Received 14 December 2021
Revised 23 June 2022
10 November 2022
Accepted 7 May 2023

Types of organizational culture and sustainability in ecotourism businesses in southern Mexico

Efraín Medina-Álvarez and Patricia S. Sánchez-Medina
Instituto Politécnico Nacional, CIIDIR-IPN Unidad Oaxaca, Oaxaca, Mexico

Abstract

Purpose – The purpose of this paper is to contribute to the understanding of the relationship between different types of organizational culture (hierarchical, clan or group, market or rational and adhocratic) and sustainability through three dimensions (economic, environmental and social) in ecotourism businesses in Oaxaca and Chiapas, Mexico.

Design/methodology/approach – In this research 80 questionnaires were administered in the form of face-to-face interviews to ecotourism business owners'. Through a discriminant analysis and the theoretical support of the competing values framework (CVF), the prevailing types of culture were identified, and their influence was analysed through a regression analysis.

Findings – The results show that ecotourism businesses which are driven by hierarchical culture tend to have a greater focus on economic sustainability, while those businesses with a market or rational culture show a positive and significant influence on environmental sustainability. Likewise, businesses with adhocratic culture achieve sustainability holistically; however, the data reveal that clan or group culture is not associated with social sustainability.

Originality/value – This study offers empirical research that explains the relationship between organizational culture and sustainability. Additionally, it contributes to the study of environmental management issues in the ecotourism sector.

Keywords Organizational culture, Ecotourism, Sustainability, Competing values framework, Triple bottom line

Paper type Research paper

1. Introduction

Within corporate environmental management, an essential challenge observed in the literature is to propose sustainable business models driven by achieving competitive success and mitigating the environmental impact of business activities that affect the planet globally. Given this, businesses must re-structure their operations and become fundamental in developing sustainable societies (Baumgartner, 2009; Franceschelli *et al.*, 2018; Wu and Pagell, 2011).

In the literature, two crucial aspects can be identified from which business models incorporating sustainability can be classified. On the one hand, some authors focus on physical aspects such as processes, products, technology, supply chain, etc.; for example, Loredo *et al.* (2019), Moyano-Fuentes *et al.* (2018), Sánchez-Medina *et al.* (2011) and Seclen-Luna *et al.* (2021) assert that sustainability is generated through product and process innovations that minimize resource consumption and limit natural environment contamination. For

JEL Classification — M14, Q26, Q56

Journal of Economics, Finance and Administrative Science
Vol. 28 No. 56, 2023
pp. 386-403
Emerald Publishing Limited
2077-1886
DOI 10.1108/JEFAS-12-2021-0267

Manrai *et al.* (2020), sustainability is an integral part of analysing a competitive tourist destination; therefore, sustainability is present throughout the analysis of the destination's competitiveness. According to Alam *et al.* (2021) and Khuntia *et al.* (2018), sustainability is a product of technology adoption. In addition, for Deng *et al.* (2021), competition in the supply chain induces companies to improve the sustainability of their products.

On the other hand, some studies address the issue of sustainability from aspects involving human resources, such as awareness, behaviour, commitment and organizational culture, among others. Authors like Ahmed *et al.* (2019), Chams and García-Blandón (2019) and Gong *et al.* (2019) argue that sustainability is the result of human resources, particularly the awareness and commitment of employees. Chassé and Courrent (2018) point out the importance of sustainable behaviour by the owners in achieving sustainable practices in companies. Similarly, Singh *et al.* (2021) point out that sustainability in family businesses results from their owners' religious behaviour.

Regarding the issue of organizational culture, authors like Isensee *et al.* (2020) argue that organizational culture and sustainability impact the development of companies; however, a review of the literature indicates a deficiency in that these variables are commonly studied separately. Therefore, our understanding of the relationship between organizational culture and sustainability needs to be improved to make it more inclusive and adequate.

Although the literature shows some indications of the relationship between organizational culture and sustainability, research still needs to be conducted. For example, Elliot (2009) highlights the importance of organizational culture in elucidating the role of information systems in environmental sustainability. Fok *et al.* (2022) support the idea that solid organizational culture improvement practices lead to positive sustainability outcomes. Likewise, Reilly and Weirup (2012) provide evidence that organizational culture influences sustainability.

da Rocha *et al.* (2018) study organizational culture and sustainability, mainly highlighting the profile of the dominant culture, cultural forces and the relationships between cultural profiles and the economic, environmental, and social dimensions of sustainability; however, they do not indicate precisely the type of organizational culture that explains each of the dimensions of sustainability, in contrast to Linnenluecke *et al.* (2009), who reveal that employees from a sub-culture with a stronger emphasis on hierarchical and bureaucratic values emphasize an economic understanding of corporate sustainability.

Based on the above, a gap is highlighted regarding the research that addresses the link between organizational culture and sustainability, particularly in terms of the following aspects: (1) There is little evidence of the relationship between organizational culture and sustainability, and more specifically, evidence that addresses how the different dimensions of sustainability are affected (economic, environmental and social) according to the type of culture that predominates in the organization, while also contemplating how a cultural change can occur in the organization to improve sustainability, (2) More current research is needed to show how the relationship between the different types of organizational culture and sustainability has changed in recent times, where complex problems such as environmental degradation, economic and social deficiencies derived from the crisis caused by COVID-19 exist at a global level. The COVID-19 crisis was a complex and unpredictable situation causing financial effects in various sectors, highlighting the need for a business approach to reduce the uncertainty caused by it (Ratten, 2020).

This work aims to contribute to understanding the relationship between the different types of organizational culture (hierarchical, group, rational and adhocratic) and sustainability through three dimensions (economic, environmental and social) in ecotourism businesses in Oaxaca and Chiapas, Mexico.

In addition to the above, it is vital to highlight the importance of conducting research in transcendental sectors of the Mexican economy, like Mexican states such as Oaxaca and

Chiapas, characterized by their high levels of poverty, but where ecotourism stands out as a critical economic activity. However, as pointed out by Epler (2002), ecotourism has the potential to create positive environmental impacts; however, it can be just as damaging as mass tourism if it is done incorrectly, risking destroying the significant environmental assets on which it depends. Therefore, it is relevant to conduct research that responds to the relationship between the distinct types of organizational culture and sustainability in ecotourism businesses in Oaxaca and Chiapas, Mexico.

This article has the following structure: a review of the relevant literature and the relationships between the studied variables; the research hypotheses; the methodology; the results; and finally, a presentation of the discussion and future research and conclusions.

2. Literature review

2.1 Sustainability and the triple bottom line

In business literature, there is evidence that explains the commonly observed economic aspects of a company, highlighting their significance for achieving good results in the field of sales (Acuña-Opazo and Contreras, 2021; Garavito and Rueda, 2021; Ghazieh and Chebana, 2021). However, more problems can and should be addressed, such as the environmental, social and institutional aspects (Manrai *et al.*, 2020; Reyes-Santiago *et al.*, 2019). Sustainability is a helpful approach to analyse these problems.

