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Corporate Social Responsibility in Family-Owned SMEs: Examining Influential Factors Through the SGE21 Standard

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Abstract This study investigates the influence of the factors established by the SGE21 standard in family businesses in a Latin American country, specifically Mexico. Corporate social responsibility (CSR) is a critical issue for companies, which increasingly adopt social responsibility models for ethical, philanthropic, stakeholder-driven, or competitive reasons. However, few studies focus on small and medium-sized family businesses (family SMEs) in this context. This research has two main objectives. First, it seeks to determine whether factors such as corporate governance, customers, suppliers, employees, the social and natural environment, investors, competition, public administration, and company age influence the CSR practices of family SMEs. Second, it assesses the level of CSR adoption in these businesses according to the Ethical and Socially Responsible Management System (SGE21 standard). The study analyzes data from 65 family businesses applying four types of analysis: exploratory factor, descriptive, correlational, and linear regression, employing the Ordinary Least Squares (OLS) method. The results indicate that most family businesses exhibit an intermediate level of adoption of the SGE21 standard indicators. The key factors influencing CSR in family SMEs are corporate governance, suppliers, employees, and the social-natural environment. This research contributes to the existing literature by providing insights into CSR from the perspective of Latin American family businesses. It highlights that, even without prior knowledge of the variables and indicators established by the SGE21 standard, these businesses actively engage with CSR indicators due to their inherent commitment to social responsibility. Furthermore, the findings underscore the adaptability of the SGE21 standard for implementation in Latin America.

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La responsabilidad social de las empresas familiares: examinando los factores de influencia a través de la norma SGE21

Resumen Este estudio investiga la influencia de los factores establecidos por la norma SGE21 en las empresas familiares de un país latinoamericano como México. La responsabilidad social empresarial (RSE) es un tema trascendental para las empresas, que cada vez más adoptan modelos de responsabilidad social por razones éticas, filantrópicas, de presión de grupos de interés o competitivas. Sin embargo, pocos estudios se centran en las pequeñas y medianas empresas familiares en este contexto. Esta investigación tiene dos objetivos. Determinar si factores como el gobierno corporativo, los clientes, los proveedores, los empleados, el entorno social y natural, los inversores, la competencia, la administración pública y la edad de la empresa influyen en la responsabilidad social corporativa de las pequeñas y medianas empresas familiares. y evaluar el nivel de adopción de la responsabilidad social corporativa en estas empresas familiares, según la visión del Sistema de Gestión Ética y Socialmente Responsable (norma SGE21). Utilizando datos de 65 empresas familiares, aplican-

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do cuatro tipos de análisis: factorial exploratorio, descriptivo, correlacional y de regresión lineal, aplicando el método de mínimos cuadrados ordinarios. Los resultados revelaron que la mayoría de las empresas familiares tienen un grado intermedio de adopción de los indicadores establecidos por la norma SGE21. Los factores que influyen en la RSE de las pequeñas y medianas empresas familiares son el gobierno corporativo, los proveedores, los empleados y el entorno socio-natural. Esta investigación contribuye a la literatura previa desde la perspectiva de las empresas familiares latinoamericanas al revelar la importancia de la responsabilidad social corporativa. Incluso sin conocimiento previo de las variables e indicadores establecidos por la norma SGE21, estas empresas atienden a estos indicadores debido a su compromiso de ser socialmente responsables. Además, la investigación demostró la flexibilidad de la norma SGE21 para su adopción en América Latina.

1. Introduction

Social responsibility has acquired a fundamental role in society, evolving from a fashion to a necessity for companies. **This shift responds to the growing pressure from stakeholders, who no longer seek only quality products or services but also demand ethical, sustainable, and transparent behavior** (Zinkann, 2024). **Further, it** also constitutes a competitive advantage strategy and is, therefore, a fundamental element for achieving business objectives (Nahar & Khurana, 2023) established in social, economic, and environmental aspects. Stakeholders have increased their level of demand for all sizes, sectors, and types of companies, hence obligating such enterprises to meet stakeholder needs without neglecting their objectives (Diéguez-Soto et al., 2024; Lyulyov et al., 2023; Gabler et al., 2023; Sun, 2021). **This balance requires comprehensive management, allowing companies to operate profitably without disregarding their responsibilities toward the social and environmental spheres (**Gabler et al., 2023; Martín & Aroca, 2016; Risi et al., 2023).

Family businesses (FBs) represent the most common type of organization globally (Arzubiaga et al., 2019; Rovelli et al., 2022). **Historically, these organizations have been more connected to their communities and social well-being, which enables them to perform better in implementing social responsibility practices** (Cardona et al., 2024; Patuelli et al., 2022; Stock et al., 2024; Aparicio & Iturralde, 2023), and tend to have more remarkable performance in social responsibility practices (Aragon & Iturrioz-Landart, 2020, Battisti et al., 2023; Rivo-López et al., 2021). **This commitment aligns with their internal values and the desire to create a positive impact that transcends generations, explaining why they often lead in social responsibility matters.**

In the business world, those who advise companies, managers, or human resources administrators may consider that the methodologies applicable to large companies can be adopted by micro, small, and medium-sized companies (MSMEs). So, each company must adopt social responsibility strategies according to their reality, concerns, and particularities (Aparicio & Iturralde, 2023).

