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Effects of Sustainable Culture on CSR and Financial Performance in Manufacturing Industry

Efectos de la cultura sustentable en la Responsabilidad Social Empresarial y el desempeño financiero en la industria manufacturera

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Abstract: The relationship between culture and firm sustainability practices is widely recognized in the literature, but little is known about a sustainable culture, particularly in a context of corporate social responsibility, since sustainability in manufacturing firms involves managing physical aspects of production and transforming the organization's culture into a sustainable culture. However, the existing research in the literature has been mainly oriented towards the analysis of a culture that focuses on improving firm financial performance. The present study aims to fill this existing gap, and generate new knowledge of the relationship between these three constructs, distribute a questionnaire to a sample of 300 manufacturing firms in Mexico, and analyze the data through partial least squares structural equation modelling. The results showed that the sustainable culture has positive effects on social responsibility and firms financial performance, and corporate social responsibility has positive effects on financial performance of manufacturing firms. Thus, the results obtained allow us to conclude that manufacturing firms that have adopted a sustainable culture have not only improved their social responsibility, but also their financial performance. However, when corporate social responsibility acts as a mediating variable, it further improves firm financial performance.

Keywords: culture, sustainable culture, corporate social responsibility, financial performance, manufacturing industry.

Resumen: La relación entre la cultura y las prácticas de sustentabilidad empresarial es ampliamente reconocida en la literatura, pero se sabe poco acerca de una cultura sustentable, particularmente en un contexto de la responsabilidad social empresarial, ya que la sustentabilidad en las empresas manufactureras implica gestionar los aspectos físicos de la producción y transformar la cultura de la organización en una cultura sustentable. Sin embargo, la investigación existente en la literatura se ha orientado principalmente en el análisis de una cultura que se enfoca en mejorar el rendimiento financiero de las empresas. El presente estudio tiene como objetivo llenar este vacío existente, y generar nuevo conocimiento de la relación entre estos tres constructos, distribuyendo un cuestionario a una muestra de 300 empresas manufactureras de México, y analizando los datos mediante los modelos de ecuaciones estructurales basados en mínimos cuadrados parciales. Los resultados obtenidos sugieren que la cultura sustentable tiene efectos positivos en la responsabilidad social y en el rendimiento financiero de las empresas, y la responsabilidad social empresarial tiene efectos positivos en el rendimiento financiero de las empresas manufactureras. Así, los resultados obtenidos permiten concluir que las empresas manufactureras que han adoptado una cultura sustentable no solamente han mejorado su responsabilidad social, sino también su rendimiento financiero. Sin embargo, cuando la responsabilidad social empresarial actúa como una variable mediadora, mejora aún más el rendimiento financiero de las empresas.

Palabras clave: cultura, cultura sustentable, responsabilidad social empresarial, rendimiento financiero, industria manufacturera.

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Introduction

Sustainable culture (SC) is considered as an essential element for developing nations, society and the economy (Abbas and Dogan, 2022). However, the productive activities of manufacturing companies generate significant damage to the environment and sustainability, especially in the deterioration of natural resources and increased pollution (Ayayi and Wijesiri, 2022). In this regard, the United Nations (2020) urged companies to generate more sustainable productive operations, as this can improve their reputation and financial performance (FP) (Liu and Lin, 2020). In this sense, SC and Corporate Social Responsibility (CSR) are considered essential sustainable practices applied by manufacturing industry to be more environmentally friendly and socially responsible (Ayayi and Wijesiri, 2022; Pan *et al.*, 2022).

Although the scientific and academic community mentions the essence of SC to improve business sustainability, and SC is one of the most important intangible assets and drivers of competitiveness for manufacturing companies (Streimikiene *et al.*, 2021), the effects of SC on CSR (Isensee *et al.*, 2022), and the effects of SC on the FP of companies are not well known (Srisathan *et al.*, 2020), for which more empirical evidence on the effects of SC on CSR is needed and in the FP (Pan *et al.*, 2022). For this reason, Schönborn *et al.* (2019) recommend conducting studies on the effects of SC on CSR and FP in manufacturing companies.