According to Amos and Uniamikogbo (2016, p. 91), "Sustainability can be defined as an overarching conceptual framework that describes a desirable, healthy, and dynamic balance between human and natural systems". The applicability of this concept is oriented towards three essential elements: economic considerations, environmental protection, and individual human well-being; this is the triple bottom line (TBL approach).

The environmental dimension of TBL refers to the attitude of organizations towards consuming only natural resources that can be re-produced from nature. The social dimension refers to the preservation and development of the human and social capital of the communities in which the organization operates. The economic dimension refers to the organization's attitude toward creating value and balancing costs and income in producing and distributing goods and services (Braccini and Margherita, 2019; Piwowar-Sulej, 2020).

Braccini and Margherita (2019) argue that when organizations fail to achieve any of these dimensions, they do not act sustainably, so academic research must address whether the three dimensions of the TBL are considered equally important within organizations (Laosirihongthong *et al.*, 2020) since although most organizations manage to have synergies between the environmental and economic dimensions, there is still a significant gap for addressing the social dimension (Braccini and Margherita, 2019).

To contribute to explaining the TBL, this work focuses on organizational culture, which refers to the set of shared values and norms that influence how the members of an organization perceive and interact with each other and with their environment (Schein, 1985). From this, it can be deduced that differences in organizational culture may be associated with differences in the company's beliefs and sustainability practices (Dyck *et al.*, 2019).

2.2 The competing values framework (CVF) model

Cameron and Quinn (1999) propose a model of competing values framework (CVF), which considers a typology of culture (adhocracy, hierarchy, market and clan). This model has been frequently used to study organizational culture (Cao *et al.*, 2015; Chatterjee *et al.*, 2018; Linnenluecke *et al.*, 2009; Zeb *et al.*, 2021) as it is a sound theoretical base to explain why each type of culture is associated with a specific strategic drive and a unique set of effectiveness criteria (Hartnell *et al.*, 2011). The CVF helps understand organizational culture, mainly the

types of culture that prevail in an organization. Identifying them within an organization is essential because it allows the design of functional strategies according to the cultural characteristics of each organization.

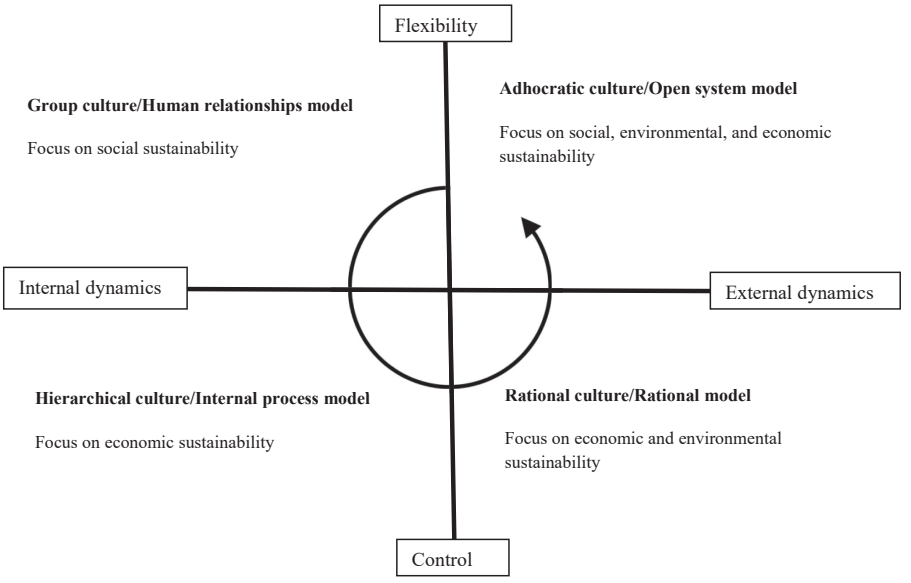
The CVF model is a graphic bi-dimensional representation divided into four quadrants; each type of organizational culture is in each quadrant (Figure 1), with characteristics that lead to particular goals (Gulosino *et al.*, 2016; Linnenluecke *et al.*, 2009; Linnenluecke and Griffiths, 2010; Di Stefano *et al.*, 2019).

Firms in the upper left quadrant have a group or clan culture, emphasizing trust, commitment and development for improving participation. It is promoted among employees through cohesion, participation and morale and is produced through training, human resources development, open communication, worker participation and participation in decision-making. Decisions are decentralized and individual results and long-term commitment to the organization are required (Haffar *et al.*, 2014; Jones *et al.*, 2005; Zammuto *et al.*, 2000).

Firms in the lower left quadrant have a hierarchy culture, with a unique structure and control derived from the strict chain of command administrated by formal rules and actions. This type of culture is characterized by its compliance with laws and regulations. Employees in the hierarchy culture have respect for power and position (Parker and Bradley, 2000; Zeb *et al.*, 2021).

The rational or market culture in the lower right quadrant is based on efficiency and productivity through setting goals, planning, precise communication and central decision-making (Jones *et al.*, 2005). Cultural profiles tend to be result-oriented; for this reason, the employees in this culture are driven to be assertive and competitive (Demir *et al.*, 2011; Di Stefano *et al.*, 2019; Hur, 2022; Linnenluecke *et al.*, 2009; Linnenluecke and Griffiths, 2010).

In the upper right quadrant is an adhocratic culture, wherein the priority includes a capacity for adaptation and disposition to change. In this model, communication is visionary and is transmitted horizontally; it encourages flexibility in decision-making, coordination and



Source(s): Adapted from Linnenluecke *et al.* (2009) and Linnenluecke and Griffiths (2010)

Figure 1.
Organizational culture types and sustainability

informal control. In this model, employees are motivated by their tasks' meaning or ideological appeal (Adams *et al.*, 2017; Hur, 2022; Linnenluecke *et al.*, 2009; Zammuto *et al.*, 2000; Zeb *et al.*, 2021) (Figure 1).

In the CVF model, each organizational culture type indicates how employees understand and implement sustainability.

2.2.1 Clan or group culture and sustainability. The clan culture (human relationships model, see Figure 1) focuses primarily on the human factor. According to Linnenluecke *et al.* (2009), an emphasis on the human factor is associated with the social aspect of corporate sustainability. In this case, entrepreneurs invest time and energy in social responsibility and often assume considerable risk. This approach suggests that employees in an organization are inundated with a culture based on human relationships and maybe strongly interested in social welfare and somewhat interested in economic concerns (Berger *et al.*, 2007; Brammer and Millington, 2008).

