Components to foster organizational resilience in tourism SMEs

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Abstract

Purpose – Small- and medium-sized enterprises (SMEs) mainly rely on their structure and internal networks to achieve their goals and remain competitive. However, their limited internal capabilities and complex environments can hinder their stability. Thus, this study evaluated the relationships among specific factors toward fostering organizational resilience (OR) in tourism SMEs.

Design/methodology/approach – A multi-methodological approach was adopted to address this research study, including (1) social network analysis (SNA) to formulate the conceptual model and (2) construct validation through partial least squares path modeling (PLS-PM).

Findings – The six proposed hypotheses were supported. These results suggest that addressing these variables and relationships after considering management style and people development as critical factors can foster OR in tourism SMEs.

Research limitations/implications – The ideas that were developed were constrained to the organizational domain. Although the results apply to the Mexican context, this limitation can be offset by extending the proposal to other emergent regions or organizations. This can also increase the generalization of the results and foster improvements in the approaches applied.

Practical implications – Academics and managers must rethink resilience as the final state generated by multiple factors. This requires reconfiguring inner organizational interactions, providing more autonomy to operative units, reinforcing business intelligence and improving feedback mechanisms.

Originality/value – This research study contrasts previous studies because it proposes that SNA be exploited to avail of the advantages it confers in designing the conceptual model. In this regard, we present new relationships to promote OR and provide new avenues in order to improve the analysis of adaptation processes.

Keywords Small- and medium-sized enterprises, Structural equations, Learning organizations, Tourism, Social network analysis

Paper type Research paper

1. Introduction

This study focuses on Mexico's tourism sector, specifically small- and medium-sized enterprises (SMEs) and limits itself to the organizational domain. We particularly aim to

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identify the components that support organizational resilience (OR) and continuous adaptation to the environment. SMEs were chosen because of their relevance, given that they constitute a crucial node in the economies of many countries, especially in regions considered as emerging (OECD, 2019). For example, they represent more than 80% of the commercial activity and contribute 70% of the formal jobs in the Mexican economy. In addition, SMEs benefit the areas they operate in because they amalgamate the relationships between sectors, thus improving the transaction of goods and services (Abdulkader *et al.*, 2020).

To remain competitive, SMEs are highly dependent on their organizational structure, their employees' engagement and the correct implementation of management approaches because of their limited configuration and access to resources. In this regard, Figueiredo *et al.* (2020) and Núñez-Ríos, Pérez, *et al.* (2020) reported that SMEs face problems related to poor planning and management processes, the lack of clear purpose, inadequate staff training and inconsistent relationships between operating units and their management and control mechanisms. Additionally, the low capacity to scan the context they operate in and retrieve valuable information transformable into strategies can undermine their ability to react to changes in a complex environment. It can also diminish their ability to analyze, integrate, create and restructure their inner organizational connections in order to build differentiators and survive.

According to Hald and Nordio (2020), adopting management perspectives based on complementarity is an alternative to facing the aforementioned problems because these models seek to align objectives and resources to efficiently reduce costs and manage operations. In this sense, and considering Belfanti (2019), approaches that focus on resources, managerial leadership, or capability development have been used as avenues toward improving OR. Moreover, Belfanti (2019) emphasized the importance of operating within an innovation-driven management scheme and culture as this can be considered the precursor of sustainable growth in respect of the organizational domain. This poses the question of whether this type of management is vaunted in its reputation as resilient and competitive (Ali *et al.*, 2017). Sánchez-García *et al.* (2020) noted that organizational systems should continuously seek resilience to overcome the environment's constant pressures. However, they also stated that identifying the key factors and coupling practices and resources to foster resilience are still challenging for SMEs. In this context, we consider the ideas of Martinez-Lozada and Espinosa (2020) regarding the need for empirical studies to adopt systemic approaches aimed at dealing with and understanding the relationships among different elements. This can motivate the formulation of models with the necessary components to build resilience in SMEs, particularly in developing countries.

Based on the foregoing, this study presents a construct that proposes relationships to promote OR in tourism SMEs. Specifically, the model's design considers both a literature review and feedback from managers and owners of tourism organizations. The research objectives are as follows: (1) Conduct a literature review and identify the relevant components using social network analysis (SNA); (2) Apply this information to propose a construct; and (3) Validate the conceptual model through partial least squares path modeling (PLS-PM). We consider it appropriate to point out that the value of PLS-PM in this study is that of a multivariate technique valuable for validation in the soft modeling context, in which PLS-PM allows the formation of a virtuous loop to explain, confirm, or revise the changes for an organization (Hair *et al.*, 2019).

2. Literature review

Hillmann (2021) identified five disciplines that shape the study of OR: (1) ecology; (2) safety and reliability; (3) systems science or systems engineering; (4) positive psychology; and (5)

organizational development. All these aspects possess different ontologies, methods and analytical tools, which lead to differences in how OR is understood and deployed. Following Hillman (2021), ecology has studied OR under the idea of the adaptive cycle and the development of the capabilities and resources to facilitate this state. From a safety and reliability perspective, it is important to orient the culture and integrate management systems toward OR. As for engineering, which coincides with the ecological perspective, it approaches the subject from the principles of efficiency, control, cohesion and flexibility, recognizing people as resilience enablers. Finally, the positive psychology and organizational development views focus on the concept of organization and the conditions that ensure the adequate performance of individuals and groups. OR could be studied from multiple perspectives; for example, Denić *et al.* (2020), Denić *et al.* (2020) and Kuzman *et al.* (2021) suggest that intelligent algorithms be used as an alternative as they could support dealing with the complexity derived from handling information in organizational phenomena and enhance the identification of relevant systems conducive to sustainable performance.

For Carias *et al.* (2020), OR is a fuzzy concept that can be taken as an "umbrella" that encompasses many ideas and phenomena. However, the present study adopted the idea that resilience is a property of living systems (such as organizations) that can be fostered (Mouhib *et al.*, 2020). In this sense, under the theoretical foundations of organizational cybernetics (Zhang, 2021) and Beer's (1985) viable system model, we define OR as the state resulting from the harmonious integration and regulation of basic operative units, with sufficient autonomy to utilize structural, relational and environmental components, in order to maintain an organization's existence despite the conditions and disruptions.

OR has been studied from distinct theoretical approaches (Holling, 1973; van der Vegt *et al.*, 2015) and methodological perspectives (Akgün and Keskin, 2014; Chowdhury and Quaddus, 2017). Rahman and Mendy (2019) examined resilience in SMEs and found that while the study of this topic has advanced, multiple research efforts have focused on identifying the challenges or behaviors that companies should adopt to improve their survivability. However, they have neglected the modeling of factors that hinder the transition to a resilient state. From their ideas, it is possible to infer that resilience continues to be understood as the ability to "bounce back" and is conceived and operationalized under a purely managerial perspective. This leads to the development of individual capabilities, thus ignoring aspects such as complexity or recursive levels.

OR has been addressed as a consequence of different variables, such as self-efficacy, cognition, context (Santoro *et al.*, 2021), people development, succession planning and communication, coordination and commitment (Ali *et al.*, 2017). In this matter, Hallak *et al.* (2018) supported the idea that OR is an incentive variable for innovation. However, innovation could be a requirement of a system that aims to adapt to the constantly changing environment.

According to Werner-de-Sondberg *et al.* (2021), innovation has been used to frame, within the economic perspective, a process that involves breaking down practices, ideas, or methods to propitiate growth continuity. *Innovation* (Inv) is conceived as the potential of an organization to integrate and align its resources in order to generate radical or incremental changes that allow it to improve (Afriyie *et al.*, 2020). To sustain the increasing competitive pressure, SMEs are continuously forced to rethink, reshape and synchronize their existing competitive sources and capabilities (Ali *et al.*, 2017). Indeed, innovative capacity is seen as a valuable and inevitable source of growth, competitiveness and long-term sustainability (Ali *et al.*, 2017). Hence, Inv is a variable that influences an organization's ability to compete (Mota Veiga *et al.*, 2021). Some of the variables that have been identified as influencing innovation include management style, decision style (Ali *et al.*, 2017), creativity (Hallak *et al.*, 2018; Valaei *et al.*, 2017), training, knowledge, organizational culture (Valdez *et al.*, 2016), business management (López Lemus and De la Garza Carranza, 2019) and sustainability (El Hilali *et al.*, 2020).

Another path to study OR is the ability of an organizational system to process knowledge and integrate it into its dynamics in order to modify its behavior and improve its performance (Valaei *et al.*, 2017). In this regard, *learning capabilities* (LeC) has been identified as a means that can help organizations learn from their environment and appropriately respond to uncertainty (Zhang, 2021). Moreover, it has been identified that SMEs, being more agile and flexible than large companies, are more willing to implement learning strategies that promote innovation (Kerdpitak *et al.*, 2019). Although the literature has established that the greater the learning capacity the greater the innovation, no evidence has been found to support this notion.