In this sense, the aim of this study is to analyze and discuss the effects of SC on both CSR and FP, and how SC acts as a mediating variable between CSR and FP. To achieve this objective, an empirical study was conducted in manufacturing companies in Mexico, using a sample of 300 observations and estimating the research model using Structural Equation Modeling of Partial Least Squares (PLS-SEM), with the support of SmartPLS 4.0 software (Ringle *et al.*, 2022). The manufacturing industry in Mexico is essential for two reasons, firstly, because it is the most incompatible industry regarding the care of the environment and sustainability (Scur *et al.*, 2019) and, secondly, it is the industry that generates the largest contribution to the national GDP (INEGI, 2020).

Following the recommendations of Ketprapakorn and Kantabutra (2022), Chen (2022), Pan *et al.* (2022) and Assoratgoon and Kantabutra (2023) to carry out studies on the analysis of CSR impacts and company performance, the main contribution of this study is to provide cutting-edge knowledge of SC with an impact on CSR, and to integrate it into a coherent CSR framework in manufacturing companies. Therefore, the effects of SC on CSR and FP can be considered inconclusive and open to debate, so that, to complement and expand the limited knowledge existing in the literature this study has as a research question: What are the effects of SC on CSR and FP in manufacturing companies?

Materials and methods

There are several theories in the literature that have been used to analyze strong culture (Pan *et al.*, 2022), one of the most frequently used theories to analyze the individual behavior of people is Skinner´s Operant Conditioning Theory (OCT) (Skinner, 1948), since Skinner considered that the best way to study human behavior is by analyzing their reasoning, because this is the cause and consequences of their actions (Skinner, 1948). In addition, Skinner (1948) considered that OCT can be used to analyze complex behaviors. Thus, manufacturing companies generally reward compliant staff and promote a sustainable and environmentally friendly culture from a social responsibility perspective (Pan *et al.*, 2022). This type of behavior of manufacturing firms' personnel is part of their personality, and commonly tends to strengthen SC and generates more CSR (Manzoor *et al.*, 2021).

Sustainable culture and corporate social responsibility

There are several definitions of SC in the literature, but one of the most recent and used is Yaselitas *et al.* (2022, p. 2), who consider that SC can be defined as "a set of values widely accepted by the staff of a company that involve beliefs, standards, practices and perspectives that guide all staff to behave ecologically", and commonly

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acts as an environmentally friendly culture oriented towards sustainability, and is based on the implementation of SC in an ecological framework to achieve environmental balance (Lee *et al.*, 2022). Thus, SC is reflected in how the personnel of a manufacturing company perform and behave within the company, and how their actions affect the functioning of the company (Satyendra, 2020; Yesiltas *et al*., 2022), particularly the interaction between the behavior of business personnel and CSR (Lakshmi and Shree, 2020).

Although there is empirical evidence showing that SC significantly improves CSR (Miska *et al.*, 2018), there are also other studies showing a negative relationship (e.g. Ioannou and Serafeim, 2012; Szöcs *et al*., 2016), so the relationship between SC and CSR can be considered inconclusive and open to debate (Miska *et al.*, 2018). Also, the differences in the results obtained can be explained by the different conceptualizations of CSR, since various studies have considered only one of the three factors that make up CSR, such as only social, economic or environmental aspects (Weerts *et al.*, 2018), for which it is important to consider the three factors of CSR (Schönborn *et al.*, 2019).

Khan *et al.* (2022) found that SC can serve as a productive means to regulate the attitude of employees, through the development of activities considered essential to achieve greater success and CSR. Beksultanova *et al.* (2022) considered that SC motivates the company's staff to act in an environmentally friendly way, as well as to follow ideas of social responsibility and ecological practices. Aggarwal and Agarwala (2022) found that SC helps companies improve their CSR, through actions such as minimizing printing, turning off lights in workspaces when not in use, and using recyclable items. Thus, considering the information presented above, it is possible to propose the following research hypothesis:

H1 The higher the level of sustainable culture, the higher the level of corporate social responsibility.