In this sense, Shin and Park (2019) found that clan culture shows poor social performance; however, Dyck *et al.* (2019), Gebril and Espino-Rodríguez (2020) and Ning *et al.* (2021) found that clan culture is associated with the social performance of the organization. Even when studies support a relationship between clan culture and the social dimension of sustainability, this relationship has been infrequently addressed in the literature. In addition, the link between ecotourism businesses and the community in which they are located is quite strong, so the social aspect can be an essential factor in the context analysed, and it can be explained through the clan culture that prevails in these ecotourism businesses. Consequently, we propose the following hypothesis.

H1. Clan or group culture is associated with the social aspect of sustainability.

2.2.2 Hierarchical culture and sustainability. The hierarchical culture (internal process model, see Figure 1) is based on economic performance; its primary purpose is to maximize profits through rational production processes. This model perceives organizations as tools to achieve goals using formal structures to improve economic performance. This approach imposes cognitive and motivational limitations on employees, limiting their actions and restricting their comprehension of sustainability (Griffiths and Petrick, 2001; Linnenluecke *et al.*, 2009; Linnenluecke and Griffiths, 2010).

Studies like Acar and Acar (2014), Elnagar *et al.* (2022) and Reino *et al.* (2020) found a positive effect of the hierarchical culture on the economic performance dimension of sustainability. On the other hand, Shin and Park (2019) found that hierarchical culture is associated with lower economic performance levels than other types of culture. Meanwhile, Calciolari *et al.* (2018) found that hierarchical culture is associated with better economic performance than rational culture. Therefore, we hypothesize as follows:

H2. Hierarchical culture is associated with the economic aspect of sustainability.

2.2.3 Market or rational culture and sustainability. Market culture (rational model, see Figure 1) stresses the importance of a broader organizational environment in which environmental needs are considered (Linnenluecke and Griffiths, 2010). It stresses efficient resource usage, planning and adequate organizational structure concerning the natural environment (Linnenluecke *et al.*, 2009). Some studies, such as the one by Green *et al.* (2015), found a positive and significant relationship between market orientation and sustainable performance-oriented towards the environmental aspect. Likewise, Bamgbade *et al.* (2017) found that market-oriented culture influences the adoption of environmental sustainability in construction companies. Reyes-Santiago *et al.* (2019) highlight that efficiency, which is vital in market culture, can reduce the consumption of inputs used in the production process, positively impacting environmental performance.

One objective of market culture is to achieve efficient resource consumption and to avoid a negative impact on the natural environment, which better informs the environmental aspect of sustainability, in addition to considering that every ecotourism business aims to guarantee good environmental performance in its operations. Market culture would help develop sustainability-oriented to the environmental aspect. This idea leads to the following hypothesis:

H3. Market or rational culture will significantly influence the environmental aspect of sustainability.

2.2.4 Adhocratic culture and sustainability. Adewale *et al.* (2018) and Linnenluecke *et al.* (2009) state that the adhocratic culture provides environmental and social benefits without compromising economic values. In this sense, Sugita and Takahashi (2015) found that adhocratic culture positively relates to sustainable environmental management. These authors argue that they can arrive at sustainable solutions due to the flexibility and independence that characterize companies with adhocratic cultures. Also, a study conducted by Reyes-Santiago *et al.* (2019) showed that adhocratic culture significantly influences eco-innovation as an aspect of sustainability in hotel companies. Adewale *et al.* (2018) found a positive and significant relationship between adhocratic culture and sustainable construction in large contractors in Malaysia.

Ecotourism businesses have traditional and collaborative values committed to teamwork, participation and consensus to achieve environmental, social and economic sustainability. Consequently, we propose the following hypothesis:

H4. Adhocratic culture will have a significant influence on sustainability.

3. Method

3.1 Research design

The research design employed a survey method for data collection. A representative random sample of 80 ecotourism businesses from two states in Southern Mexico was selected out of 100 firms identified by government agencies such as the Secretary of Tourism (SECTUR) and Secretary of Environment and Natural Resources (SEMARNAT). The sample comprised 59 ecotourism businesses in Oaxaca, including eight regions (Cañada, Costa, Istmo, Mixteca, Papaloapam, Sierra Sur, Sierra Norte, and Valles Centrales), and 21 in Chiapas, including five regions (Centro, Istmo-costa, Fronteriza, Selva and Altos). The distribution of the sample by state and region is shown in Table 1. We used a structured questionnaire to collect the data, which we applied through personal interviews.

After selecting the sample, the survey instrument was designed and pilot tested. In this test, ten questionnaires were administered to ecotourism businesses to correct and improve the items and scales, verify whether the instrument was reasonable for the context, and determine whether the format and vocabulary were appropriate. Subsequently, the corrected and improved version of the instrument was used for the actual survey.

3.2 Sample determination

For the sample selection criteria, the following were taken into consideration: (1) representative states with the greatest biodiversity in the country, according to the CONABIO (1998), (2) businesses related to the enjoyment of nature and with basic infrastructure to receive ecotourists in the area promoted. Businesses that provide services without being directly involved with the community, such as travel agencies and other national and international operators were excluded from the sample.

State	Region	Sample
Oaxaca	Cañada	2
	Costa	17
	Istmo	2
	Mixteca	3
	Papaloapam	6
	Sierra Sur	3
	Sierra Norte	21
	Valles Centrales	5
Total sample of ecotourism businesses in Oaxaca		59
Chiapas	Centro	4
	Istmo-Costa	2
	Fronteriza	3
	Selva	11
	Altos	1
Total sample of ecotourism businesses in Chiapas		21

Table 1.
Total sample by state and administrative region in Oaxaca and Chiapas

Source(s): Own elaboration

Businesses within a region were selected based on the ease of reaching the business, the availability of the person in charge, and their willingness to take the survey (see Table 1).

To determine our targeted sample size, we used the following formula:

$$n = \left(N * Zc^2 p * q\right) / \left(e^2 * (N-1) + Zc^2 * p * q\right) \quad (1)$$

Where.

n = Sample size.

Zc = Z-value (1.96) associated with a 95% confidence level.

e = 5% Margin of error.

N = Population size.

$p = q$ = percentage value (since we do not have data from the population, we use $p = 0.5$).

3.3 Survey instrument

The survey included 121 items: 40 on organizational culture, 23 on social sustainability, 28 on environmental sustainability and 30 on economic sustainability. A 5-point Likert-type scale was used to measure each variable. The survey was administered to owners of ecotourism businesses.