Companies can adopt various social responsibility (SR) methodologies, such as the United Nations Global Compact, promoting values about human rights, labor relations, the environment, and corruption (De Oliveira & Smith, 2012). Also, the Green Book of the Global Reporting Initiative (GRI) establishes a guide with indicators to measure CSR and present sustainability reports (GRI, 2024). In Mexico, it is used precisely to present SR reports (Ríos-Manríquez & Sánchez, 2020). Other international standards issued by the International Organization for Standardization (ISO) include the ISO 26000 standards. The SGE21 standard, which originated in Europe, certifies ethical and socially responsible management systems voluntarily. It evaluates the integration of social, environmental, and governance aspects (Forética, 2017).

The globally accepted ISO 26000 and the SGE21 are international standards for SR that MSMEs companies can adopt. These standards are free and universally recognized, making them suitable for all types of companies, sectors, sizes, or lines of business. The SGE21 standard certifies socially responsible companies, adding to its credibility.

In this research, the SGE21 standard is chosen due to its flexibility in adapting to a globalized world and its adaptability to all types of companies, such as FBs. Its approach aims to voluntarily address social, environmental, and commercial aspects, as well as its relationship with the various interest groups (Forética, 2017).

Despite the growing attention toward social responsibility in companies, **the focus on** FBs **particularly SMEs, remains limited.** Most studies focus on large corporations, leaving a knowledge gap regarding SR practices in family SMEs (Alayo et al., 2023; Stock et al., 2024; Martín & Aroca, 2016). **This gap is particularly significant in the Latin American context**, where FBs represent 90% of the business landscape, with Mexico ranking as the fifth country globally with the highest number of FBs, and the most significant number in Latin America (Kurowska-Pysz et al., 2024; Pallares, 2023; Donoso, 2023). This reality **underscores the importance of understanding how regional** FBs **can adopt and benefit from corpo-**

rate social responsibility practices.

Therefore, this research has two aims. The first is to determine if the factors of corporate governance, customers, suppliers, people who make up the organization, social environment, natural environment, investors, competitors, public administrations, and company age influence the CSR in family SMEs. The second determines the level of adoption of the Social Responsibility of family SMEs (CSRFSME), from the vision that is part of the SGE21 standard and the company´s characterization (as is age).

The present investigation is organized into five sections: the introduction establishes the justification and objectives of the research; the literature review supports the importance of studying CSR in Family SMEs; the methodology; analysis and results, followed by the discussion and conclusions.

2. Theoretical Background and Research Hypotheses

This section reviews the literature on the importance of social responsibility in companies, CSR, and FBs and on the feasibility of adopting the SGE21 standard, establishing the variables and research hypotheses.

2.1. Corporate social responsibility and standards at the service of the company

CSR is a company's commitment to ethical and sustainable practices driven by philanthropy, stakeholder pressure, or competitive strategy. Under ethical principles, CSR typically focuses on three core areas: social, economic, and environmental. Although these terms are clear, they can be interpreted ambiguously, resulting in international organizations, individual countries, and researchers have developing various methodologies to establish clear standards for companies pursuing social responsibility. Ríos-Manríquez & Sánchez (2020) emphasize the importance of organizations that support companies by offering "proposals for socially responsible actions, technical standards, and proposed methodologies [...] seeking to establish SR regulations" (p.37).

Numerous tools and methodologies exist for companies to adopt, but this research only aims to explore some of them in detail. However, it is essential to note that CSR methodological frameworks have evolved, mainly through the work of international organizations, resulting in global standards such as the GRI and ISO 26000. GRI offers a comprehensive guide with indicators for measuring CSR and producing sustainability reports (GRI, 2024). Additionally, ISO 26000, developed through global consensus, serves as a guide for all organizations, covering seven core subjects: organizational governance, human rights, labor practices, the environment, fair operating practices, consumer affairs, and community involvement (ISO Standard, 2010).

The Ethical and Socially Responsible Management System, represented by the SGE21 standard issued by Forética in Spain, is particularly relevant to this research. SGE21 is based on the ISO 26000 framework and is accepted in Europe and Latin America, characterized by its focus on three dimensions: economic, social, and environmental. The SGE21 standard is notable for its adaptability, as it can be adopted by companies of any size, sector, or type, and it is compatible with other systems, such as quality management and environmental protection. Additionally, it offers a CSR certification following a voluntary evaluation process (Forética, 2017, 2008). SGE21 is structured into nine management areas, each defining the indicators companies must meet to demonstrate CSR implementation. These areas include corporate governance, customers, suppliers, employees, the social environment, the natural environment, investors, competitors, and public administrations (Forética, 2017, 2008). This flexibility makes the SGE21 standard particularly suitable for family businesses.

The literature analyzes the approaches of CSR standard models, such as SGE21 and ISO 26000 (Carrillo et al., 2023), with a focus on environmental, social, and governance variables (Arteaga & Basco, 2023; Torres et al., 2023). It also delves into the SGE21 standard, considering its variables for integrating strategy into CSR management (Ruiviejo & Sotomayor, 2016). Additionally, it explores the adoption of the SGE21 standard in Mexican companies (Ríos-Manríquez et al., 2021; Ríos-Manríquez & Sánchez, 2020), proposing models of CSR for Mexican SMEs.