Sustainable culture and financial development

SC commonly sets out how the personnel of a company behave and perform within the company, and how their actions affect the functioning of the company (Satyendra, 2020; Yesiltas *et al.*, 2022), especially the individual behavior that can generate better results in business (Cherian *et al.*, 2021), including an increase in the FP (Schönborn *et al.*, 2019). In addition, the bibliography states that SC should be developed in all areas, so that manufacturing companies have more chances to achieve better results (Kosiciarova *et al.*, 2021), including a higher FP (Pinzone *et al.*, 2018), since SC is considered by the scientific and academic community as one of the main factors to achieve organizational change (Frost *et al.*, 2020).

In this context, the commitment to change by the staff of manufacturing companies, especially managers, will allow the development of a positive SC that can be extended to the whole company (Chen, 2022), which could generate the opportunity to learn about the implementation of the activities involved in SC (Schönborn *et al.*, 2019), leading not only to a significant development in the human capital of companies, but also to significant positive effects in the FP in terms of productivity, quality and innovation (Pinzone *et al.*, 2018). In addition, manufacturing companies that have adopted a SC are more likely to improve investors' FP (Schaltegger and Burritt, 2018; Schönborn *et al.*, 2019).

Little is known about the integration of SC into sustainable programs and FP (Isensee *et al.*, 2020; Srisathan *et al.*, 2020). Similarly, Miskha *et al.* (2018, p. 263) state that "research in this specific area is fraught with significant challenges, which limits the full theoretical understanding of how cultural features can influence sustainability." Thus, SC can help companies to develop and implement sustainable strategies proactively, thereby improving existing processes and products (Schaltegger and Burritt, 2018). In addition, SC can change the future competitive scenario of manufacturing companies, through the development of socially more sustainable innovation activities in terms of new products or services,

business models and markets (Schaltegger and Burritt, 2018), which could result in an increase in FP (Schönborn *et al.*, 2019). Thus, considering the information presented, it is possible to raise the following research hypothesis:

H2 The higher the sustainable culture level, the higher the financial performance level.

Mediating effects of corporate social responsibility on the relationship between sustainable culture and financial performance

It is common to find in the literature that companies must create an individuality that allows them to distinguish them from their main competitors in the minds of customers and consumers (Kumari *et al.*, 2021a). Several studies, such as Abbas (2020), China (2021) and Viererbl and Koch (2022), mention that CSR allows manufacturing companies to create an individuality, since the main objective of CSR is for companies to devote part of their economic benefits to improving society (Pan *et al.*, 2022). CSR can therefore not only be economically, socially and environmentally beneficial for society (Abbas and Dogan, 2022), but can also have an individual benefit, since CSR affects social operations as well as the DF of manufacturing companies (Herrera and Heras-Rosas, 2020).

In addition, CSR applied by manufacturing companies can be carried out geographically in the communities in which they are located, generally and culturally (China, 2021), which usually include different ethical practices that allow manufacturing companies to obtain more FP (Pan *et al.*, 2022). In addition, CSR helps manufacturing companies to generate some purchasing stability for their products, for those customers who have deep-rooted moral and ethical beliefs (Kim, 2022). In this sense, CSR can help manufacturing companies build a high business reputation, due to increased customer and consumer loyalty (Hwang *et al.*, 2022), which can substantially improve relationships with their customers, suppliers and employees through an increase in FP (Kumari *et al.*, 2021b).

In addition, CSR can not only generate a social advantage for economic value creation, competitive spirit, and creativity (Al-Swidi *et al.*, 2021), but can also help company staff to work together to benefit the company itself and society (China, 2021). Freitas *et al.* (2020) linked CSR to sustainable activities carried out by company staff and found that effective sustainable activities by staff strengthen both CSR and the economic performance of companies, in particular CSR significantly improves not only staff teamwork, but also the FP of manufacturing companies *(Pan et al.*, 2022). Therefore, considering the information presented above, it is possible to propose the following research hypothesis:

H3 The higher the CSR level, the higher the financial performance.