3.4 Measures

Organizational culture is the ideology promoted by ecotourism business owners and organization members, which manifests itself through the employees' collective behaviour (Hofstede, 1998; Sánchez, 2008). To measure this variable, we used the organizational culture assessment instrument (OCAI, 2010) by Cameron and Quinn (1999), which is based on the CVF. The interviewees answered a survey with 40 questions, including ten questions for four possible scenarios corresponding to each type of culture per the CVF. Each block of questions describes an organizational culture's characteristics, such as dominant traits, organization leaders, management style, organization unity, strategic emphasis and success criteria. Each aspect of corporate culture was measured using a Likert-type scale with 5 points, where

1 = never and 5 = always (Quinn and Spreitzer, 1991). Assessing the scale's reliability, we found that Cronbach's alpha was 0.79 for the hierarchical culture, 0.74 for the group culture, 0.81 for the rational culture and 0.82 for the adhocratic culture. These results are comparable to those of previous studies (Linnenluecke *et al.*, 2009).

Sustainability is measured from three dimensions: economic, environmental and social, according to the TBL approach. The contributions by Cohen and Ferreira (2010), Fryxell and Lo (2003) and Mercado and García (2007) were considered to measure this variable, and the ecotourism business owners were asked about the decision-making frequency in terms of actions aimed at improving economic, social and environmental aspects of the business. The answers were generated using a Likert-type scale with 5 points: 1 = never through 5 = always.

A factor analysis with varimax rotation and Kaiser normalization was used to determine the internal consistency of the sustainability scale; factor loadings over 0.5 were retained. Five factors were identified: satisfaction (factor 1) and profitability (factor 2), which correspond to economic sustainability; corporate ethics/social connections (factor 3) and quality of life in the workplace (factor 4), which correspond to social sustainability; and implementing environmental activities (factor 5), which corresponds to environmental sustainability. Cronbach's alpha was used to assess the scales' reliability, obtaining values from 0.52 through 0.86, which are acceptable according to Linnenluecke *et al.* (2009). A single sustainability construct was created by adding up all the retained items. This sustainability scale shows a Cronbach's alpha of 0.72 (see Table 2).

3.5 Analytical procedure

A discriminant analysis was carried out on the organizational culture variable to ensure that the types of culture will be correctly classified into differentiated groups through canonical discriminant functions using the statistical package for the social sciences (SPSS) software, version 19. This analysis made it possible to correctly classify the ecotourism businesses that contribute the most to the difference between the groups, eliminating those cases that were not classified correctly (Pozo *et al.*, 2005).

First, a scatter diagram was generated (Figure 2). Because the cases that correspond to each culture type do not entirely overlap, the diagram suggests that differences exist between groups.

Second, after the discriminant analysis, 21 cases were eliminated and 59 were classified, wherein 100% of the variance was explained. The cases were classified into four groups (see Tables 3 and 4).

Of 59 cases, 72.9% belonged to Oaxaca and 27.1% to Chiapas. Concerning the business scale, 72.9% were small, 23.7% medium and 3.4% large businesses. Regarding the owner's education, 67.8% had elementary, 18.6% secondary and 13.6% high school education. Finally, 81.4% were men and 18.6% were women.

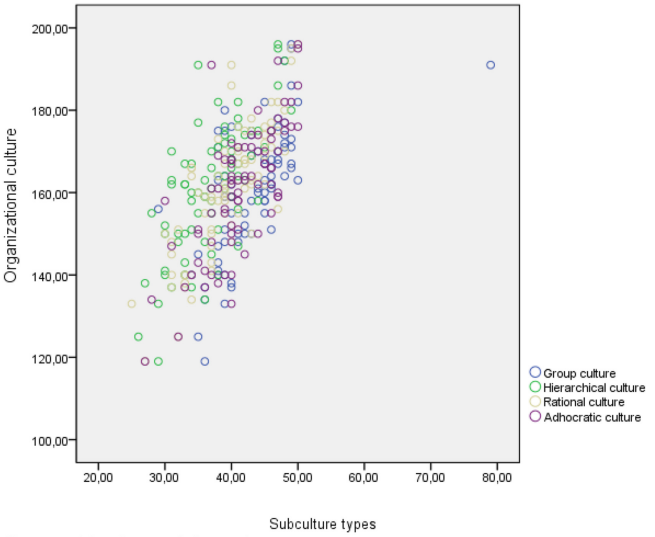
4. Results

The mean, standard deviation and correlations for the variables involved are shown in Table 5. The organizational culture variable registers significant and positive correlations with all the dimensions of which it is composed (hierarchical, group, rational and adhocratic culture); the correlation coefficients are between 0.53 and 0.75. Likewise, sustainability maintains a significant and positive correlation with its dimensions (economic, environmental and social); the correlation coefficients are between 0.35 and 0.92. We also obtained overall correlation values between organizational culture variables and environmental sustainability variables.

Sustainability	Economic sustainability 1		Social sustainability 3		Environmental sustainability 5	Commonality
1. Satisfaction						
The tourists who visit the park are satisfied with the natural and cultural attractions	*0.90*	0.04	0.08	0.06	−0.11	0.83
The tourists who visit the park are satisfied with the business facilities	*0.69*	0.27	0.41	−0.18	−0.08	0.75
The tourists who visit the park are satisfied with the services provided by the business	*0.87*	−0.07	−0.08	0.05	0.16	0.79
The tourists who visit the park are satisfied with the workers' hospitality	*0.87*	−0.00	−0.07	0.07	0.23	0.82
The tourists who visit the park are satisfied with the ecotourism park safety	*0.68*	0.16	0.08	0.05	0.42	0.67
2. Profitability						
Ecotourism activities generate sufficient economic resources to cover business expenses	0.14	*0.89*	−0.07	0.07	0.15	0.84
The ecotourism activities generate a profit	−0.06	*0.90*	−0.07	−0.02	0.20	0.87
3. Corporate ethics/societal connections						
There is a commitment to truthfully and transparently inform both the staff and the public on the internal affairs of a business	0.04	−0.04	*0.80*	−0.17	0.23	0.72
A dialogue is established with the community that supports listening as well as communicating, and solving problems	0.14	0.07	*0.88*	0.19	−0.04	0.84
Informs the community of results from its activities	−0.02	−0.18	*0.83*	0.23	−0.09	0.78
4. Workplace quality of life						
Workers can freely express their demands, needs and proposals	0.06	0.10	−0.04	*0.94*	0.03	0.89
Harassment, bullying or discrimination is monitored between workers	0.03	0.08	0.08	*0.91*	0.13	0.85
5. Implementing environmental activities						
Measures are taken to clearly limit the zones where vehicles and visitors can pass	0.03	−0.12	0.16	0.10	*0.75*	0.61
Gardens are built with native species in the ecotourism park	0.06	0.04	0.21	−0.05	*0.69*	0.53
Action is taken to separate organic and non-organic waste	0.21	0.13	−0.03	0.11	*0.63*	0.47
Variance explained	22.3	12.8	15.1	12.6	12.3	75.0
Cronbach's alpha	0.82	0.86	0.80	0.86	0.52	0.72