Returning to the idea of innovation, Sánchez-García *et al.* (2020) highlighted a gap regarding translating resilience into concrete actions because innovation involves more than the technical, economic and social aspects that generate changes or benefits for a given group. However, considering Yoo and Roh (2021), this relationship has been omitted because it is assumed that resilience underlies innovation. In this sense of helping SMEs to become resilient, *management style* (MaS), as a way decision-making managers strengthen and influence employees to achieve organizational goals (Ali *et al.*, 2020), has been highlighted as a promoter of organizational change. Its main objective is to influence employees to achieve the company's objectives, while achieving their individual development (Neise *et al.*, 2021). This component is necessary for an organization to achieve resilience (Zhao *et al.*, 2021). Although Ali *et al.* (2017) analyzed the influence that management style might have on innovation and resilience, and the relationships were rejected in their empirical model, leaving it unclear as to whether such relationships can exist.

In the organizational framework of SMEs, *people development* (PeD) has been explored to aid organizational performance. In addition, PeD can be conceived as the strategies and courses of action adopted by a company to train, educate and inform its employees (Ali *et al.*, 2017). However, PeD also refers to building an environment based on learning, knowledge and personal growth; allowing companies to be aware of their reality and environment; and facilitating adaptation and competitiveness (Lijauco *et al.*, 2020; Taneo *et al.*, 2020). Thus, it would be feasible to identify whether PeD influences both innovation and resilience, considering that this relationship has yet to be identified.

Considering the foregoing, it is suggested that models first consider OR as a variable explained by innovation and then seek to adopt a comprehensive perspective in order to identify the characteristics or attributes that allow an organization to move toward innovation and resilience (Wen-Dong *et al.*, 2018). In this brief context, Strobl *et al.* (2019) stated that innovation should be conceived as a component that improves OR rather than as a fundamental factor. For example, Neise *et al.* (2021) considered that the deployment of information systems constitutes the backbone of resilience, while Zwane *et al.* (2019) stated that the survival of an organization rests on planning, leadership and conducting an organization under an ambidextrous scheme. In this sense, Iborra *et al.* (2020) assured that organizational ambidexterity and strategic consistency are the factors that explain resilience in SMEs. Resilience has even been thought of due to technological tools, such as virtual reality (Sánchez and Palos-Sanchez, 2021). According to Ali *et al.* (2020) and Zhang (2021), research that addresses OR in SMEs is still explicitly needed. This includes discussing infrastructure and empowering people with the autonomy to self-organize or assess work at different company recursion levels to translate such information into courses of action that improve performance (Audretsch and Belitski, 2021).

We value the research effort made by other authors to enrich the study and understanding of OR. Additionally, we identify the components that underpin an organizational arrangement that favors the ability to maintain and ensure existence, because according to Carias *et al.* (2020), it is inconceivable for an SME to plan stability, continuity and competitiveness without developing a structural arrangement that contributes to the fundamental purpose of survival.

Finally, Table 1 presents the search strategy performed in SCOPUS to compose the literature review and determine the OR of SMEs. Our search focused on identifying articles solely on PLS and analyzing OR in their models, specifically in SMEs. It is necessary to add that the SNA applied to the literature is presented in a complementary manner in the Results section.

3. Methodology

For this study, we adopted the systemic method because it promotes a dialectical synthesis between critical, naturalistic and positivist research methods to understand the relationships, structures and functions that affect a system (Núñez-Ríos *et al.*, 2020). Thus, it assumes that organizational problems are structured totalities nested in other totalities, which, as Warfield (2003) discussed in his science model, should be approached from a multi-methodological perspective. In this regard, the coupling of the selected tools is supported by the multi-dimensionality criterion (Brocklesby and Mingers, 2005).

Derived from the foregoing, the protocol of the present study is based on the soft systems methodology (SSM) that is suitable for addressing unstructured or fuzzy situations (Checkland, 2001). In this framework, considering Núñez-Ríos *et al.* (2020), analytical tools, such as SNA and PLS-PM, were combined. Specifically, SNA was used to detect the connection patterns between the variables in the PLS models and identify the factors that were relevant to design a model conducive to foster resilience. Then, PLS-PM was used to statistically validate the congruence of the proposed construct. Subsequently, the steps were as follows:

(1) Identify the relevant components: The objective in this phase was to obtain an overview using the literature review and determine the factors that can foster OR.

(2) Express a conceptual model: Using the previous phase's information, a conceptual model was developed. In SSM, conceptual models are helpful as change enablers.

(3) Propose the hypotheses: Based on the conceptual model, the hypotheses were presented for validation.

(4) Apply a questionnaire: The expression of the conceptual model was used to guide the formulation and subsequent application of the questionnaire.

(5) Analyze the data: PLS-PM was used to assess the congruence of the relations in the model and evaluate if they fit the studied situation.

(6) Make recommendations: We formulated recommendations that consider systems thinking based on Lowe *et al.*'s (2020) ideas.

Round	Search criteria	Results
1	(TITLE-ABS-KEY (innovation) AND TITLE-ABS-KEY (smes) AND TITLE-ABS-KEY (partial AND least AND square) AND TITLE-ABS-KEY (touris*))	2
2	(TITLE-ABS-KEY (innovation AND resilience) AND TITLE-ABS-KEY (smes) AND TITLE-ABS-KEY (pls) OR TITLE-ABS-KEY (partial AND least AND squares))	2
3	(TITLE-ABS-KEY (resilience) AND TITLE-ABS-KEY (service AND smes) AND TITLE-ABS-KEY (pls) OR TITLE-ABS-KEY (partial AND least AND squares))	21
4	(TITLE-ABS-KEY (innovation AND adaptability) AND TITLE-ABS-KEY (smes) AND TITLE-ABS-KEY (pls) OR TITLE-ABS-KEY (partial AND least AND squares))	5

Table 1. Search criteria in SCOPUS

Recapitulating the idea of contrasting the PLS models in the literature review, we present an overview. Through SNA, we explored the density of the nodes, considering the recommendations of Núñez-Ríos *et al.* (2020) and followed these steps

(1) The articles were chronologically ordered (in ascending order) and revised so that they all proposed a PLS model (Table 2). Consequently, an undirected and weighted two-mode network was designed (Borgatti *et al.*, 2013) linking the PLS models of each article with their variables.

(2) Using the eigenvector centrality measure, we obtained an overview of what trend follows the variable's usage when using PLS.

(3) Through the fast-greedy algorithm of graph partitioning (Kolaczyk and Csárdi, 2014), a network was arranged (variables-variables) to reveal the study's focus on OR.

(4) According to the SNA workflow, an edgelist-type arrangement was followed to set the variable–article relationships. A node file was also generated (both in CSV format) and processed through the *igraph* package (Kolaczyk and Csárdi, 2014) in Rstudio.

It is important to note that SNA was selected for its capacity and robustness to visualize significant amounts of relational data. Although SNA holds the mathematical rigor of graph theory, it is flexible enough to be used with inputs to illustrate the links between components instead of purely focusing on quantitative analysis (Núñez-Ríos *et al.*, 2020). Furthermore, this tool is suitable because it represents the totalities consisting of different elements. In the present study, we used SNA to draw connections between the variables in the PLS models. Consequently, seeking patterns can be used to increase the understanding of how research efforts and observations at the individual level (node level) and the complete level (whole network) can help create an overview about the levels and trends regarding resilience in SMEs (Bright *et al.*, 2021).

3.1 Information collection

In addition to considering the literature review, the variables in our proposal consider the functions defined by Beer (1985). According to Zhang (2021), the organizational cybernetics framework is necessary to address resilience problems. Thus, our questionnaire focused on the components related to achieving OR, while the assessment of the learning capabilities, management style and people development variables was based on the work of Ali *et al.* (2017). For the innovation variable, we followed Afriyie *et al.* (2020), and for the OR variable, we used the work of Núñez-Ríos *et al.* (2020). Although the first iteration consisted of 20 items, eight were removed because of collinearity. This is in line with Sanchez (2013), who advised not to use items with factor loadings below 0.70. We also used a five-point Likert scale ranging from 1 (total disagreement) to 5 (full agreement). Table 3 presents the variables and the descriptions of the items, while Table 4 reports the corresponding descriptive statistics and correlations between the variables.