2.2. Family business

FBs intersect two subsystems: family and business (Arzubiaga et al., 2019; Stock et al., 2024). They are the most prevalent organizational form worldwide (Arzubiaga et al., 2019; Aparicio & Iturralde, 2023; Villalonga & Amit, 2020), characterized by family control over governance and management (Sun et al., 2024). FBs can be large, medium, minor, or micro and operate across various sectors, such as industry, commerce, and services. Although there is no universally agreed-upon definition of a family business, they are generally described as organizations where ownership, control, and management are under total or partial authority of a family (Baltazar et al., 2023; Herrero et al., 2024; Sun et al., 2024). FBs are those in which the founder plays a significant role in governance, and the company reflects the family's values and traditions (Alayo et al., 2023;

Mariani et al., 2023).
The defining characteristics of FBs are (Manzano-García, 2023): a) family ownership and governance, b) family emotions influencing management, and c) decision-making controlled by family members. FBs are known for their strong commitment to social responsibility, which stems from their deep-rooted values and strong ties to their communities (Battisti et al., 2023; Mora & De la O, 2023; Ríos-Manríquez & Sánchez, 2020; Venturelli et al., 2021). This organizational culture enables FBs to adapt quickly to market changes and foster long-term competitive advantages, which often translate into a higher level of social responsibility (Rueda & Rueda, 2019). Moreover, FBs play a significant role worldwide, accounting for two-thirds of companies in the world economy (Albers-Schoenberg et al., 2020). FBs represent 90% of companies in Mexico, generating 85% of the country's Gross Domestic Product (GDP) (Leyva, 2022). Furthermore, 90% of the companies listed on the Mexican Stock Exchange are of family-owned origin (Rizo, 2018).

2.3. Family business and social responsibility

CSR has become increasingly important in businesses, making it necessary to explore social responsibility practices by business type, activity, and sector, including FBs. This is a relatively recent area of research (Stock et al., 2024). FBs have increasingly engaged in CSR due to the mutual benefits it offers to the family and the business (Citterio et al., 2024; Stock et al., 2024). CSR practices in FBs are often reinforced by their values, corporate culture, strong community commitment (Do Espirito Santo, 2023), and responsible practices (Aragon & Iturrioz-Landart, 2020).
Scholars have explored various dimensions of CSR in FBs, such as the impact of family ties on social performance and corporate governance (Endo, 2020; Salehnezhad et al., 2023; Thuy et al., 2024). The literature suggests that the family's involvement in the business strengthens CSR practices, given the family's emotional ties and focus on reputation and community relations (Mariani et al., 2023; Stock et al., 2024). However, family influence can have negative consequences, such as nepotism and undermining social responsibility practices (Clarke, 2023; Serfraz et al., 2023).
In Mexico, limited studies have examined CSR in SMEs, using the SGE21 standard, and even fewer have focused on FBs. The studies tend to focus on variables that influence the social responsibility of SMEs, such as human capital, customers, and organizational governance (Ríos-Manríquez et al., 2021), justifying the need to explore CSR in family SMEs further, especially in Latin America.

2.4. Hypotheses and research focus

This research is particularly intriguing, focusing on the potential impact of family SMEs adopting the SGE21 standard in Latin America. The SGE21 standard, with its nine management areas, offers a comprehensive framework to evaluate CSR in any type of company, including FBs. Moreover, the influence of company age on social responsibility leads to the following hypotheses:

***H_1*. Corporate governance, customers, suppliers, people who make up the organization, social environment, natural environment, investors, competitors, and public administrations influence the social responsibility of family SMEs.**
***H_2*. Company age positively influences the social responsibility of family SMEs.**
***H_3*. Family SMEs have a high level of social responsibility.**

3. Research Method

This section covers the research design, subjects, instrument, indicators of the nine variables (as defined to the SGE21 standard), the proposed econometric model, sample, and internal consistency.

3.1. Design of the research

A quantitative approach is proposed to respond to the objectives of this research. This involves conducting an exploratory factor analysis to validate the instrument used in the investigation, followed by a descriptive analysis using contingency tables, a correlational analysis and subsequently proposing a linear regression model. The OLS method is used because it provides the Best Linear Unbiased Estimator (BLUE) under the following assumptions: 1) The model is linear in the parameters; 2) Normality, $\varepsilon_{ij} \sim N(0, \sigma^2)$; 3) Homoscedasticity, $VAR[\varepsilon_{ij}] = \sigma^2$; 4) The model is correctly specified; and 5) There is no perfect multicollinearity. The technical structure on which this study is based is shown in Table 1.

Table 1. The technical structure of the research

Type of research	Quantitative, exploratory factor analysis, descriptive, correlation and regression
Design	Non-experimental, with cross-sectional data.
Sample selection	Quota system
Subjects of study	65 family business
Size	SMEs
Country	Mexico
Lifting method	Face to face
Statistical software	SPSS 23rd version, Stata13
Instrument	5-point Likert scale questionnaire (based on the SGE21 standard)

Source: Self-made.

3.2. Measurement instrument

The measurement instrument was adapted from the SGE21 standard issued by Forética (2017, 2008). Table 2 details each variable. In this research, the indicators consist of 76 items: corporate governance (CG; 23), customers (CU; 10), suppliers (SUP; 4), people who make up the organization (PMO; 15), social environment (SE; 5), natural environment (NE; 8), investors (INV; 3), competition (COMP; 6), and public administrations (PA; 2). These are measured using a 5-point Likert scale: 1) indicator is not met, 2) indicator is sometimes met, 3) medium degree of implementation, 4) indicator is met most of the time, and 5) indicator is fully met. The firm's age variable influences the dependent variable CSRFSME.

The dependent variable CSRFSME is a control variable in which the respondent was asked if they consider the company where they work is socially responsible, with the following 5 Likert scale response options: 1) not a SR Company, 2) low degree of SR, 3) intermediate degree of SR, 4) medium degree of SR, 5) high degree of SR.
The description of both the dependent and the independent variables is shown in Table 2. Additionally, the indicators of the independent variables and their coding are also included. The businessmen were administered the instrument in person, and a detailed explanation of the questionnaire's content was provided. Their questions were addressed, and assurances were given regarding the anonymity of their responses and the general treatment of the data.