The implementation of CSR is generally considered in the literature as one of the optimal alternatives, both to improve relations with stakeholders and to create competitive advantages that allow increasing FP (Chen, 2022). This means that manufacturing companies have obtained a better FP with CSR, for which they are willing to make the necessary changes in their SC and take full advantage of the opportunities offered by the market (Kim and Kim, 2017). In this sense, manufacturing companies can take advantage of their SC in CSR practices to improve cultural values (Elbaz and Iddik, 2020), transformational leadership (Cicea *et al.*, 2022), mental states, attitudes of employees and leaders (Isensee *et al.*, 2020), and social factors (Cicea *et al.*, 2022); on the other hand, they can provide continuous learning opportunities for managers and employees, and can develop more human capital with positive effects on the FP (Pinzone*et al.*, 222222). (2018).

In addition, SC plays a key role in determining the commitment in CSR implementation (Liu and Lin, 2020), as companies that have implemented CSR generally have a direct and indirect FP, both within and outside the organization (Ahmed *et al.*, 2020). According *to* Latif *et al.* (2022), manufacturing companies that have incorporated CSR prac-

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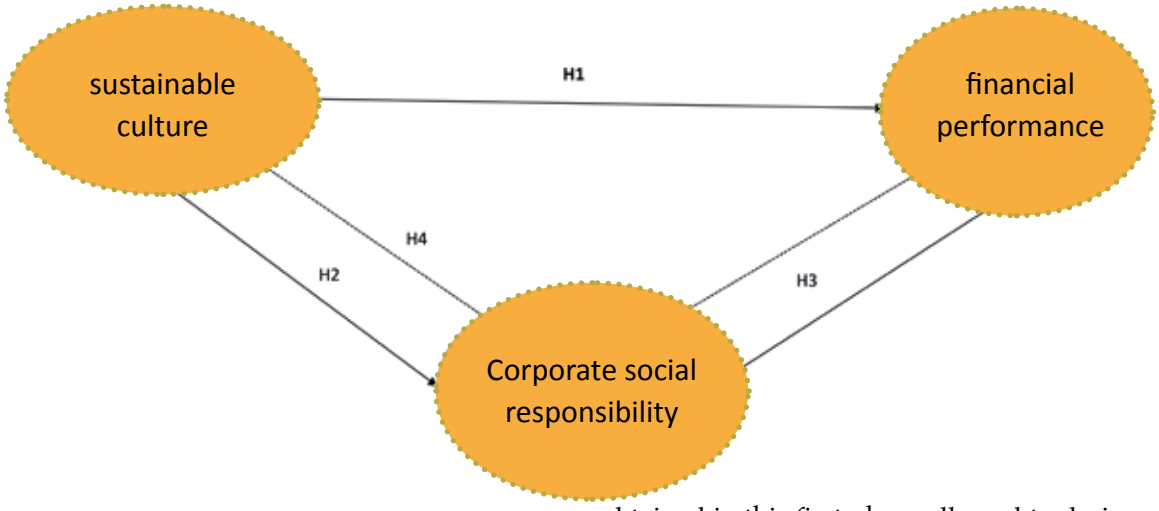
tices have employees and workers with attitudes supportive of the environment and sustainability, which contributes to the well-being of staff and organization (Malik *et al.*, 2021). Al-Suwaidi *et al.* (2021) considered that CSR adopted by companies also educates and trains staff, and changes their behavior within the organization, for which CSR improves the relationship between CS and DF of companies (Chen, 2022).

Additionally, when manufacturing companies implement CSR practices, their employees and workers are generally considered distinctive, respectable and a source of pride (Kumari *et al.*, 2021a), for which the inclusion of all personnel in SC strengthens the commitment of manufacturing companies to achieve the goals of social and financial responsibility (Matsuo and Aihara, 2021). As a result, more companies are adopting CSR as a business strategy (Latif *et al.*, 2022), allowing organizations to improve the relationship between SC and FP (Farid *et al.*, 2019), which allows establishing that CSR mediates and improves the relationship between SC and FP (Chen, 2022). Thus, considering the information presented above, the following research hypothesis is proposed:

H4 CSR mediates the relationship between sustainable culture and financial performance.

Figure 1 shows the three hypotheses raised in the research model.