3.2 Sample selection and data processing

The sample size was estimated using the *pwr* package in Rstudio. Regarding the parameters, and following Champely's (2018) suggestions, we set the statistical power at 0.95 with a significance level of 0.05 and conducted an f^2 test to determine effect size at 0.15. This resulted in a sample size of 100. Although this outcome fits the minimum threshold recommended by Kock (2018) to generate significant results using PLS-PM, we defined a sample size of 150 to collect the data. The information was collected with the support of the Confederation of National Chambers of Commerce, Services and Tourism (CONCANACO SERVYTUR for its

Id	Authors	Variables
Mod1	Chaparro-Peláez *et al.* (2014)	Organizational capabilities, inter-organizational environment, perceived benefits, intention to adopt inter-organizational information
Mod2	Vatamanescu *et al.* (2016)	Social network capitalization, innovation and quality, technological development, sustainability
Mod3	Valdez *et al.* (2016)	Employee training, strategies and policies, knowledge acquisition, organizational culture, innovation, performance, company size, company age
Mod4	Wang *et al.* (2016)	Explicit knowledge sharing, financial performance, human capital, innovation quality, innovation speed, operational performance, relational capital, structural capital, Tacit knowledge sharing, firm age, firm size
Mod5	Scuotto *et al.* (2017)	Innovation performance, absorptive capacity, social networking sites
Mod6	Ali *et al.* (2017)	Management style, decision-making, people development, succession planning, Horizon scanning, change management, resilience, innovation
Mod7	Jaaffar *et al.* (2017)	Administrative innovation, entrepreneurial orientation, firm performance, marketing innovation, process innovation, product innovation
Mod8	Valaei *et al.* (2017)	Exploitative learning, explorative learning, improvisational creativity, compositional creativity, innovation
Mod9	Sharifonnasabia *et al.* (2018)	Perception of internet usage, SME, organizational performance
Mod10	Valdez-Juárez *et al.* (2018)	External knowledge acquisition, internal knowledge acquisition, knowledge transfer, knowledge exploitation, innovation, infrastructure and management, performance, management of intellectual property
Mod11	Hallak *et al.* (2018)	Resilience, performance, innovation, creative self-efficacy
Mod12	Lee and Hallak (2018)	Entrepreneurial self-efficacy, innovation, restaurant performance
Mod13	Leyva Carreras *et al.* (2018)	Resources, globalization, strategic planning, strategic management, operation and management, managerial skills, competitiveness
Mod14	Kerdpitak *et al.* (2019)	Service innovation performance, employee collaboration, dynamic knowledge capability, external knowledge, RABCP, SBR
Mod15	Nurhilalia *et al.* (2019)	Interfunction coordination, innovation orientation, competitor orientation, customer orientation, marketing performance
Mod16	López Lemus and De la Garza Carranza (2019)	Innovation, business management practices, business entrepreneurship, firm performance, production performance, non-financial performance, financial performance
Mod17	Hanifah *et al.* (2019)	Adaptability, alignment, proactive creativity strategy, growth risk orientation strategy, innovation culture, innovation performance, government support
Mod18	Hutahayan and Yufra (2019)	Innovation speed, creative destruction, competitiveness of SME
Mod19	Linder (2019)	Customer-oriented manufacturing strategy, liabilities of smallness, new operations and manufacturing routines, flexibility of production, reduction of cost of production
Mod20	Abdul-Halim *et al.* (2019)	Organizational learning, market orientation, organizational culture, innovation culture
Mod21	Lijauco *et al.* (2020)	Leadership, business relationships, market orientation, workforce capacity, innovation propensity
Mod22	Wiwoho *et al.* (2020)	Adaptive capability, marketing performance, product innovation

(*continued*)

Table 2.
Articles used for the design of the network

Id	Authors	Variables
Mod23	Taneo *et al.* (2020)	Innovation speed, knowledge creation, creative destruction, competitiveness of SME
Mod24	Afriyie *et al.* (2020)	Knowledge sharing, product innovation, process innovation, marketing innovation, organization innovation, transformational leadership
Mod25	Afriyie *et al.* (2020)	Product innovation, process innovation, marketing innovation, organization innovation Knowledge sharing, transformational leadership, marketing performance, innovation types
Mod26	Kim and Ahn (2020)	Organizational flexibility, entrepreneurial orientation, open innovation climate, knowledge management, open innovation activity
Mod27	Prima Lita *et al.* (2020)	Entrepreneurial orientation, organizational culture, organizational innovation, organizational performance
Mod28	El Hilali *et al.* (2020)	Competition, customers, DATA, innovation, sustainability
Mod29	Leyva Carreras *et al.* (2020)	Performance of employees' human capital, Manager's human capital performance, technological innovation capacity
Mod30	Mabula *et al.* (2020)	Perceived cooperative support, members' commitment to the cooperative, members' trust in the cooperative, entrepreneurship orientation, learning orientation, innovation performance

Table 2.

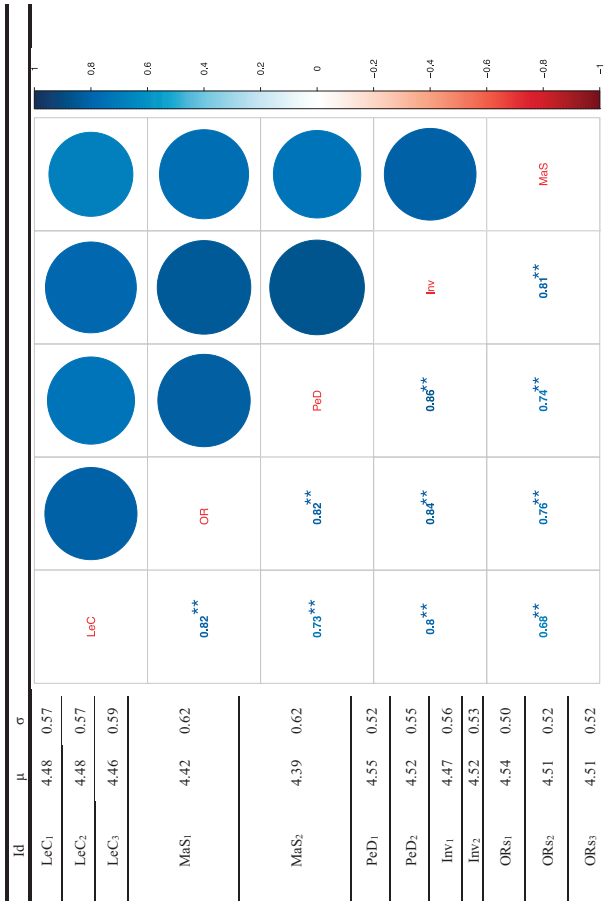
Variable	Id	Item
Learning capabilities	LeC_1	The organization has well-established mechanisms to retrieve information and distribute it properly
	LeC_2	I receive training that improves my performance and that of the organization
	LeC_3	In the organization, each work team has specific responsibilities without being overloaded with assignments
Management style	MaS_1	Your role in the company does not prevent the organization members from discussing any business aspect without fear of consequences
	MaS_2	All members of the organization know what to do and how their effort contributes
People development	PeD_1	Employee education and development strategies are designed considering internal and external feedback and data
	PeD_2	The actions to develop the staff are integral because they seek to improve working capabilities without neglecting socio-cultural aspects
Innovation	Inv_1	The organization always seeks to perform activities in a new and better way
	Inv_2	Management monitors and optimizes the organization as a whole through measurement, resource allocation and continuous improvement
Organizational resilience	OR_1	The organization runs information from both the environment and key actors and distributes it, appropriately strengthening management and operations
	OR_2	The organization has strong internal and external social connections considering an ethical framework
	OR_3	Appropriate use of resources, capabilities and relationships are made to amplify good results

Source(s): Self-elaboration

Table 3.
Variables and the descriptions of the items

acronym in Spanish). Overall, 170 SMEs agreed to participate. The questionnaires were distributed by email, and although incomplete questionnaires were received, we were able to obtain the established sample size, i.e. 70 SME owners and 80 managers.

Id	μ	σ
LeC_1	4.48	0.57
LeC_2	4.48	0.57
LeC_3	4.46	0.59
MaS_1	4.42	0.62
MaS_2	4.39	0.62
PeD_1	4.55	0.52
PeD_2	4.52	0.55
Inv_1	4.47	0.56
Inv_2	4.52	0.53
ORs_1	4.54	0.50
ORs_2	4.51	0.52
ORs_3	4.51	0.52



Note(s): Correlations are presented in the lower diagonal and those marked with ** are significant at $p > 0.01$

Source(s): Self-elaboration

Table 4.
Items with the corresponding mean (μ) and standard deviation (σ) values as well as the correlation among the variables of the model

PLS-PM is helpful for dealing with the complexity of unstructured problems by first focusing on the dimensions that constitute it and then estimating the multiple relationships between blocks/variables to draw systemic conclusions and achieve a comprehensive view of a phenomenon (Hair *et al.*, 2019; Núñez-Ríos *et al.*, 2018). We adopted PLS-PM to validate the proposed model and verify whether the proposed relationship coherence fits the studied context. Therefore, the data was processed through the approach suggested by Sanchez (2013) using the *plspm* package in Rstudio and complemented with some measures recommended by Hair *et al.* (2019) (Figure 1).