Table 2. Measurement instrument for social responsibility in family SMEs.

Dependent variable		
Variable	**Code**	**Description**
CSR in family SMEs	CSRF-SME	Like any other type of company, share the same commitment to social responsibility. However, their family ties serve as an advantage, fostering greater commitment, trust, and a sense of belonging (Mora & De la O, 2023; Venturelli et al., 2021), as well as a strong corporate culture and dedication to the community or region in which they operate (Rueda & Rueda, 2019).

Independent variable				
SGE21 Standard	**Code**	**Description**	**Code**	**Indicator of each independent variable**
Corporate governance	CG	Responsible for ensuring that the other indicators work properly.	CG1	Legal requirements and regulations activity.
			CG2	Legal requirements and specific regulations.
			CG3	Updating of legal and regulatory requirements.
			CG4	Ethical management policy.
			CG5	Social responsibility policy.
			CG6	Code of Conduct.
			CG7	Compliance with the code of conduct.
			CG8	Ethical management committee.
			CG9	Social responsibility committee.
			CG10	Responsible for Ethical Management.
			CG11	Responsible for Social Responsibility Management.
			CG12	Social responsibility plan.
			CG13	Plan monitoring indicators.
			CG14	Model and interest groups.
			CG15	Interest groups.
			CG16	Communication.
			CG17	Security of information.
			CG18	Public policy.
			CG19	Ethical management system.
			CG20	Socially responsible management system.
			CG21	Annual review of the ethical management system.
			CG22	Annual review of the socially responsible system.
			CG23	Social responsibility status report.

Independent variable				
SGE21 Standard	**Code**	**Description**	**Code**	**Indicator of each independent variable**
Customers	CU	Consumers are increasingly demanding not only quality products but also the company acts in a responsible manner.	CU1	Responsible and competitive products and services.
			CU2	Continuous commitment R+D+I.
			CU3	Quality principles.
			CU4	Client satisfaction.
			CU5	Commercial offer.
			CU6	Product or service safety.
			CU7	Accessibility to products and services.
			CU8	Advertising principles and practices.
			CU9	Principles and practices of responsible advertising.
			CU10	Responsible advertising.
Suppliers	SUP	They are the commercial partners that the company seeks, meeting the requirements of a socially responsible company, such as promoting good practices.	SUP1	There are responsible purchasing criteria.
			SUP2	Supplier diagnosis and classification system.
			SUP3	Responsible purchases.
			SUP4	Collaboration with suppliers.
People who make up the organization	PMO	It is the commitment that the company makes to its employees that supports their work, personal, and family life.	PMO1	Human rights.
			PMO2	Employee diversity profiles.
			PMO3	Principle of equal opportunities.
			PMO4	Absence of discrimination.
			PMO5	Control of unwanted behaviors.
			PMO6	Conciliation with the collaborator.
			PMO7	Safety and health mechanisms.
			PMO8	Prevention of occupational hazards.
			PMO9	Job description.
			PMO10	Assessment of training needs.
			PMO11	Information about the code of conduct.
			PMO12	Evaluation of the work environment.
			PMO13	Stakeholder interests and demands.
			PMO14	Suggestions, complaints, or reports.
			PMO15	Follow-up on problem solving.
Social environment	SE	The company is committed to measuring and evaluating its social impact and investment in the community.	SE1	Repercussions in the community.
			SE2	Adoption of measures in favor of society.
			SE3	Transparency in the social environment.
			SE4	Report on solidarity or social actions.
			SE5	Report on activities with society.

Independent variable				
SGE21 Standard	**Code**	**Description**	**Code**	**Indicator of each independent variable**
Natural environment	NE	The company is committed to identify how their activities have an environmental impact and develop programs to care for the environment.	NE1	Pollution prevention.
			NE2	Identification of impacts to the environment.
			NE3	Program for environmental commitment.
			NE4	Annual review of the management program.
			NE5	Environmental risk plan.
			NE6	The plan for risks and prevention of accidents, incidents, and emergencies.
			NE7	Annual review of the risk plan.
			NE8	Informed Stakeholders.
Investors	INV	The company is committed to providing potential investors with transparent and reliable information.	INV1	Transparency and value creation.
			INV2	Good governance code.
			INV3	Company financial statements are disclosed to the public.
Competence	COMP	The company is committed to establishing fair competition and fostering cooperation and alliances with its competitors.	COMP1	Respect for the property rights of competitors.
			COMP2	Stakeholder agreements.
			COMP3	Improper actions are not allowed.
			COMP4	Updating of claims and competition requirements.
			COMP5	False information is not disseminated.
			COMP6	Forums of interest.
Public administrations	PA	The company is committed to complying with the law and establishing communication channels with public administrations.	PA1	Communication channels and dialogue.
			PA2	Comply with law.
Company age	AGE	Young companies (in operation for 10 years or less) Mature companies (in operation for more than 10 years)		

Source: Forética (2017, 2008), Ríos-Manríquez et al. (2021).

3.3. Sample characteristics

In Mexico, no formal organization was found that provides data on FBs. Therefore, the research on the SGE21 standard was applied to small and medium-sized companies, established by the National Statistical Directory of Economic Units of INEGI, which includes 17123 companies (INEGI 2024). With a sampling error of 5% and a confidence level of 95%, a sample of 376 was obtained, of which 65 FBs responded, and are reported in this research. The sample indicates that 61.5% are of male gender leading FBs, and 38.5% are of female gender, with high school studies mostly (43.1%), followed by a bachelor's degree (26.2 %), 13.8% secondary, 10.8% primary, and 6.2% with master's degrees. As per company size and age, 73.8% are small, 26.2% are medium, 27.7% are young, and 72.3% are mature, respectively (see Table 3).