Table 2.
Factor analysis using the sustainability scale

Note(s): Rotation method: Varimax with Kaiser normalization. The rotation has converged in five iterations. Extraction method: Principal component analysis
Source(s): Own elaboration



Source(s): Own elaboration

Figure 2. Subculture identification

	Forecast group				
Origin group	1	2	3	4	Total
Adhocratic	4	0	0	0	4
Rational	0	11	0	0	11
Group	0	0	35	0	35
Hierarchical	0	0	0	9	9
Percentages					
Adhocratic	100.0	0.0	0.0	0.0	100.0
Rational	0.0	100.0	0.0	0.0	100.0
Group	0.0	0.0	100.0	0.0	100.0
Hierarchical	0.0	0.0	0.0	100.0	100.0

Note(s): 100.0% of the original cases were correctly classified
Source(s): Own elaboration

Table 3. Culture types in the ecotourism businesses

	Total			
	1.00	2.00	3.00	4.00
Group	5.967	10.255	14.626	17.150
Hierarchical	6.673	9.608	13.524	16.874
Rational	7.074	12.355	17.287	21.503
Adhocratic	8.272	14.118	19.040	25.195
(Constant)	−21.939	−53.512	−100.863	−159.661

Note(s): Fisher linear discriminant functions
Source(s): Own elaboration

Table 4. Classification function coefficients

	μ	σ	CT	GC	HC	RC	AC	S	ES	SS	ENS
Organizational culture (CT)	2.83	0.77	1								
Group culture (GC)	2.88	1.08	0.53**	1							
Hierarchical culture (HC)	3.02	1.00	0.58**	0.50	1						
Rational culture (RC)	2.93	1.01	0.67**	0.12	0.44**	1					
Adhocratic culture (AC)	2.97	0.98	0.75**	0.39**	0.28*	0.31*	1				
Sustainability (S)	2.97	0.76	0.48**	0.09	0.37**	0.49**	0.33**	1			
Economic sustainability (ES)	2.95	0.86	0.38**	0.14	0.32*	0.47**	0.21	0.92**	1		
Social sustainability (SS)	2.95	1.17	0.21	−0.09	0.15	0.28*	0.20	0.63**	0.43**	1	
Environmental sustainability (ENS)	4.03	1.11	0.40**	0.03	0.26*	0.15	0.39**	0.35**	0.08	−0.04	1

Table 5.
Variable correlations

Note(s): $N = 59$, $^{**}p < 0.01$, $^{*}p < 0.05$
Source(s): Own elaboration

A regression analysis was performed for the hypothesis test, as shown in Table 6. As seen for hypothesis 1, our data reveal that clan or group culture is not associated with social sustainability; therefore, this hypothesis is rejected. The lack of this expected relationship shows that ecotourism businesses still need solid social responsibility actions that allow impact within the organization through its employees, who are the most crucial factor within a clan culture.

Concerning hypothesis 2, hierarchical culture is associated positively and significantly with economic sustainability ($R^2 = 0.32, F = 6.54, p < 0.01$); thus, hierarchical culture explains a certain level of economic sustainability in ecotourism businesses ($\beta = 0.32$). These results support hypothesis 2. According to this result, employees with a hierarchical culture in ecotourism businesses have a certain respect for their superiors; this situation establishes a clear chain of command and may be operating from well-established agreements and rules based on the economic performance these businesses aim to achieve.

	Sustainability	Economic sustainability	Social sustainability	Environmental sustainability
Constant	72.20**	44.39**	10.63**	17.22**
Organizational culture				
Hierarchical culture		0.32*		
Group culture				
Rational culture				0.28*
Adhocratic culture	0.33*			
R	0.33	0.32	0.03	0.28
R^2	0.11	0.10	0.00	0.08
F-value	7.18	6.54	0.05	4.84
Significance	0.01	0.01	0.81	0.03

Table 6.
Regression analysis results

Note(s): $N = 59$, $^{**}p < 0.01$, $^{*}p < 0.05$
Source(s): Own elaboration

Another result of this work is the positive and significant influence found between the market or rational culture on environmental sustainability ($R^2 = 0.28$, $F = 4.84$, $p < 0.05$). Rational culture is thus a good predictor of environmental sustainability ($\beta = 0.28$). These results support hypothesis 3 and verify that the ecotourism businesses analysed pursue and adequately meet their environmental objectives, and since rational culture is aimed at promoting efficiency, said efficiency impacts the environmental activities that this type of business carries out.

Regarding sustainability as an integrative term, the results suggest that the adhocratic culture positively and significantly influences sustainability ($R^2 = 0.33$, $F = 7.18$, $p < 0.01$). Thus, the adhocratic culture is a good predictor of holistic sustainability ($\beta = 0.33$). With these results, the flexibility and independence of the employees in the ecotourism businesses can be confirmed, as they are characteristic elements of the adhocratic culture, which lead to sustainability in the economic, social and environmental fields in the context of the ecotourism businesses studied.

5. Discussion

The results of this work suggest that different types of organizational culture within ecotourism businesses produce differences in the various conceptions of sustainability (economic, environmental and social).

Regarding the influence of clan culture on social sustainability, the results found do not support this relationship, contradicting the findings of authors such as Dyck *et al.* (2019), Gebril and Espino-Rodríguez (2020) and Ning *et al.* (2021), who did find that clan culture positively influences social sustainability. The implicit risk involved in carrying out social responsibility actions can be a limitation that prevents ecotourism businesses from undertaking or promoting social performance.

The results show that ecotourism businesses better emphasize economic sustainability if they have hierarchical culture. These results are consistent with Acar and Acar (2014), Elnagar *et al.* (2022), Linnenluecke *et al.* (2009) and Reino *et al.* (2020), who also found that the hierarchical culture explains economic sustainability. Then, the hierarchical structure, compliance and conformity with norms, and decision-making formality are specific issues that frame the focus of economic sustainability in ecotourism businesses.

Ecotourism businesses with a market or rational culture show more interest in the environmental aspect of sustainability, which is consistent with Bamgbade *et al.* (2017), Green *et al.* (2015) and Linnenluecke and Griffiths (2010). Ecotourism businesses with market culture reflect their owner's interest in following environmental practices that mitigate damage to the natural environment; such entrepreneurs exhibit environmental awareness focused on efficient resource consumption.

An adhocratic culture type was a significant predictor for understanding sustainability in its three dimensions, which supports the results found by Adewale *et al.* (2018) and Reyes-Santiago *et al.* (2019). However, it contradicts the results of Abdulrahim *et al.* (2020), who found no effect of adhocratic culture on sustainability. Ecotourism businesses with a dominant adhocratic culture strongly believe that their activities are linked to the natural environment and perceive that their economic survival depends on the level of importance they attribute to the external environment that affects their business. They, moreover, consider environmental and social aspects. Thus, ecotourism businesses with such characteristics are strongly interested in the values that compose an open system (Figure 1).