4. Results

Processing the data in Table 2 resulted in two types of graphs. The first one (Figure 2) is a two-mode graph connecting each PLS model cited in Table 2 (blue nodes) with the variables used by each model (light pink nodes). This allowed us to corroborate that all the models in the graph focus on SMEs. The connections in this graph also helped us infer that although the PLS models converge on addressing resilience, they essentially focus on innovation aspects, specifically variables such as quality, knowledge, people, innovation orientation, leadership, performance, finance and management. Although the idea of resilience as a guiding factor or

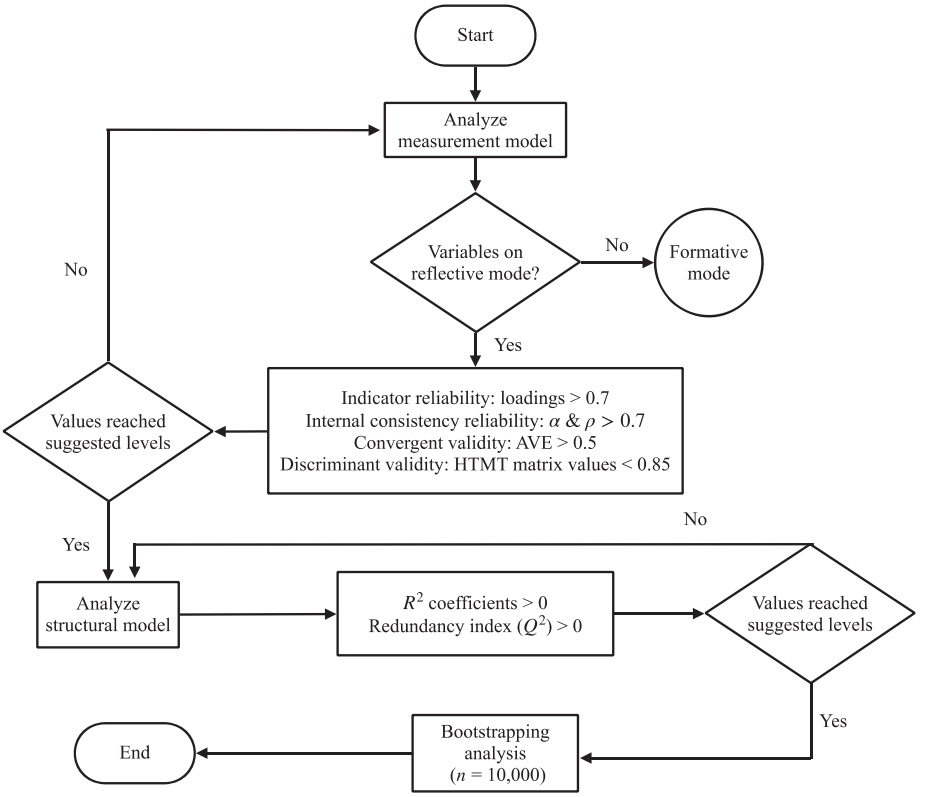
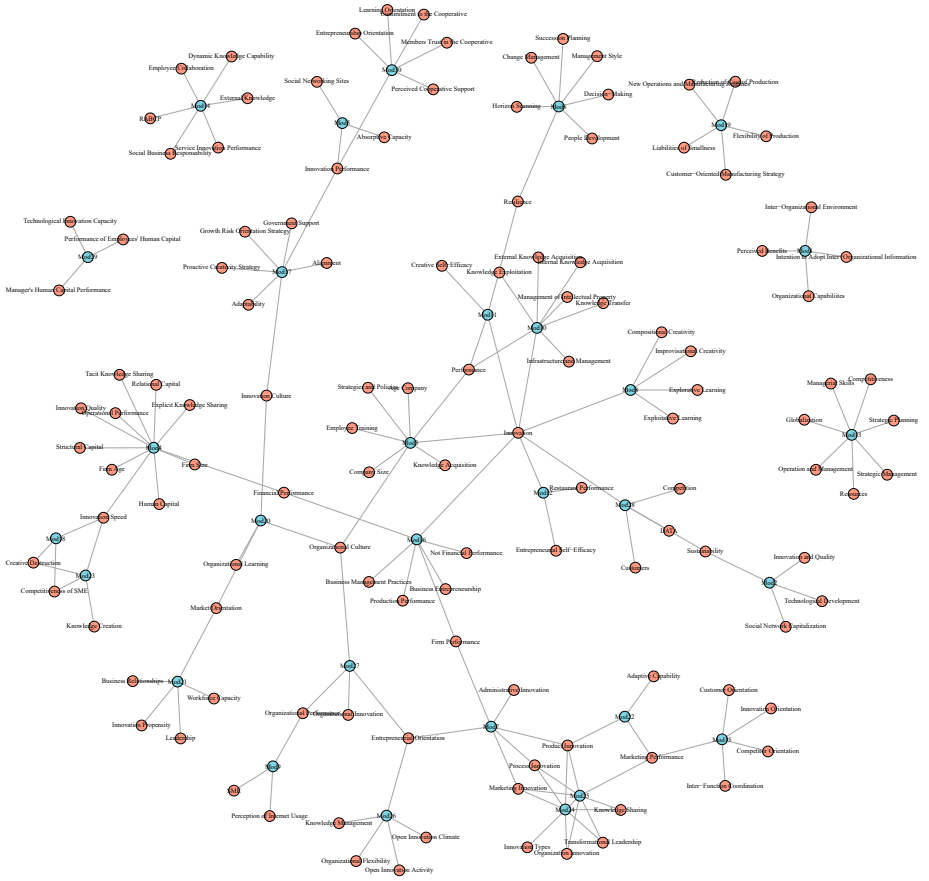


Figure 1.
Adopted analysis approach

Source(s): Based on Sanchez (2013)



Source(s): Self-elaboration using the *igraph* package in Rstudio

Figure 2.
Two-mode network of models and variables

final state has gained importance in the models conforming the network, this term is often used metaphorically (Brocklesby and Mingers, 2005). Considering the ideas expressed leading up to this juncture, it is necessary to tackle the problems related to resilience because of the tensions/conflicts between different factors and functions at various organizational levels. Subsequently, the resilience of an SME is not only given by the fact of "being a company" or being articulated in certain departments but also because it has a structural design that confers the ability to preserve its identity and purpose in the present and the future (Wang *et al.*, 2015).

To build the second graph (Figure 3), we used eigenvector centrality to find the relevant variables (Kolaczyk and Csárdi, 2014). This graph shows a trend toward certain variables, such as innovation and its application in different areas, including marketing, processes, products, leadership and knowledge management (KM). This is in line with what Werner-de-Sondberg *et al.* (2021) stated in that this type of variable only addresses relational aspects of an organization. We revised each model comprising the graph and mainly proposed innovation as the final variable to be explained/predicted. This follows the ideas of Wen-Dong