Table 3. Descriptive analysis of the sample by sector, size, and age.

Age	Sector	Company Size		Total
		Small	Medium	
Young companies (in operation for 10 years or less)	Industry	15.4%	4.6%	20.0%
	Commerce	1.5%	1.5%	3.1%
	Services	4.6%	0.0%	4.6%
	Total	21.5%	6.2%	27.7%
Mature companies (in operation for more than 10 years)	Industry	30.8%	13.8%	44.6%
	Commerce	13.8%	1.5%	15.4%
	Services	4.6%	4.6%	9.2%
	Agriculture	3.1%	0.0%	3.1%
	Total	52.3%	20.0%	72.3%
Total	Industry	46.2%	18.5%	64.6%
	Commerce	15.4%	3.1%	18.5%
	Services	9.2%	4.6%	13.8%
	Agriculture	3.1%	0.0%	3.1%
	Total	73.8%	26.2%	100.0%

Source: Self-made.

4. Results

Initially, an exploratory factor analysis (EFA) is carried out, using principal components and varimax rotation, eliminating charges in excess of 0.500, to obtain a robust instrument of social responsibility that characterizes Mexican FBs. Table 4 shows how the robust instrument remains, eliminating 34 items for having loads of less than 0.500 (De la Fuente, 2011). The eliminated items are CG1, CG2, CG3, CG4, CG5, CG6, CG7, and CG18 of corporate governance (8); CU2, CU3, CU7, CU8, CU9, and CU10 from customers (6); PMO1, PMO2, PMO4, PMO5, PMO10, PMO11, PMO12, PMO13, PMO14, and PMO15 from people who make up the organization (10); SE1, SE2, and SE3 of social environment (3); NE4 of natural environment (1); INV1, INV2, and INV3 of investors (3); COMP1, COMP,5 and COMP6, of competition (3); PA1, PA2, public administrations, eliminating this area.

Forty items were distributed in 6 variables: corporate governance (15), customers (4), suppliers (4), people who make up the organization (5), natural and social environment (9), and competition (3). The investor and public administration variables were eliminated, and the social and natural environment variables were combined.
The EFA results indicate a variance of 75.890, being the six variables CG, S&NE, CU, PMO, SUP, and COMP, explaining 75.89% of the original variability (100%). The Kaiser- Meyer-Olkin (KMO) test indicates whether the factorial model is appropriate or not, obtaining a high value of KMO=0.842>0.600. Bartlett's test of sphericity contrasted with the existence of a significant correlation between the variables c^2=2885.848, ρ<0.01 with a critical level (significance) of 0.000.

Table 4. Results analysis by sector, size, and age.

Indicator	CG	S&NE	CU	PMO	SUP	COMP
CG8	.844					
CG9	.831					
CG10	.805					
CG11	.817					
CG12	.680					
CG13	.762					
CG14	.658					
CG15	.714					
CG16	.698					
CG17	.625					
CG19	.619					
CG20	.652					
CG21	.719					
CG22	.665					
CG23	.706					
CU1			.707			
CU4			.799			
CU5			.849			
CU6			.622			
SUP1					.654	
SUP2					.661	
SUP3					.736	
SUP4					.830	
PMO 3				.750		
PMO 6				.805		
PMO 7				.842		
PMO 8				.797		
PMO 9				.705		
SE4		.750				
SE5		.690				
NE1		.643				
NE2		.701				
NE3		.724				
NE5		.792				
NE6		.636				
NE7		.645				
NE8		.716				
COMP2						.807
COMP3						.856
COMP4						.749

Extraction method: principal component analysis.
Rotation method: Varimax with Kaiser normalization.
The rotation has converged in 8 iterations.
Source: Self-made.

The reliability analysis of the CSRFSME scale, of the original scale of eight variables with 76 items, is α=0.985, and the current scale with six variables with 40 items is α=0.974, exceeding the value of 0.700 (recommended by Carrasco-Venturelli et al., 2024; Nunnally & Bernstein, 2005). The AFE allowed the obtaining of a more robust scale of six variables, that exceed the reliability of α=0.832, where corporate governance has the highest value α=0.974 and the lowest reliability is competitors α=0.833 (see Table 5).

Table 5. Cronbach´s alpha for the initial scale.

Variables	Cronbach Alpha	Num. of elements	Variables	Cronbach Alpha	Num. of elements
1 Corporate governance	0.974	23	1 Corporate governance	0.974	15
2 Customers	0.907	10	2 Customers	0.862	4
3 Suppliers	0.898	4	3 Suppliers	0.898	4
4 People who make up the organization	0.937	15	4 People who make up the organization	0.908	5
5 Social environment	0.896	5	5 Natural and social environment	0.956	9
6 Natural environment	0.949	8	6 Competition	0.833	3
7 Investors	0.785	3			
8 Competition	0.842	6			
9 Public administrations	0.389	2			
Total instruments	0.985	76	Total instruments	0.974	40

Source: Self-made.