5.1 Theoretical implications

This paper contributes to the current empirical research literature by analysing the relationship between different types of organizational culture and the various aspects of

sustainability in ecotourism businesses in an emerging economy, especially in the poorest states of the Mexican Republic, which receive little attention in studies on environmental management. Specifically, the study contributes to the existing literature on CVF by applying this model in a little-analysed sector, such as the ecotourism sector. From the CVF model, this work identifies the types of organizational culture that predominate in ecotourism businesses and how these types of culture influence the achievement of economic, social and environmental sustainability.

Likewise, this study contributes to the TBL approach by examining sustainability from the economic, environmental and social point of view, thereby seeking to find alternatives for the continuity of ecotourism businesses in current times, given the recently derived economic, social and environmental conditions resulting from the COVID-19 pandemic.

5.2 Policy/managerial implications

Based on the CVF model used in this research to identify the predominant types of culture, ecotourism business owners can identify and learn about the characteristics of each culture and contemplate how a cultural change can occur to improve the sustainability of their business. They can also design strategies focused on achieving economic, environmental and social sustainability based on the types of organizational culture prevailing in their companies.

In this sense, this study shows that ecotourism businesses driven by internal process dynamics (hierarchical culture, see Figure 1) achieve economic sustainability; however, only firms interested in their external environment (adhocratic culture) are holistically sustainable. Therefore, an internal process culture (focused on group or clan culture) may limit an organization's ability to confront environmental and social aspects, which may later limit such ecotourism businesses' transition to a sustainable culture. Thus, ecotourism business owners must understand the differences between the organizational culture types and their scope.

Likewise, the results obtained are helpful for ecotourism business owners because they can anticipate the changes and new trends that the COVID-19 crisis caused. For this and as mentioned by Ratten (2020), the agility of the owners of these businesses should be considered since this will allow them to be more capable of adapting and directing their strategies based on the market's new needs.

On the other hand, the results obtained here can be helpful for government decision-making. Since public policies can be developed from the findings that affect the sustainability of ecotourism businesses, the basis of these policies can consider the prevailing cultures in this sector.

5.3 Limitations and future research

Given the limited funds for developing this research, our sample was restricted to two Mexican states. Therefore, in future studies, increasing the geographic scope for a greater sample size is recommended, covering different geographical areas of the country (North, Centre and South).

Since the link between clan culture and social sustainability in the ecotourism businesses analysed is not corroborated, further research is required based on applying the CVF model in various sectors to provide elements that can explain the results obtained here and their difference from what the literature raises. Further research investigating whether the three dimensions of TBL are equally important in organizations is also recommended.

Finally, an investigation into how the types of organizational cultures in the CVF model can be modified based on aspects such as the crisis caused by the SARS-CoV-2 pandemic would be recommended for incorporation into future research.

6. Conclusions

This research provides empirical support for understanding the link between culture and sustainability. It contributes to a detailed analysis of the diverse relationships between organizational culture types and sustainability and its economic, social and environmental dimensions.

The results show that hierarchical and rational culture explain economic and environmental sustainability, while adhocratic culture explains integral sustainability; however, there is no evidence of the relationship between clan culture and social sustainability, so great attention to the human factor as an essential element of the clan culture is required, while at the same time promoting social welfare actions through motivation by the owners or leaders in charge of ecotourism businesses.

References

Abdulrahim, M., Ganis, E., Saraswati, E. and Subekti, I. (2020), "The mediating effect of strategic posture on the link between organizational culture and sustainability performance", *OISR Journal of Business and Management*, Vol. 22 No. 6, pp. 1-18.

Acar, A. and Acar, P. (2014), "Organizational culture types and their effects on organizational performance in Turkish hospitals", *Emerging Markets Journal*, Vol. 3 No. 3, pp. 17-31.

Acuña-Opazo, C. and Contreras, O. (2021), "The impacts of intellectual capital on financial performance and value-added of the production evidence from Chile", *Journal of Economics, Finance and Administrative Science*, Vol. 26 No. 51, pp. 127-142, doi: 10.1108/JEFAS-08-2019-0178.

Adams, C., Dawson, A. and Foureur, M. (2017), "Competing values framework: a useful tool to define the predominant culture in a maternity setting in Australia", *Women and Birth*, Vol. 30, pp. 107-113.

Adewale, J., Mohammed, A., Nasrun, M., Zien, R. and Azahari, R. (2018), "Does government support matter? Influence of organizational culture on sustainable construction among Malaysian contractors", *International Journal of Construction Management*, Vol. 18 No. 2, pp. 93-107.

Ahmed, U., Alzgool, M.D.H. and Shah, S.M.M. (2019), "The impact of green human resource practices on environmental sustainability", *Polish Journal of Management Studies*, Vol. 20 No. 1, pp. 9-18.

Alam, M.N., Masroor, I., Rokon, T.M. and Golam, S. (2021), "Blue technology for sustainability of small and medium fish firms: a study on small and medium fish firms of Bangladesh", *Environment, Development and Sustainability*, Vol. 23, pp. 635-646.

Amos, A. and Uniamikogbo, E. (2016), "Sustainability and triple bottom line: an overview of two interrelated concepts", *Igbinedion University Journal of Accounting*, Vol. 2, pp. 88-126.

Bamgbade, J.A., Kamaruddeen, A.M. and Nawi, M.N.M. (2017), "Towards environmental sustainability adoption in construction firms: an empirical analysis of market orientation and organizational innovativeness impacts", *Sustainable Cities and Society*, Vol. 32, pp. 486-495.

Baumgartner, R.J. (2009), "Organizational culture and leadership: preconditions for the development of a sustainable corporation", *Sustainable Development*, Vol. 17, pp. 102-113.

Berger, I., Cunningham, P.H. and Drumwright, M.E. (2007), "Mainstreaming corporate social responsibility: developing markets for virtue", *California Management Review*, Vol. 49 No. 4, pp. 132-160.

Braccini, A.M. and Margherita, E.G. (2019), "Exploring organizational sustainability of industry 4.0 under the triple bottom line: the case of manufacturing company", *Sustainability*, Vol. 11 No. 1, doi: 10.3390/su11010036.

Brammer, S. and Millington, A. (2008), "Does it pay to be different? An analysis of the relationship between corporate social and financial performance", *Strategic Management Journal*, Vol. 29 No. 12, pp. 1325-1343.

Calciolari, S., Prenestini, A. and Lega, F. (2018), "An organizational culture for all seasons? How cultural type dominance and strength influence different performance goals", *Public Management Review*, Vol. 20 No. 9, pp. 1400-1422.

Cameron, K.S. and Quinn, R.E. (1999), *Diagnosing and Changing Organizational Culture. Based on the Competing Values Framework*, John Wiley & Sons, San Francisco.