Figure 1
Research Model



To answer the hypotheses raised in the research model, an empirical study was conducted in manufacturing companies in Mexico, using the business directory of the Business Information System of Mexico (SIEM) for the state of Aguascalientes in 2020 as a reference framework, which had a record of 1350 companies with more than ten workers. In addition, a "Business Panel" was conducted in which five automotive entrepreneurs participated, two representatives of government agencies related to financial support to companies, and three academics from the area of innovation to whom the survey was applied for its analysis and discussion. The results obtained in this first phase allowed to design a survey to collect information, which was applied to a pilot sample of ten firms in the manufacturing industry, making small adjustments in writing, appearance, and spelling. Pilot studies are essential to ensure validity when surveys are self-administered or contain self-developed scales (Hair *et al.*, 2019).

In addition, a survey was designed and given to the managers of the companies, who in turn trusted their staff to respond, and was applied to a sample of 300 manufacturing companies selected by simple random sampling; the survey was applied from February to May 2020. In addition,

this work is a quantitative study with a survey approach to examine the effects of SC on CSR and FP, and PLS-SEM analyzes in SmartPLS 4.0 software (Ringle *et al.*, 2022) were used to observe the effect of the independent variable as a predictor factor on the dependent variable (Im *et al.*, 2022). After considering the statistical equation proposed by Murray and Larry (2018), to reduce the sampling error and have a higher quality of the data, in this study the probabilistic size of the sample was calculated with 95 % confidentiality and a maximum error of 5 %, obtaining a sample of 284 companies. To demonstrate that it meets the desired statistical power of the sample, data were calculated through GPower, where the size of the sample N is calculated as a function of the power level 1 - β, significance level α, and the size of the population effect to detect, obtaining a sample of 300 manufacturing companies.

As a previous step to the reliability and validity analysis of the measurement scales used in this study, the measurement scales for SC, CSR and FP were defined. In this sense, the scale developed by Lumpkin and Dess (2001) was used to measure the SC, who considered that this variable can be measured through seven items. Regarding the FP measurement, the scale developed by Leonidou *et al.* (2013) was used, who established that this variable can be measured through seven items. Finally, to measure CSR the three most cited practices in the literature were considered, and the scale of Alvarado and Schlesinger (2008) was used, which considers that social responsibility is measured through six items; environmental responsibility is measured with six items and economic responsibility through seven items. All items of the scales were measured through a 5-Likert scale.

The reliability and validity of the measurement scales of SC, FP and CSR was performed using Cronbach's alpha, CRI, Dijkstra-Henseler rho and AVE (Hair *et al.*, 2019). Cronbach's alpha, CRI and Rho de Dijkstra-Henseler exceeded the recommended value of 0.70 (Hair *et al.*, 2019); while the AVE values were higher than the recommended value of 0.50 (Hair *et al.*, 2019), indicating, on the one hand, that the items effectively measure each of their variables and, on the other hand, the existence of reliability of the data obtained.

Discriminant validity was evaluated by the most important test in the literature of PLS-SEM: Fornell and Larcker criteria and heterotrait-monotrait (HTMT) relationship (Henseler, 2018). The results obtained are shown in Table 1 and indicate that Cronbach's alpha has values ranging from 0.818 to 0.943, CRI has values ranging from 0.868 to 0.961, and Dijkstra-Henseler rho has values ranging from 0.819 to 0.954, indicating that they are good values and are above the value 0.70, and AVE has values ranging from 0.525 to 0.744, which are higher than the value 0.50 recommended by Hair *et al.* (2019). The results obtained in this study show that HTMT values range between 0.150 and 0.434, which are higher than the recommended value of 0.08, indicating the existence of discriminant validity of the measurement scales of SC, FP and CSR.