With the results obtained, the CSRFSME model proposed by the method OLS, expressed by the following equation under the assumption that company age influences, in addition to the variables, corporate governance, customers, suppliers, people who make up the organization, social and natural environmental and competition:

$$CSRFME_i = \beta_0 + \beta_1 CG_i + \beta_2 CU_i + \beta_3 SUP_i + \beta_4 PMO_i + \beta_5 S\&NE_i + \beta_6 COMP_i + \beta_7 AGE_i + \beta_2 CU_{i\,+}\,\varepsilon_i \qquad (1)$$

$CSRFSME_i$= Corporate social responsibility in family SMEs, CG_i= Corporate governance, CU_i= Customers, SUP_i= Suppliers, PMO_i= People who make up the organization, $S\&NE_i$= Social and natural environment, COM_i= Competition, AGE_i= Company age

Once the variables to be analyzed in this research have been established, a descriptive analysis of the factors influencing the social responsibility of FBs, as outlined in the SGE21 standard, is carried out. Observing Table 6, it is evident that, in general, all variables exhibit a medium degree of implementation across their indicators. Customers have the highest average score $\bar{X}$=3.7277, denoting the importance given to responsibility to their customers. They were followed by the people who make up the organization ($\bar{X}$= 3.6749), the lowest variable being the social and natural environmental setting ($\bar{X}$= 3.2327).

Table 6. Descriptive statistics of independent variables.

	N	Mean	Std. Dev.
Corporate governance	65	3.2476	1.09843
Customers	65	3.7277	0.86250
Suppliers	65	3.4500	1.09080
People who make up the organization	65	3.6749	0.86486
Natural and social environment	65	3.2327	1.21451
Competition	65	3.4385	1.05227

Source: Self-made.

Concerning the association between the SR variables, in Table 7 it is observed that all the factors are positively and significantly associated with the CSRFSME at levels of p<0.01, with corporate governance (r=.838) being the most associated with CSRFSME, followed by social and natural environment (r=.745), with the least associated being competition (r=.455).

Table 7. Correlation matrix.

	CSRFSME	CG	CU	SUP	PMO	S&NE	COMP	AGE
CSRFSME	1							
CG	.838**	1						
CU	.632**	.797**	1					
SUP	.589**	.654**	.750**	1				
PMO	.615**	.806**	.810**	.636**	1			
E&NE	.745**	.851**	.640**	.524**	.787**	1		
COMP	.455**	.568**	.496**	.501**	.470**	.578**	1	
AGE	.038	-.093	-.032	-.076	-.130	-.119	.002	1

** The correlation is significant at the 0.01 level (bilateral).

Source: Self-made.

Consequently, we carried out a linear regression using the Linear Regression Model (OLS). The results indicate that the predicted variables are corporate governance, customers, suppliers, people who make up the organization, social and natural environment, competition, and company age. To ensure the model's statistical acceptability, a comprehensive battery of tests was performed. The goodness-of-fit test of the model was applied, which explains the variance with an R^2=0.723, F=96.610 significant (Prob > F=0.000), making it possible to establish that the predictor variables proposed in the model are relevant to explain the CSRFSME.

Reviewing the regression coefficients, it is observed that corporate governance (0.978) is the variable that triggers the most excellent direct and statistically significant relationship with the variable of social responsibility of FBs, revealing the importance for FBs to attend to the indicators proposed by the SGE21 standard, at a significance level of 1%. The suppliers (0.234), people who make up the organization (-0.384), the social and natural environment (0.301), and their company age (0.370) are also significant at 5%.

Exploring if the distribution of the residuals was normal and converged in probability to the real coefficients (Greene, 2018; Gujarati & Porter, 2010), the Kolmogorov-Smirnov and Shapiro-Wilk normality tests were used, suggested for samples of more than 50 observations, where the value of the probability is more significant than 0.05 (Kolmogorov, 1933; Pérez & López, 2019; Yüzbaşı & Ahmed, 2020), indicating that the contrast distribution of the general model is normal (KS= 0.660), with a probability of Prob > Z=0.200 (see Table 8). The model does not present autocorrelation problems between the errors, as indicated by the Durbin-Watson Test (1.809), with a significance level of 0.001. The result is close to 2, which indicates that the residues are independent (De la Fuente, 2011; Ríos-Manríquez et al., 2021).

Subsequently, it was analyzed that the model did not have heteroscedasticity problems when subjected to the Breusch-Pagan test (Breusch & Pagan, 1980; Pérez & López, 2019; Yüzbaşı & Ahmed, 2020). Further, the CSRFSME model does not present heteroscedasticity problems (15.69), with a probability of Prob > c2=0.294, that is, the data are homoscedastic.

Another relevant aspect is to verify that the proposed model does not omit predictor variables, for which the Ramsey test was used (15.69, with significance Prob > F=0.064). Results indicate that the CSRFSME model does not require incorporating predictor variables. Finally, the model does not present multicollinearity problems (see Table 8), as ruled out by the VIF tests which indicate that the values are less than ten, and TOL is close to 1 (Gujarati & Porter, 2010; Pérez & López, 2019; Yüzbaşı & Ahmed, 2020).

Table 8. CSRFSME Model

	CSRFSME Model	Collinearity Tolerance (TOL)	Statistics Variance Inflation Factor (VIF)
Corporate governance	0.978***	.165	6.047
Customers	-0.117	.204	4.913
Suppliers	0.234**	.408	2.451
People who make up the organization	-0.384**	.214	4.677
Social and natural environment	0.301**	.203	4.932
Competition	-0.134	.594	1.685
Company Age	0.370**	.956	1.046
Constant[1]	-0.316		
R^2 adjusted	0.723		
F	24.922		
Prob > F	0.000		
Kolmogorov-Smirnov	0.66		
Prob > Z	0.200		
Breusch-Pagan	1.64		
Prob > c2	0.200		
Ramsey Test	0.051		
Prob > F	0.984		
Durbin-Watson	1.809***		
Observations	65		

Source: Self-made.