Cao, Z., Huo, B., Li, Y. and Zhao, X. (2015), "The impact of organizational culture on supply chain integration: a contingency and configuration approach", *Supply Chain Management: An International Journal*, Vol. 20 No. 1, pp. 24-41.

Chams, N. and García-Blandón, J. (2019), "On the importance of sustainable human resource management for the adoption of sustainable development goals", *Resources, Conservation and Recycling*, Vol. 141, pp. 109-122.

Chassé, S. and Courrent, J. (2018), "Linking owner-managers' personal sustainability behaviors and corporate practices in SMEs: the moderating roles of perceived advantages and environmental hostility", *Business Ethics: A European Review*, Vol. 27, pp. 127-143.

Chatterjee, A., Pereira, A. and Bates, R. (2018), "Impact of individual perception of organizational culture on the learning transfer environment", *International Journal of Training and Development*, Vol. 22 No. 1, pp. 15-33.

Cohen, M. and Ferreira, J. (2010), "Evaluation of collaborative strategies for ecotourism and recreational activities in natural parks of Rio de Janeiro", *Revista de Administración Pública*, Vol. 44 No. 55, pp. 1097-1123.

CONABIO (1998), "La diversidad biológica de México: estudio de país 1998", in *Comisión Nacional para el Conocimiento and Uso de la Biodiversidad*, Ediciones CONABIO, México.

da Rocha, D.A.S., Camargo, E., de Miranda, E.K., Parente, V. and Talita, K. (2018), "Organizational culture and sustainability in Brazilian electricity companies", *RAUSP Management Journal*, Vol. 53, pp. 488-506.

Demir, C., Ayyildiz, N. and Erturk, E. (2011), "Diagnosing the organizational culture of a Turkish pharmaceutical company based on the competing values framework", *Journal of Business Economics and Management*, Vol. 12 No. 1, pp. 197-217.

Deng, W., Feng, L., Zhao, X. and Lou, Y. (2021), "Effects of supply chain competition of firms' product sustainability strategy", *Journal of Cleaner Production*, doi: 10.1016/j.jclepro.2020.124061.

Di Stefano, G., Scrima, F. and Parry, E. (2019), "The effect of organizational culture on deviant behaviors in the workplace", *The International Journal of Human Resource Management*, Vol. 30 No. 17, pp. 2487-2503.

Dyck, B., Walker, K. and Caza, A. (2019), "Antecedents of sustainable organizing: a look at the relationship between organizational culture and the triple bottom line", *Journal of Cleaner Production*, Vol. 231, pp. 1235-1247.

Elliot, S. (2009), "Developing organizational capabilities in SMEs: enabling environmentally sustainable ICT", *BLED Proceedings*, 14–17 June, pp. 237-249.

Elnagar, A.K., Abdelkawi, A., Elshaer, I. and Salama, S. (2022), "The effect of organizational culture on financial performance: based on Cameron and Quinn model (CVF)", *Management and Economics Research Journal*, Vol. 4 No. 1, pp. 38-53.

Epler, M. (2002), *Ecotourism: Principles, Practices and Policies for Sustainability*, United Nations Environment Programme, 32.

Fok, L., Zee, S. and Tsai, Y. (2022), "Green practices and sustainability performance: the exploratory links of organizational culture and quality improvement practices", *Journal of Manufacturing Technology Management*, doi: 10.1108/JMTM-11-2021-0439.

Franceschelli, M.V., Santoro, G. and Candelo, E. (2018), "Business model innovation for sustainability: a food start-up case study", *British Food Journal*, Vol. 120 No. 10, pp. 2483-2494.

Fryxell, G.E. and Lo, C.W.H. (2003), "The influence of environmental knowledge and values on managerial behaviours on behalf of the environment: an empirical examination of managers in China", *Journal of Business Ethics*, Vol. 46, pp. 45-69.

Garavito, Y. and Rueda, F. (2021), "Innovation and patents as a business success factor", *Journal of Economics, Finance and Administrative Science*, Vol. 26 No. 51, pp. 143-159, doi: 10.1108/JEFAS-09-2019-0218.

Gebril, M. and Espino-Rodríguez, T.F. (2020), "The impact of the organizational culture on hotel outsourcing and sustainable performance an empirical application in the Egyptian hotel sector", *Sustainability*, Vol. 12, pp. 1-25.

Ghazieh, L. and Chebana, N. (2021), "The effectiveness of risk management system and firm performance in the European context", *Journal of Economics, Finance and Administrative Science*, Vol. 26 No. 52, pp. 182-196, doi: 10.1108/JEFAS-07-2019-0118.

Gong, M., Gao, Y., Koh, L., Sutcliffe, C. and Cullen, J. (2019), "The role of customer awareness in promoting firm sustainability and sustainable supply chain management", *International Journal of Production Economics*, Vol. 217, pp. 88-96.

Green, K.W., Toms, L.C. and Clark, J. (2015), "Impact of market orientation on environmental sustainability strategy", *Management Research Review*, Vol. 38 No. 2, pp. 217-238.

Griffiths, A. and Petrick, J.A. (2001), "Corporate architectures for sustainability", *International Journal of Operations and Production Management*, Vol. 21 No. 12, pp. 1573-1585.

Gulosino, C., Franceschini, L. and Hardman, P. (2016), "The influence of balance within the competing values framework and school academic success on teacher retention", *Journal of Organizational and Educational Leadership*, Vol. 2 No. 1, pp. 1-32.

Haffar, M., Al-karaghouli, W. and Ghoneim, A. (2014), "An empirical investigation of the influence of organizational culture on individual readiness for change in Syrian manufacturing organizations", *Journal of Organizational Change Management*, Vol. 27 No. 1, pp. 5-22.

Hartnell, C.A., Yi, A. and Kinicki, A. (2011), "Organizational culture and organizational effectiveness: a meta-analytic investigation of the competing values framework's theoretical suppositions", *Journal of Applied Psychology*, Vol. 96 No. 4, pp. 677-694.

Hofstede, G. (1998), "Attitudes, values and organizational culture: disentangling the concepts", *Organization Studies*, Vol. 19 No. 3, pp. 477-492.

Hur, S. (2022), "Organizational culture and public service motivation in executive agencies: mediating role of adhocracy culture", *Korean Comparative Government Review*, Vol. 26 No. 1, pp. 41-64.

Isensee, C., Teuteberg, F., Griese, K. and Topi, C. (2020), "The relationship between organizational culture, sustainability, and digitalization in SMEs: a systematic review", *Journal of Cleaner Production*, doi: 10.1016/j.jclepro.2020.122944.