Table 1
Reliability, validity and discriminant validity

Group A. Reliability and validity				
Variables	**Cronbach's alpha**	**CRI**	**Dijkstra-Henseler rho**	**AVE**
Sustainable culture	0.943	0.953	0.954	0.744
Financial performance	0.909	0.927	0.918	0.647
Economic Responsibility	0.856	0.891	0.865	0.564
Environmental responsibility	0.924	0.961	0.930	0.727
Social responsibility	0.818	0.868	0.819	0.524

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Variables	Group B. Fornell-Larcker criterion					Heterotrait-monotrait (HTMT) ratio			
	1	2	3	4	5	1	2	3	4
1. Sustainable culture	0.862								
Financial Performance	0.288	0.804				0.298			
3. Economic Responsibility	0.339	0.204	0.738			0.371	0.231		
4. Environmental Responsibility	0.343	0.137	0.310	0.853		0.359	0.150	0.344	
5. Social responsibility	0.299	0.206	0.364	0.252	0.724	0.337	0.244	0.434	0.285

Note. CRI: Composite reliability index; AVE: mean variance extracted. PANEL B: Fornell-Larcker criterion: Diagonal elements (bold) are the square root of the variance shared between constructs and their measurements (AVE). For discriminant validity, diagonal elements must be larger than diagonal elements.

Results

To respond to the hypotheses raised in the research model of this study, the statistical technique PLS-SEM was used with the software SmartPLS 4.0 (Ringle *et al.*, 2022), since PLS-SEM is generally used in theories that are poorly developed (Hair *et al.*, 2019), in various disciplines such as management (Cepeda-Carrión *et al.*, 2019), and human resources management (Ringle*et al.*, 2020). In addition, the use of PLS-SEM is essential, not only because it facilitates the explanation of the measurement error of the variables, which allows this method to be better than the multiple linear regression (Hair *et al.*, 2019), but also when the objective sought in the application of the structural equation model is to identify the sources of competitive advantage and the investigation of success factors (Sarstedt *et al.*, 2021). Table 2 presents in more detail the results obtained from the implementation of the PLS-SEM.

Table 2
Structural Model

Hypothesis	Standardized coefficient (t value; p value)	95% confidence interval	f^2	Support
SUC → FPE (H1)	0.294 (4.789, 0.000)	[0.173 - 0.406]	0.150	Yes
SUC → RSE (H2)	0.466 (10.287, 0.000)	[0.375 - 0.553]	0.275	Yes
RSE → FPE (H3)	0.109 (1.639, 0.098)	[0.002-0.222]	0.019	Yes
Indirect effects				
SUC → RSE → FPE (H4)	0,323 (8,828; 0,000)	[0,251 - 0,395]	0,182	Sí
Endogenous variable	**R^2 adjusted**	**Model Adjustment**	**Value**	**HI99**
		SRMR	0,042	0,059
FPE	0,195	dULS	1,072	1,416
RSE	0,276	dG	0,484	0,615
		NFI	0,786	

Note. SUC: Sustainable Culture; SPE: Sustainable Performance; CSR: Corporate Social Responsibility. One-row t-values and parenthesized p-values; 95% confidence intervals for starting (based on n = 5000 subsamples) RMUR: residual square-normalized mean square; dULS: unweighted least squares differences; dG: geodesic difference; NFI: normal fit index; HI99: bootstrap-based 99% percentiles.

Table 2 shows that the results obtained show acceptable statistical levels, with an adjusted R2 greater than 0.10, a value of SRMR. (0.042) less than the value 0.08, the values obtained from the geodetic difference (dG) and the difference of unweighted least squares (dULS) (0.484 and 1.072, respectively), lower than the values of HI99 (Sarstedt *et al.*, 2019; Hair *et al.* 2019), which allows to verify the significance of the research model (Hair *et al*., 2020). Additionally, the results obtained from PLS-SEM allow establishing that SC has significant positive effects in the FP of manufacturing companies (0.294; p-value 0.000), which provides empirical evidence in favor of the H1 hypothesis, and allows establishing the rejection of the possible absence of the phenomenon, thus indicating the possible presence of the phenomenon.