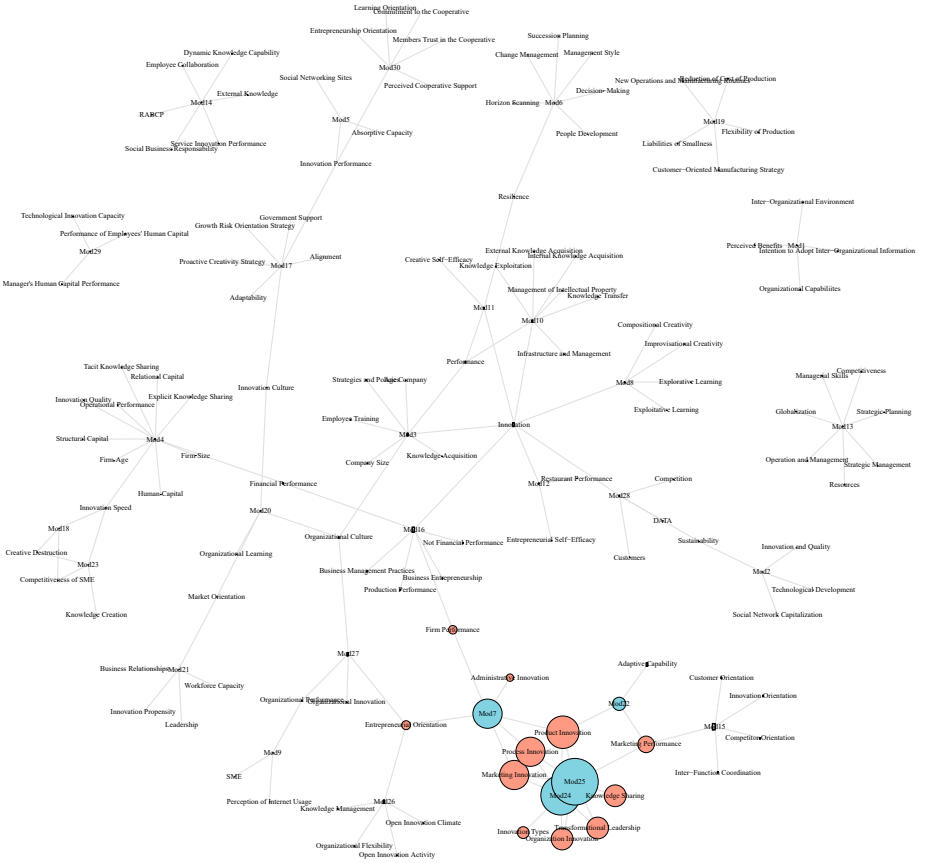
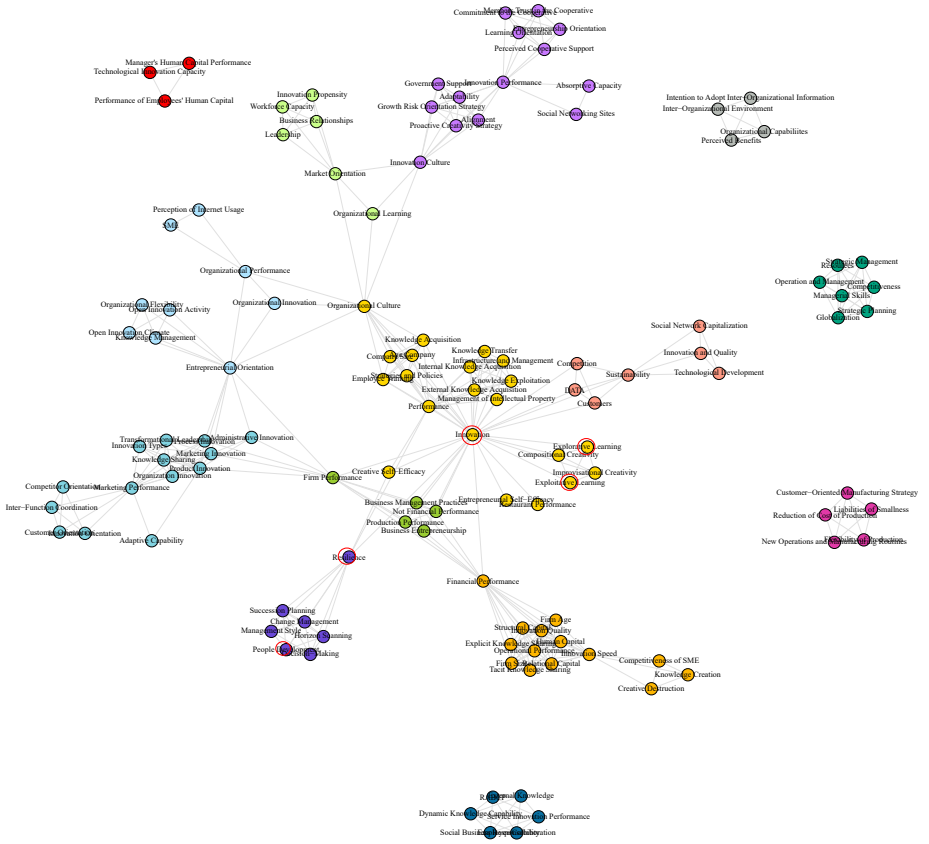


Figure 3.
Importance of the models and variables based on eigenvector centrality

Source(s): Self-elaboration using the igraph package in Rstudio

et al. (2018) and Oeij *et al.* (2018) because the design of a model assumes that resilience is subjacent to innovation and is taken as the basis for adaptation or resilience in SMEs. Although under PLS-PM, the models report correct and sufficient data to support their hypotheses, no variable or relationship was identified, the purpose of which was to foster or operationalize a state of resilience (this is supported by the graph partitioning).

Figure 3 was transformed into a one-mode network (Kolaczyk and Csárdi, 2014), which, in this case, centered on presenting the variables. Making this change is important because it allows us to recognize patterns based on which the analysis of OR is focused on SMEs and the areas wherein the use of the PLS approach is focused. For example, when a link connects one or more variables in a model, this connection increases if another model uses the same variable. Consequently, it was observed that some variables were very close to one another, thereby integrating a community. From this perspective, and derived from the application of the fast-greedy algorithm that forms hierarchical agglomerated groups (communities) (Kolaczyk and Csárdi, 2014), a total of 14 communities were identified (Figure 4) and assumed to be blocks in which OR is treated.



Note(s): The nodes circled in red are the factors to study in our model
Source(s): Self-elaboration using the *igraph* package in Rstudio

Figure 4.
One-mode network of variables (communities)

Among the subgraphs, five isolated blocks were identified, which correspond to the models proposed by the following scholars:

(1) Chaparro-Peláez *et al.* (2014) studied what factors can help SMEs continue to operate in an adverse economic environment and among a low rate of technologies to improve intra- and inter-organizational processes. This subgraph indicates that a system must face the demands of a new environment, suggesting that the adoption of information systems and the pursuit of innovation increases collaboration between companies, improves service to suppliers and end-users, increases the ability to define a target market and develops courses of action to meet their needs. However, the authors recognize that their proposal is limited because they do not establish guidelines for generalizing their results to other sectors or regions.

(2) Leyva Carreras *et al.* (2018) indicated that SMEs are at a disadvantage in relation to large companies because the latter have more resources and capabilities. The model in this subgraph proposes to strengthen internal soft abilities before investing money in infrastructure. Its results show that strategic planning and management skills, as internal factors of SMEs, influence business competitiveness.

(3) Kerdpitak *et al.* (2019) found that SMEs could improve their competitiveness if they reinforce the capacity to obtain information from the environment and manage internal knowledge. The model in this subgraph suggests that SMEs must integrate dynamic knowledge capacity into their management. They also indicated that information positively influences production flexibility and reduces costs, fostering new operations and manufacturing routines. However, this increases the responsibilities of most employees because of the relatively small size of SMEs.

(4) Linder (2019) examined the link between practice, performance and the use of external knowledge to develop capabilities that improve operations. The author also centered on innovation and stated that competitiveness can increase by creative destruction (i.e. increased competition and maintenance of innovations). In addition, Linder (2019) suggested that the role of the government does not strengthen the relationship between innovation and competitiveness in SMEs.

(5) Leyva Carreras *et al.* (2020) determined how staff performance influences the adaptability of SMEs and innovation based on managers' perceptions. Consequently, the authors suggested that the core component toward achieving these capacities is the human factor and they identified it as an opportunity to reinforce human capital strategies and activities.

Although the essence of the aforementioned proposals is adaptation to the environment, resilience, or innovation concepts, they are isolated because they are applied in specific economic sectors or because of the specificity in the variable names that they use. Nevertheless, by focusing on the variables of each model, we were able to study the network and locate the relationships of PLS usage on the basis of the cohesion of the clusters. Table 5 presents nine communities, with brief descriptions of the contributions that conform to them. Particularly, the colors representing each community are related to those in Figure 4.

Based on the ideas expressed in Table 5, it is possible to foster resilience in SMEs by recognizing the components that influence operative units, coordination and management to deploy their actions under an organizational arrangement that continually seeks equilibrium (Carias *et al.*, 2020). With regard to this, resilience requires an integrated view of an organization. For example, addressing the functional provides a sense of stability and structure (Bunge, 1992); addressing the relational provides a sense of environment, identity and norms (Luhmann, 1982); and addressing the structural provides a sense of direction, purpose and meaning to the changes in an organization (Bunge, 1992).

4.1 Conceptual model and pls-pm results

From the systemic method perspective, a conceptual model represents the "how it might work" arrangement or the relationship between specific components to achieve improvement. Derived from the literature review and based on eigenvector centrality and the partitioning graph from SNA, Figure 5 depicts the proposed conceptual model to foster OR. In this regard, this model introduces the following hypothesis: *organizational resilience (OR) depends on the interactions of variables such as learning capabilities (LeC), management style (MaS), people development (PeD) and innovation (Inv)*.

Accordingly, the working hypotheses fitting the conceptual model are as follows:

(H1). Learning capabilities are positively related to management style.

(H2). Learning capabilities positively influence innovation.

(H3). Management style has a positive effect on people development.

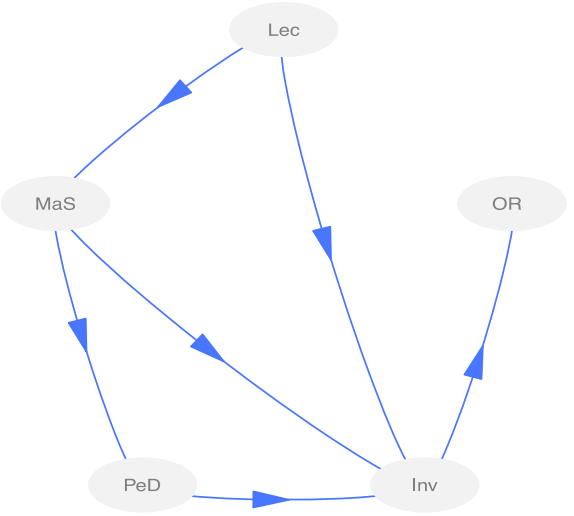
(H4). Management style positively effects innovation.