Jones, R.A., Jimmieson, N.L. and Griffiths, A. (2005), "The impact of organizational culture and reshaping capabilities on change implementation success: the mediating role of readiness for change", *Journal of Management Studies*, Vol. 42 No. 2, pp. 359-384.

Khuntia, J., Saldanha, T.J.V., Mithas, S. and Sambamurthy, V. (2018), "Information technology and sustainability: evidence from an emerging economy", *Production and Operations Management Society*, Vol. 27 No. 4, pp. 756-773.

Laosirihongthong, T., Samaranayake, P., Verl, S. and Adebanjo, D. (2020), "Prioritization of sustainable supply chain practices with triple bottom line and organizational theories: industry and academic perspectives", *Production Planning and Control*, Vol. 31 No. 14, pp. 1207-1221.

Linnenluecke, M.K. and Griffiths, A. (2010), "Corporate sustainability and organizational culture", *Journal of World Business*, Vol. 45 No. 4, pp. 357-366.

Linnenluecke, M.K., Russell, S.V. and Griffiths, A. (2009), "Subcultures and sustainability practices: the impact on understanding corporate sustainability", *Business Strategy and the Environment*, Vol. 18 No. 7, pp. 432-452.

Loredo, E., López-Mielgo, N., Pineiro-Villaverde, G. and García-Álvarez, M.T. (2019), "Utilities: innovation and sustainability", *Sustainability*, Vol. 11, pp. 1-13.

Manrai, L.A., Manrai, A.k. and Friedeborn, S. (2020), "Environmental determinants of destination competitiveness and its Tourism Attractions-Basics-Context, A-B-C, indicators. A review, conceptual model and propositions", *Journal of Economics, Finance and Administrative Science*, Vol. 25 No. 50, pp. 425-449, doi: 10.1108/JEFAS-01-2018-0010.

Mercado, S.P. and García, H.P. (2007), "La responsabilidad social de empresas en el Valle de Toluca, México. Un estudio exploratorio", *Estudios Gerenciales*, Vol. 23 No. 102, pp. 119-135.

Moyano-Fuentes, J., Maqueira-Marín, J.M. and Bruque-Cámara, S. (2018), "Process innovation and environmental sustainability engagement: an application on technological firms", *Journal of Cleaner Production*, Vol. 171, pp. 844-856.

Ning, M., Lu, C., Cui, N. and Wang, T. (2021), "The influence of clan culture on business performance in Asian private-owned enterprises: the case of China", *Industrial Marketing Management*, Vol. 99, pp. 97-110.

OCAI (2010), *Report Public Administration*, OCAI.

Parker, R. and Bradley, L. (2000), "Organizational culture in the public sector: evidence from six organizations", *International Journal of Public Sector Management*, Vol. 13 No. 2, pp. 125-141.

Piwowar-Sulej, K. (2020), "Pro-environmental organizational culture: its essence and a concept for its operationalization", *Sustainability*, Vol. 12 No. 2, doi: 10.3390/su12104197.

Pozo, D., Maylí, Z. and Carrasco, O. (2005), "Aplicación del análisis discriminante a un conjunto de datos vinícolas mediante el paquete estadístico SPSS v10", *Tecnociencia*, Vol. 7 No. 1, pp. 7-21.

Quinn, R.E. and Spreitzer, G.M. (1991), "The psychometrics of the competing values culture instrument and an analysis of the impact of organization culture on quality of life", *Research in Organizational Change and Development*, Vol. 5, pp. 115-142.

Ratten, V. (2020), "Coronavirus (COVID-19) and entrepreneurship: changing life and work landscape", *Journal of Small Business and Entrepreneurship*, Vol. 32 No. 5, pp. 503-516.

Reilly, A. and Weirup, A. (2012), "Sustainability initiatives, social media activity, and organizational culture: an exploratory study", *Journal of Sustainability and Green Business*, Vol. 1 No. 1, pp. 1-15.

Reino, A., Roigas, K. and Müürsepp, M. (2020), "Connections between organizational culture and financial performance in Estonian service and production companies", *Baltic Journal of Management*, Vol. 15 No. 3, pp. 375-393.

Reyes-Santiago, M., Sánchez-Medina, P. and Díaz-Pichardo, R. (2019), "The influence of environmental dynamic capabilities on organizational and environmental performance of hotels: evidence from Mexico", *Journal of Cleaner Production*, Vol. 227, pp. 414-423.

Sánchez, Q.I. (2008), "Desarrollo de un instrumento de medida de la cultura organizativa: un modelo confirmatorio en los hoteles españoles", *Revista Europea de Dirección y Economía de la Empresa*, Vol. 19 No. 1, pp. 107-126.

Sánchez-Medina, P.S., Corbett, J. and Toledo-López, A. (2011), "Environmental innovation and sustainability in small handicraft businesses in Mexico", *Sustainability*, Vol. 3 No. 7, pp. 984-1002.

Schein, E.H. (1985), *Organizational Culture and Leadership: A Dynamic View*, Jossey Bass, San Francisco.

Seclen-Luna, J.P., Moya-Fernández. and Pereira, A. (2021), "Exploring the effects of innovation strategies and size on manufacturing firms' productivity and environmental impact", *Sustainability*, Vol. 13 No. 6, doi: 10.3390/su13063289.

Shin, C. and Park, J. (2019), "Classifying social enterprises with organizational culture, network and socioeconomic performance: latent profile analysis approach", *Journal of Open Innovation: Technology, Market, and Complexity*, Vol. 5, pp. 1-13.

Singh, G., Sharma, S., Sharma, R. and Dwivedi, Y.K. (2021), "Investigating environmental sustainability in small family-owned businesses: integration of religiosity, ethical judgment, and theory of planned behavior", *Technological Forecasting and Social Change*, Vol. 173, pp. 1-10.

Sugita, M. and Takahashi, T. (2015), "Influence of corporate culture on environmental management performance: an empirical study of Japanese firms", *Corporate Social Responsibility and Environmental Management*, Vol. 22 No. 3, pp. 182-192.

Wu, Z. and Pagell, M. (2011), "Balancing priorities: decision-making in sustainable supply chain management", *Journal of Operations Management*, Vol. 29, pp. 577-590.

Zammuto, R.F., Gifford, B. and Goodman, E.A. (2000), "Managerial ideologies, organization culture, and the outcomes of innovation", in Ashkanasy, N.M., Wilderoom, C.M. and Peterson, M.F. (Eds), *Handbook of Organizational Culture and Climate*, Sage, Thousand Oaks, pp. 261-278.

Zeb, A., Akbar, F., Hussain, K., Safi, A., Rabnawaz, M. and Zeb, F. (2021), "The competing value framework model of organizational culture, innovation and performance", *Business Process Management Journal*, Vol. 27 No. 2, pp. 658-683.

Corresponding author
Patricia S. Sánchez-Medina can be contacted at: psanchez@ipn.mx