Likewise, the results obtained allow to verify that CS has significant positive effects on CSR in manufacturing companies (0.466; p-value 0.000), which provide empirical evidence in favor of the H2 hypothesis, and to establish the rejection of the possible absence of the phenomenon, therefore indicating the possible presence of the phenomenon. In addition, the results obtained verify that CSR has a positive impact on the FP of manufacturing companies (0.109; p-value 0.098), which provides empirical evidence in favor of the H3 hypothesis, which allows establishing the rejection of the possible absence of the phenomenon, thereby showing the possible presence of the phenomenon. Finally, Table 2 shows that the mediating effect generated by CSR (0.323; p-value 0.000) is positive in the relationship between SC and FP, which provides positive empirical evidence in favor of the H4 hypothesis and allows establishing that CSR can be considered as a variable that explains the relationship between SC and FP of manufacturing companies in Mexico.

Conclusions and discussion

Conclusiones

The results obtained in this empirical study have several conclusions. On the one hand, the research model on the effects of SC on CSR and FP of manufacturing companies shows that depending on the use and implementation of SC oriented to CSR in manufacturing companies there will be more opportunities to reach a higher level of market ranking and a better FP. On the other hand, this research model offers a holistic view of CSR by including the three most cited practices in the literature (economic, social and environmental). In addition, the effects of SC on CSR and FP have been poorly studied by researchers and academics, compared with studies that focus on its conceptualization. Therefore, it is possible to conclude that this study contributes to fill the theoretical gap in the literature by proposing a model based on a theory that integrates SC and FP activities, mediated by the three CSR practices.

Finally, although the work that focuses on the analysis and discussion of the effects of SC on CSR and FP in manufacturing companies are relatively scarce, it is also true that it is a topic that has recently attracted the attention of various researchers and academics, which allows concluding that the relationship between SC, CSR and FP is a topic open to discussion (Schönborn *et al.*, 2019). Therefore, it is possible to conclude that this study provides empirical evidence on the effects of SC on CSR and FP in manufacturing companies in a country with an emerging economy, as is the case of Mexico, which represents a significant percentage of the growth and development of the economy and society of the country.

Discussion

The results obtained support the H1 hypothesis (the existence of a relationship between SC and FP in manufacturing companies in Mexico), and are in line with those obtained by Khan *et al.* (2022), Beksultanova *et al.* (2022) and Aggarwal and Agarwala (2022), who found that SC has positive effects on FP. One of the possible reasons for this positive effect is that SC is currently considered one of the best ways for manufacturing companies anywhere in the world to develop critical environmental care capabilities, which affect not only the flexibility strategy, but also the FP of the organization, through the creation of a SC stronger within the company, and more visible outside the organization.

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The significant positive effect of SC on CSR of manufacturing companies in Mexico supports the H2 hypothesis, and is consistent with the results obtained by Pinzone *et al.* (2018), Schaltegger and Burritt (2018), and Schönborn *et al.* (2019), which found that SC substantially improves CSR. The main reason for this positive effect is that a SC motivates the company's staff to adopt a more responsible behavior with society, since the SC promotes a social and environmental behavior of environment awareness among the employees and workers of the organization, which translates into economic benefits not only for the society of the community where the manufacturing company is located, but also for the organization itself through the sale of more environmentally friendly products.

The positive effect of CSR on FP of manufacturing companies in Mexico supports the H3 hypothesis, and is in line with the results obtained by Al-Swidi *et al.* (2021), China (2021) and Pan *et al.* (2022), who found that CSR has positive effects on FP. One of the main reasons for this positive effect is that CSR not only acts as a self-regulated business model in which personal values generally act as catalysts for CSR practices, but also because the implementation of CSR allows the staff of manufacturing companies to be more likely to participate or demonstrate cooperation behaviors with the society and the environment, generating an increase in the financial participation of organizations.

Furthermore, this study provides empirical evidence that supports the H4 hypothesis (the mediating effect of CSR between SC and FP in manufacturing companies in Mexico), and is consistent with the results found by Matsuo and Aihara (2021), Chen (2022), and Latif *et al.* (2022), which indicate that CSR acts as an explanatory variable of the relationship between SC and FP. One of the main reasons for this positive effect is that the values, beliefs and attitudes of company managers and staff play an essential role in the adoption of CSR practices, which, in turn, will significantly influence the development of SC through the transmission of shared values, as well as the achievement of better economic and financial practices of manufacturing companies.

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