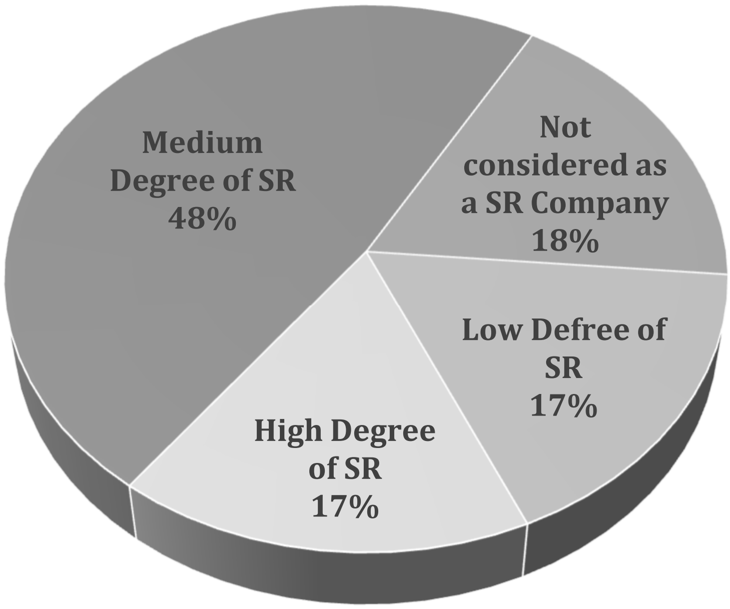
Asterisks denote significance levels of 5 (**) and 1% (***), respectively.

With the results obtained, it is established that statistically, the model does not need to incorporate more variables since all tests were accepted. Thus, the model presented in Equation 2 is validated:

$$CSRFSME_i = -0.316 + 0.978CG_i - 0.117CU_i + 0.234SUP_i - 0.384PMO_i + 0.301S\&NE_i - 0.134COMP_i + 3.370AGE_i$$

Finally, the degree of social responsibility of family SMEs is also analyzed from the entrepreneurs' perception. Figure 1 shows that 48% of entrepreneurs consider having an intermediate degree of SR, and only 17% of FBs perceive having a high degree of social responsibility. The same percentage considers that they have a low degree of SR, while 18% regard their company as not socially responsible.

Figure 1. Degree of social responsibility (SR) of family SMEs



5. Discussion

This research addresses the responsibility of family SMEs based on the SGE21 standard, as examined in various research studies such as Carrillo et al. (2023), Torres et al. (2023), Ríos-Manríquez & Sánchez (2020), Ríos-Manríquez et al. (2021), and Ríos-Manríquez et al. (2023). Responding to the objectives of this research, through the hypotheses and partially accepting Hypotheses H_1. Corporate governance, customers, suppliers, the people who make up the organization, the social environment, the natural environment, investors, competitors, and public administrations influence the CSRFSME. This is due to the CSRFSME model being determined by six variables, given that the EFA analysis eliminated the investors and public administration variables. Besides combining a single variable, the social and natural environment, contrary to other studies of the SGE21 standard in medium-sized companies in Mexico (Ríos-Manríquez et al., 2023) and MSMEs (Ríos-Manríquez & Sánchez, 2020) that for them it is relevant to treat each variable separately, according to what is established in the SGE21 standard.

In relation to the variable investors, it coincides with other studies of the SGE21 standard in medium-sized companies in Mexico (Ríos-Manríquez & Sánchez, 2020). However, the study of MSMEs in Mexico based on the adoption of the SGE21 standard, established that investors are a significant variable, with a 90% confidence level. Family firms aim to keep the business within the family or transfer it to the next generation (Kechli, 2023; Thorben, 2023), including women's succession in family firms (Boukhabza & Ouhadi, 2024). Nevertheless, it is essential to explore this issue further, as the investor variable is not considered for Mexican companies on their way to becoming socially responsible.

The estimators associated with the dependent variable CSRFSME, being statistically significant at a 99% confidence level, are corporate governance, followed by suppliers, people who make up the organization, and social and natural environment with statistical significance of 95% confidence. Therefore, these variables are relevant to explain the dependent variable CSRFSME.

Corporate governance is the variable with the strongest direct relationship with CSRFSME. This variable is fundamental for FBs because it supports long-term stability and a good stakeholder relationship (Arteaga & Basco, 2023). It reveals the importance for FBs to meet the indicators proposed in the CG by the SGE21 standard and is also crucial in achieving CSR. This aligns with existing literature, indicating a direct correlation between effective governance and social responsibility (Manzano-Garcia, 2023; Ríos-Manríquez et al., 2023; Thorben, 2023). Moreover, the impact of corporate governance on CSR is evident (Carrillo et al., 2023; Endo, 2020; Manzano-García, 2023; Ríos-Manríquez et al., 2023; Torres et al., 2023; Thorben, 2023), in the direct relationship between family governance and SR, as was established by Aragon & Iturrioz-Landart (2020).

The relevance of the variables corporate governance, suppliers, people who make up the organization, and social and natural environment is partially aligned with studies focused on MSMEs in Mexico, and various types of companies, identifying a significant relationship between stakeholders and top management (Ríos-Manriquez et al., 2023; Torres et al., 2023).

Specifically, this research highlights the significant link between FBs and the variable related to employees, who are the most attended stakeholder group (Thorben, 2023). This is due to the importance and concern that family SMEs place on their workforce (Aragon & Iturrioz-Landart, 2020; Brenes-Cardenas, 2024; Martín & Aroca, 2016), particularly regarding job inclusion, stability, and staff satisfaction (Aragon and Iturrioz-Landart, 2020; Brenes-Cardenas, 2024), among other factors. In relation to the social and environmental surroundings for the FBs, in this study, they are the relevant variables on their path to social responsibility. As such, it is important to seek a balance between economic objectives and social and environmental variables, committed to the impact caused by their economic activity on society and the environment (Cervantes et al., 2023).