Table 5. Communities based on the one-mode network of variables

Community	Description
Innovation	The models in this cluster explore the relationships, components and capabilities necessary to strengthen SMEs' operations to avoid closure. For example, Valdez-Juárez *et al.* (2018) focused on KM, indicating no significant influence on the business performance level of SMEs. Thus, managers and owners must be open to changes derived from KM implementation. This requires investing in appropriate training, implementing new strategies to acquire/process information, developing collaboration networks and promoting autonomy from top management. This cluster also highlights the relationship between management innovation, company performance and the product delivered for an organization because it is significant and positively moderates the results of operations (Valaei *et al.*, 2017). Valdez-Juárez *et al.* (2018) established that information and communication technologies (ICT) positively influence resource management, innovation and profitability. Although the relationship between ICT and KM positively promotes innovation, it does not influence operations management to be resilient. Hallak *et al.* (2018) resilience, self-efficacy and performance to the innovation process. Their results provide an empirical basis for the effects of resilience on self-efficacy and innovation in service sector organizations. They also presented alternatives for the tourism industry, indicating that organizational capacities can positively impact companies' performance in this sector. Lee and Hallak (2018) pointed out that education is a relevant factor in fostering self-sufficiency. They also showed that improvements can be made in products, services, management, processes and marketing and that resilience should be understood as the company's ultimate goal
Sustainability	This sub-group is related to the work of Vatamanescu *et al.* (2016) and El Hilali *et al.* (2020), who suggested that data, customers and innovation are components that positively impact sustainability. One idea standing out in this cluster is that the competition between companies is not seen as a factor that favors exchanging information and making commitments to sustainability
Resilience	The variables in this block highlight the necessity of SMEs to adapt to environmental disruptions. In this regard, Ali *et al.* (2017) approached the issue from an organizational capabilities perspective. The author established that various aspects, such as decision-making, leadership style, people development and processes of fulfillment and control, must be considered to transition toward resilience. Additionally, adaptation must be promoted to explore the environment, management and capacity to develop a course of action that leads to recovery
Innovation culture	This cluster presents the models addressing adaptation and innovation in SMEs, promoting and adopting an organizational culture focused on innovation-based outcomes. Particularly, Scuotto *et al.* (2017) proposed increasing the use of digital ecosystems and social networks, as they offer a significant quantity, quality and speed of information regarding interactions in and outside the organization. In this context, Hanifah *et al.* (2019) admitted that the ambidextrous culture and the mediating effect of innovation culture can be factors in aligning resources and organizational levels to increase performance. However, it should be noted that an innovation-centered culture is not sufficient for continuous adaptation because (besides scanning the environment to retrieve and process relevant information), it is necessary to translate it in a clear manner so that operative units act with the support of adequate management and resource allocation mechanisms. In this framework, Mabula *et al.* (2020) noted the need to incorporate soft factors, such as cooperation, commitment and trust, to foster an organizational structure conducive to learning. However, SME managers should seek inner organizational strength and be cautious about inter-organizational partnerships because this has produced negligible results

(*continued*)

Community	Description
Organizational learning	The models in this block analyze the influence of components related to organizational learning. Abdul-Halim *et al.* (2019) found that organizational culture dimensions (i.e. adaptability, participation, mission and coherence) foster an organizational learning culture through information acquisition to regulate company performance. In this regard Lijauco *et al.* (2020) studied the relationships between cultural factors and the propensity to innovate. They found that cultural factors strongly condition the response in which an organizational system operates and affects their capacity to share and take advantage of information and knowledge. These models reinforce the idea that market orientation focused on relations with competitors affects the internal search for adaptation, since it also shapes the operational management and leadership style in staff handling
Entrepreneurial orientation	This cluster includes the proposals that coincide with the idea that adaptation to a complex environment rest on entrepreneurial orientation. Sharifonnasabia *et al.* (2018) highlighted the importance of SMEs' participation in countries' development. They found that technology must be used to build, adopt and coordinate an inter-organizational cooperation framework to share and complement information conducive to solving strategic problems. In this framework, Kim and Ahn (2020) suggested that the systematic and orderly management of knowledge generated within organizations constitutes the most basic facilitator for influencing performance and regulating policies that are adapted to this context
Marketing performance	The variables of the models in this cluster explore co-productive relationships to enhance marketing performance, support SMEs and improve their competitiveness. Jaaffar *et al.* (2017) found that management capacity, adaptability and organizational innovation positively and significantly strengthen SMEs' performance. Nurhilalia *et al.* (2019) focused on the relationship between cross-functional coordination, competitor and customer orientation. They emphasized that managers and owners must consider structure and finite resources to build a strategic framework that provides quality products and services, without neglecting the continuity of their products in the market. In this context, Wiwoho *et al.* (2020) considered that innovating products may help adaptability but not performance, generating a gap with strategic management and organizational ethos. This has practical implications for the relationship between adaptive capacity and marketing performance because management must integrate control mechanisms to increase adaptive capacity. Related to marketing performance, Afriyie *et al.* (2020) and Prima Lita *et al.* (2020) pointed out that knowledge sharing under a transformational leadership scheme should be addressed to improve performance and open an avenue to an adaptation state
Innovation speed	This group incorporates the works addressing innovation and change speed. Wang *et al.* (2016) stated that knowledge sharing (KS) contributes to business performance (FP) by improving innovation and intellectual capital (IC). Integrating KS into organizational management is still necessary to improve operational and strategic response. Additionally, the authors suggested that organizational performance improvement should not be based on innovation but on IC, as it mediates the KS and FP relationship. They also suggested not omitting the specific operational context of each company so that KS is used to meet priority goals. Hutahayan and Yufra (2019) and Taneo *et al.* (2020) converged on the need to increase competition through cost efficiency, improve product quality and enhance worker skills to positively influence the pace on changes. However, this should be followed by creative destruction (i.e. increasing competition and maintaining innovations) and organizational knowledge. This last point represents a gap in the theories of organizational learning
Firm performance	This community emphasizes that SMEs should strive for firm performance. López Lemus and De la Garza Carranza (2019) determined the degree of the joint influence of business management practices, innovation and entrepreneurship on new or entrepreneurial firms' performance. They concluded that the aforementioned variables directly and positively impact the framework for seeking resilience. Therefore, to increase a new company's success, the management practices must align leadership and strategic planning with technology and service requirements



Source(s): Self-elaboration using the *plspm* package in Rstudio

Figure 5.
Conceptual model

(H5). People development is positively related to innovation.

(H6). Innovation has a positive effect on organizational resilience.

Sanchez (2013) suggested examining Cronbach's alpha, Dillon–Goldstein's rho and the first and second eigenvalues to provide evidence of consistency. Table 6 reports these measurements and shows that $\alpha > 0.70$ and $\rho > 0.80$ in all of the cases that fit the suggested thresholds.

Figure 6 reports the factorial loads [λ], highlighting the relative importance of the items that make up each latent variable (Soto-Pérez *et al.*, 2020). In the proposed conceptual model, all of the items report $\lambda > 0.7$, exceeding the minimum threshold of 0.5 to ensure commonality. In this sense, by exceeding this threshold, each item explains at least 50% of each variable's variance.

Table 7 presents the data on discriminant validity and shows that the intervals of λ do not overlap with those estimated for cross-loadings [C-λ]. This information allows us to rule out the indicators as atypical or as not being adequate approximations of their latent variables, given that $\lambda >$ C-λ (Sanchez, 2013). Thus, the proposed model fits the discriminatory validity requirements because each indicator reports λ as more significant to the corresponding variable.

