection on internationalization results or the consequences of adopting different paths. Firms are more determined and ambitious in their CES are expected to see results more quickly. However, the risk associated is higher, and there could also be cases where this strategy is wholly abandoned.

6. Conclusions

This study focuses on analyzing the relationship between CES and the internationalization of SMEs in a developing European region, Andalusia (Spain), based on environmental conditions. The results have confirmed the existence of this relationship. Both EPs and the EC directly and positively influence the internationalization of SMEs. The decision to internationalize is strategic. Nevertheless, this is not necessarily a direct result of the existence of an ESV. Implementing EPs favors the development of a more proentrepreneurial management support structure; together, both elements contribute to SME internationalization. The relationship between EPs and OBs is conflicting, which could hinder the successful implementation of a CES. More research on this conflict is needed. Provisionally, we can assume that the specific characteristics of the SMEs in our survey (mainly in low-tech sectors and in a nonsupportive environment) could help explain this negative relation.

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