Another relevant result is that the proposed CSRFSME model does not omit predictor variables, nor requires adding more independent variables, according to the Ramsey test. However, it is important to note that customers and competition are not significant variables for the CSRFSME model, from the perspective of family business owners. This is contrary to studies where customers and competition are significant variables in the CSR model in medium-sized companies, ethical management and SR committee of the SGE21 Standard (Ríos-Manríquez et al., 2023), and study of Chinese and French FBs with high levels of CSR development with external stakeholders (Ye & Li, 2020). These variables should also bear weight on the responsible behavior of FBs and satisfying customer needs (Aragon & Iturrioz-Landart, 2020). Another aspect is that FBs do not support or serve the needs of the companies they consider competitors (Solarte et al., 2020). This motivates us to investigate in a future line of research why competition is not significant for FBs in Mexico.

This research supports the acceptance of hypothesis H_2. Company age positively influences the social responsibility of SME. The results show that the independent seniority variable influences the CSR-dependent variable. The findings in this study align with other studies on the relationship between seniority and being socially responsible (Kaimal & Uzma, 2024; García-Valenzuela et al., 2021; Stüber & Jarchow, 2023). In this regard, the research contributes to the literature on the importance of seniority in CSR, based on the SGE21 standard in FBs. The literature establishes the relevance of seniority in relation to the absorptive capacity of the entrepreneur (García-Valenzuela et al., 2021) and from the CSR perspective, the link between CSR and the intention of successors in family SMEs (Stüber & Jarchow, 2023).

Hypothesis H3 is partially accepted: ‘SME family businesses have a high level of social responsibility’ since only 17% of FBs perceive they have a high degree of SR. These results are consistent with studies on the degree of social responsibility (Rueda & Rueda, 2019; Cardona et al., 2024) and research examining the influence of CSR on the business activities of SMEs (Ollinyk et al., 2023). The research also highlights the significant link between FBs and the variables related to employees, as well as the social and environmental context. These findings are consistent with various studies in the literature (Ríos-Manríquez et al., 2023; Thorben, 2023; Martínez-Ferrero et al., 2017). Additionally, the impact of corporate governance on CSR is evident (Carrillo et al., 2023; Endo, 2020; Manzano-García, 2023; Martínez-Ferrero et al., 2017; Ríos-Manríquez et al., 2023; Torres et al., 2023). Furthermore, the importance and concern that family SMEs place on their staff, who are integral to the organization, is well documented (Martín & Aroca, 2016).

6. Conclusions, Future Research, and Limitations

The primary contribution of this article lies in its practical implications and social impact, which stem from its focus on the influence of the SGE21 standard factors in Latin American family SMEs and their level of adoption.

The study’s key findings are as follows: Nearly half of FBs in Mexico exhibit an intermediate level of adoption of the indicators established by the SGE21 standard, despite lacking awareness of it. This underscores the potential for further research in these areas, aiming to enhance the level of social responsibility demonstrated by these businesses and highlight the adaptability of the SGE21 standard for adoption by Mexican FBs. The CSRFSME model, which has been statistically validated, does not require the incorporation of additional predictor variables. The analysis identified corporate governance as the most significant predictor, aligning with a fundamental characteristic of FBs: ownership and governance (Manzano-García, 2023).

The SGE21 standard, a foundational framework for social responsibility, has yielded significant insights for companies. These results suggest several practical considerations for businesses when developing their social responsibility strategies. First, businesses should implement training programs to raise awareness among employees regarding the SGE21 standard. It is crucial for employees to understand the benefits of the SGE21 standard and how effectively to apply it. Second, businesses should encourage continuous improvement by regularly reviewing and updating social responsibility practices in line with the SGE21 standard, ensuring relevance and effectiveness. Moreover, businesses must prioritize the needs and well-being of customers and employees, recognizing their pivotal role in the success and sustainability of the business.

In summary, the primary contribution of this research to the academic and business community is to demonstrate the relevance of social responsibility in FBs. It shows that even without prior knowledge of the variables and indicators established by the SGE21 standard, these businesses adhere to these indicators due to their commitment to being socially responsible. Another contribution is to address the SGE21 standard and demonstrate its flexibility for adoption by Mexican FBs, presenting an opportunity for those companies that seek to enhance their CSR practices.

However, as with all research, this study is not without its limitations. One such limitation is the limited scope of the sample. Another limitation is the difficulty in Mexico to establish the structure of FBs, as no formal organizations provide definition for family business. Consequently, future research should consider the following directions: identifying and classifying FBs in Mexico using robust and standardized methodologies as Casillas et al. (2024) proposed in Spain, evaluating the implementation and effectiveness of the SGE21 and ISO 26000 standards in FBs striving for socially responsible behavior, analyzing of the barriers faced by FBs in adopting social responsibility practices, studying CSR by sector, and conducting comparative studies between Mexican FBs and those of other Latin American countries.

Author Contribution Statement

The author conducted the entire study independently.

Conflict of Interest Statement

The author declares no conflicts of interest.

Ethical Statement

The authors confirm that informed consent was obtained from all participants.

The authors confirm that data collection was conducted anonymously, ensuring no possibility of identifying the participants.

Declaration on the Use of Generative AI in the Writing Process

The author confirms that no AI tools were used in the preparation of this manuscript.

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