	α	ρ	*eig.1*	*eig.2*
Learning capabilities (*LeC*)	0.76	0.82	1.81	0.76
Management style (*MaS*)	0.73	0.84	1.46	0.54
People development (*PeD*)	0.77	0.89	1.62	0.38
Innovation (*inv*)	0.82	0.92	1.69	0.31
Organizational resilience (*OR*)	0.94	0.96	2.69	0.24

Source(s): Self-elaboration using the *plspm* package in Rstudio

Table 6.
Cronbach's alpha (α), Dillon–Goldstein's rho (ρ) and the first and second eigenvalues to measure the internal consistency of each latent variable

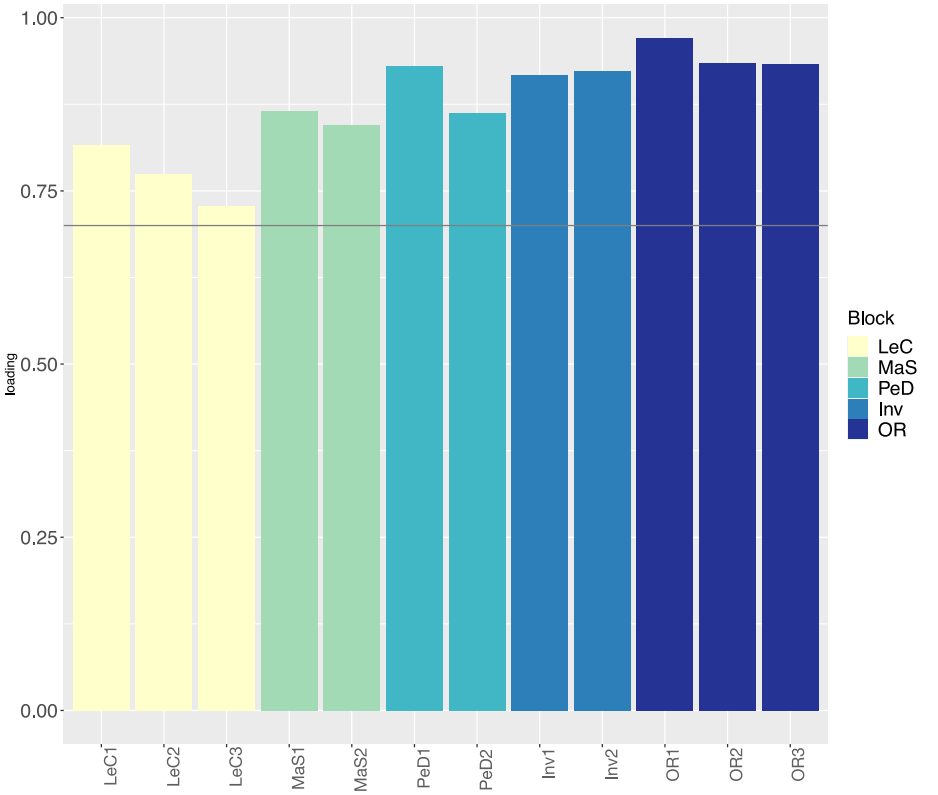


Figure 6.
Bar chart loadings for each indicator

Source(s): Self-elaboration using the *plspm* package in Rstudio

Table 7.
Factor loadings (λ), cross-loadings (C-λ) and AVE values for each variable

	[λ]	[C-λ]	AVE
Learning capabilities (*LeC*)	0.73–0.82	0.46–0.69	0.60
Management style (*MaS*)	0.85–0.87	0.57–0.73	0.74
People development (*PeD*)	0.86–0.93	0.55–0.82	0.80
Innovation (*inv*)	0.92–0.95	0.69–0.83	0.86
Organizational resilience (*OR*)	0.93–0.97	0.62–0.89	0.89

Source(s): Self-elaboration using the *plspm* package in Rstudio

To support the discriminant validity, the heterotrait–monotrait (HTMT) assessment was performed (Hair *et al.*, 2019). Values below the more conservative threshold of 0.85 (Table 8) were obtained for all of the variables. Table 8 also confirms that convergent validity can be established if the λ values are narrow and the result of the lower limit of each variable's loading is significant (Latan, 2018).

This model reports acceptable levels of convergent validity (Table 9) because the AVE values for each variable are above 0.5 (Hair *et al.*, 2019). Table 9 also shows the model's predictive quality, considering determination coefficients (R^2), indicating to what extent the exogenous variables explain the level of variance for each endogenous variable. Considering

Sanchez-Franco *et al.* (2019), R^2 allows us to evaluate the predictive power (in-sample prediction) of endogenous constructs. According to the ranges suggested by Sanchez (2013), the variables MaS, PeD, Inv and OR report a high or substantial level of R^2. Moreover, Table 9 reports the results for the redundancy index (RI), and it should be clarified that in the PLS-PM approach suggested by Sanchez (2013), RI constitutes an alternative measure to the cross-validated index Q^2 (Felipe *et al.*, 2017; Núñez-Ríos *et al.*, 2020). In this sense, it is above 0 for all of the endogenous variables that support the predictive quality of the proposed model.

F7 Figure 7 shows the path coefficients for the model's relationships. Together with the measurements presented earlier, the configuration proposed for the relationships makes OR plausible in the SMEs under study. This allows us to infer that these organizations can generate an organizational structure that allows them to adapt to the environment's constant changes, without neglecting their clients' requirements. It is to be noted that the LeC and MaS factors do not constitute elements that directly and significantly affect these companies' innovation processes (Inv). However, its effect is amplified when PeD is integrated because it is through the human factor that it is possible to operationalize actions oriented toward the "here and now" of the organization and innovation. To the extent that people are comprehensively nurtured, this will have a positive impact on a company's resilience. The model's configuration emphasizes that the actors with decision-making power must identify and work on the learning capacities as well as support these capacities with a management style that better regulates the innovation processes.

T10 A bootstrapping analysis with 10,000 iterations was generated to validate the significance of the relationships suggested in the model (Table 10). Together with an associated confidence interval, this analysis reports on the degree of stability/acceptability of the sample statistics as an estimate of the population parameter (Sanchez, 2013). If the perc.025 to perc.975 intervals do not contain 0, then this relationship is reliable and significant at 95% confidence. Consequently, and given that no interval contains 0, the six proposed hypotheses are supported. These results suggest that addressing these components and relationships can foster the OR of tourism SMEs. However, this brings to the fore the challenge of strengthening organizational learning capacity, aligning management styles and rethinking organizational relationships at all levels of this type of business so that this new configuration integrates sufficient autonomy to ensure resilience.

LeC	LeC	MaS	PeD	Inv	OR
LeC					
MaS	0.581				
PeD	0.632	0.637			
Inv	0.595	0.610	0.664		
OR	0.619	0.665	0.522	0.644	

Source(s): Self-elaboration using Rstudio

Table 8.
Heterotrait–monotrait (HTMT) discriminant validity assessment

	Type	R^2	R I	AVE
LeC	Exogenous	0.00	0.00	0.60
MaS	Endogenous	0.56	0.34	0.73
PeD	Endogenous	0.55	0.54	0.80
Inv	Endogenous	0.80	0.71	0.85
OR	Endogenous	0.71	0.74	0.90

Source(s): Self-elaboration using the *plspm* package in Rstudio

Table 9.
Type of variable, R^2, redundancy and average variance of the extracted values by latent variable

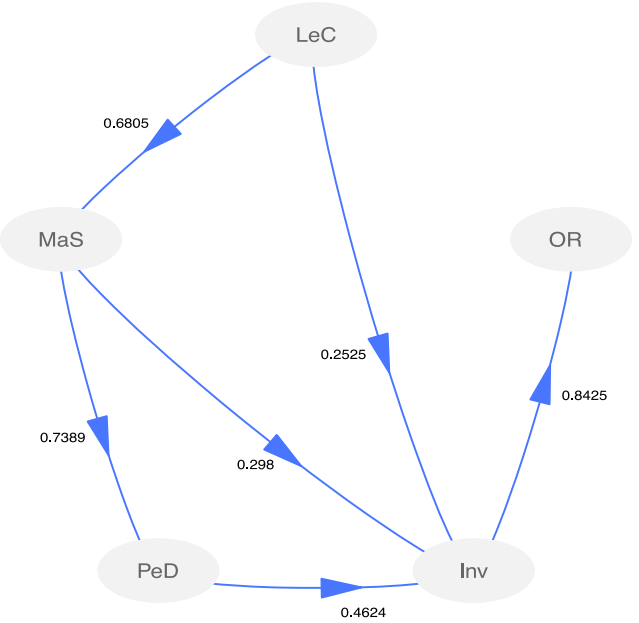


Figure 7.
Path coefficients for the proposed model

Source(s): Self-elaboration using the *plspm* package in Rstudio

Table 10.
Bootstrapping analysis by latent variables, confidence interval at 95% and their significance levels at *** with 0.001, ** with 0.01 and * with 0.05 of the confidence levels

	Original	Mean.boot	Std.error	perc.025	perc.975	Signf
LeC → MaS	0.6805	0.6942	0.0501	0.5903	0.7868	***
LeC → inv	0.2525	0.2538	0.0944	0.0693	0.4378	***
MaS → PeD	0.7389	0.7453	0.0519	0.6348	0.8383	***
MaS → inv	0.2980	0.2994	0.0802	0.1489	0.4637	***
PeD → inv	0.4624	0.4600	0.0893	0.2838	0.6312	***
Inv → OR	0.8425	0.8479	0.0370	0.7744	0.9197	***

Source(s): Self-elaboration using the *plspm* package in Rstudio

5. Discussion

Our model integrated the participant's perspective without neglecting what is reported in the literature. Subsequently, and based on the results of the learning capabilities (LeC) variable, our study concurs with those of Ali *et al.* (2017), Kerdpitak *et al.* (2019), Valaei *et al.* (2017), Valdez-Juárez *et al.* (2018), Wiwoho *et al.* (2020) and Zhang (2021). They all highlighted that the learning capability of an organization is a relevant factor in generating information that improves the operation of SMEs. These authors also argued that innovation precedes the capability for organizational learning. Based on the coefficient for the relationship (0.2525), our research study coincides partially because the relationship between these variables is recognized. Before focusing on innovation, it is necessary that SMEs foster their learning capabilities by first addressing organizational characteristics that prevent their structure from rising above limitations and from becoming responsive to changing conditions because addressing the relationship in this order can have a positive impact on management style

(MaS) and the operationalization of innovation (Inv). Learning capabilities can be reinforced if the company's managers or owners rethink the relationships between operational units and their management mechanisms. In this regard, it is vital to integrate coordination and control mechanisms that support and meet the operation's needs as quickly as possible. Thus, management must seek an organizational culture that integrates accountability, corrects resource allocation and acts as a bridge between the strategic and managerial parts of the organization.

Regarding the relationship between LeC and MaS, the assessments obtained for this variable (0.6805) allow us to converge with the contributions of Ali *et al.* (2017), Hanifah *et al.* (2019), Leyva Carreras *et al.* (2018), Valdez-Juárez *et al.* (2018), Leyva Carreras *et al.* (2020) and Neise *et al.* (2021). This is because the management component is necessary in regulating the relationship between the staff and the resources available to them. These works recommend that we consider MaS a component that only processes information and includes a unidirectional relationship with the employees. However, SMEs have organizational characteristics and management models that restrict their capacity to respond. This factor is an important element for regulating the operational framework that can lead the organizations under study toward the desired performance. In this sense, this study proposes new relationships. For example, MaS is as crucial as Inv as a preponderant element to propel OR because it must function as a regulatory framework for innovation processes while having a positive and significant impact on PeD.

As for the PeD component, the results are consistent with the work of Valdez *et al.* (2016), Wang *et al.* (2016), Ali *et al.* (2017) and Werner-de-Sondberg *et al.* (2021) because they verify the positive impact that the operationalization of strategies and action courses to train employees has on the organization's performance, quality of products and services and competitiveness. However, based on the community detection algorithm, the present study found that various models tend to overlook the role of people in building resilience and did not consider PeD a component that significantly impacts organizational performance and resilience. In this regard, the proposed construct bring to the fore new relationships for the PeD variable. Accordingly, this path reports a high value (0.7389) when influenced by MaS and a moderate value (0.4624) when related to Inv. It is to be noted that focusing on developing the human factor is necessary because it amplifies the impact on OR when MaS and Inv are incorporated. As for the Inv variable, various authors, such as Scuotto *et al.* (2017), Valaei *et al.* (2017), Hutahayan and Yufra (2019), Kim and Ahn (2020), Mabula *et al.* (2020) and Taneo *et al.* (2020), considered innovation central to the sustained performance of SMEs in a competitive market. Additionally, the literature does not establish a relationship between sustainability and continuous adaptation. Within this context, the model proposed in this research introduces Inv as a component that can align all of the organizational components to increase the capacity to adapt to the changes brought about by the environment. Thus, innovation is not only focused on incremental or disruptive changes to maintain marketing or financial performance but also on organizational structures that allow for the conservation of stable conditions that foster OR.

Considering the results from the methodology and on the basis of the suggestions of Lowe *et al.* (2020), some implications can be made for tourism SMEs that aim to move toward OR. In theoretical terms, incorporating concepts and tools from the systemic approach can enrich the study of organizational problems related to OR by allowing one to understand OR as a continuous process that involves both external factors and organizational design and coherently connects operating units to their regulatory, coordination, communication and accountability mechanisms at all levels to cope with changing conditions. In addition, by providing empirical support, the study bridges the gap of methodological complementarity and highlights the inclusion of SNA as a method of strengthening the identification of variables in the PLS-PM process. Moreover, by identifying the factors that SMEs can quickly

recognize and adopt in their "day-by-day" activities, they can move toward a state of continuous equilibrium.

In practical terms, the estimations obtained in the model can represent opportunities for tourism SMEs in terms of OR. Researchers have also suggested that the lack of seeking resilience is partly based on the difficulties of identifying what to address and carrying out organizational learning (Hillmann, 2021). On the other hand, the approach we present indicates that consideration be given to the functions and processes necessary for management to deal with the ambiguities inherent to the practice of OR. These organizations must reformulate the relationship between their core operations with coordination, management, audits, business intelligence and policy mechanisms. The basic operations had better be understood because they produce or deliver the goods or services of a company to the environment. Therefore, these had better be strengthened by training people at all levels (PeD) and be complemented with a management style (MaS) that seeks the regulation and coordination of basic operations. The coordination mechanisms (i.e. information channels, technical resources, scheduling functions, shared resources, organizational culture, policies and operation rules) should consider integrating the MaS of each organization because it would facilitate the coherent operation of these operational units. This presents SMEs with the challenge of strengthening the means and models of internal communication as well as the accountability processes in resource management. It also demands that SMEs monitor the environment they operate in to retrieve information and data, process them and (through their learning capabilities) anticipate changes and update their courses of action. Finally, the involvement of owners and managers is critical toward achieving the above without neglecting optimal resource allocation in order to implement the objectives adequately. In this sense, actors with high incidence of fostering changes must focus on promoting commitment and collaboration.

6. Conclusion

Previous literature has established the human factor as having a positive and significant impact on organizations. Specifically, it helps them become competitive and generates advantages that allow them to consolidate and maintain their operations in a complex and highly competitive environment. However, it is necessary to provide a robust management and action framework that allows partners to achieve success in these aspects. Consequently, this study contrasts with the revised proposals because it uses OR as a variable to explain/predict new relationships that can lead to this state.

Prior research has also focused on explanatory, and in some cases, predictive analysis. Additionally, it has examined the validity of the interactions between variables that foster innovation, sustainability, or organizational learning. In this regard, it was observed that model designs that address the aspects of continuity or resilience in SMEs emphasize innovation as a factor. Although they integrated various factors, such as environment, learning capacity, the importance of people, modality, or ways of managing the collaborators, the speed of developing innovation tends to separate the idea or resilience factor and distances itself from the central idea of this concept. That is to say, a property or state emerges from the synergy of the components of a system that allows it to adapt and evolve to generate new structures, relationships and new conditions of fitness for itself whenever it is necessary. Following this idea, the model proposed in this research study considered conceptual support from the perspective presented by Beer (1985) and Zhang (2021). Within this framework, our model's components and relationships can lead SMEs toward OR.

Overall, this work presented a conceptual model that considered the integration of SNA and the data collected from the participants. Thus, it aligned the methodological tools for each purpose in a suitable manner. In this regard, the first objective was achieved because SNA allowed us to identify the relevant components that could integrate a conceptual model.

This was complemented by the questionnaire's descriptive statistics and the correlation matrix of the variables, which indicate the absence of a deviation between the theoretical domain and the organization's practice. The second objective was achieved because the information allowed for the design of a conceptual model. The third objective was to validate the conceptual model through PLS-PM, considering the idea of OR from the perspective of systems that provide an alternative for organizational change. We found similarities in some variables and relationships that had been previously reported by other authors. Nevertheless, we proposed new relationships that are congruent and persistent and can be considered an adequate approximation of the situation wherein the companies under study operate. Moreover, the assessment and validation of the conceptual model, as well as the estimates obtained for each hypothesis, allow us to conclude that the model can be applied in other organizations and sectors because the variables are not limited to the tourism sector.

Several limitations should be noted. First, we found that the data was collected between November 2019 and January 2020, that is, before the international health emergency was declared. Hence, it is relevant to mention this because we did not develop items to address this situation specifically. Second, it is likely that because of the indexing of new contributions in SCOPUS, they were not considered in the literature review. Third, Mexico was our application context. However, we consider that this limitation can be overcome by extending the proposed model at least to other emergent regions or organizations because the generalization and integration of new methodologies are characteristics of PLS approaches.

Finally, this research study addressed the idea of OR as a state that must result from a special arrangement between certain organizational elements. Likewise, it opened new discussions and paths to apply different methodological approaches and to evaluate OR on the basis of the proposed configuration. In this regard, we suggested the application of SNA, organizational viability assessment, organizational cybernetics and systems dynamics to rethink organizational and managerial issues in tourism SMEs. We also suggest that adaptive neuro fuzzy inference system (ANFIS; Gavrilović *et al.*, 2018; Milićević *et al.*, 2021; Petković *et al.*, 2021; Spasić *et al.*, 2020; Stojanović *et al.*, 2021) be explored as it could help determine significant factors to improve management and performance in organizations. In conceptual terms, this research study contributed to the study of the resilience and sustainability of tourist-sector organizations. Finally, this proposal seeks to guide both owners and managers with decision-making power, who wish to determine the factors that should be addressed, to promote and ensure OR in practical terms.

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