




The relevance of national contexts for corporate carbon disclosure: a cross-cultural analysis

A relevância dos contextos nacionais para a divulgação corporativa de carbono: uma análise intercultural

La relevancia de los contextos nacionales para la divulgación corporativa sobre carbono: un análisis intercultural

Autorship




Alan Bandeira Pinheiro

 Universidade Federal do Paraná (UFPR)
 alanbpinheiro@hotmail.com
 <https://orcid.org/0000-0001-6326-575X>




Vanessa Marques de Araújo Zafalon

 Universidade Federal de Mato Grosso do Sul (UFMS)
 vanessamazafalon@gmail.com
 <https://orcid.org/0000-0002-9843-1997>

Camila Maria de Oliveira

 Universidade de São Paulo (USP)
 camila.maria321@usp.br
 <https://orcid.org/0000-0002-0874-3971>

Wendy Beatriz Witt Haddad Carraro

 Universidade Federal do Rio Grande do Sul (UFRGS)
 wendy.carraro@ufrgs.br
 <https://orcid.org/0000-0002-2152-1767>

ABSTRACT

Goal: This paper aims to investigate the influence of the country's national culture on carbon disclosure. **Methodology/approach:** Our research analyzed five cultural dimensions of the GLOBE Project (uncertainty avoidance, future orientation, power distance, societal collectivism, and gender egalitarianism) of the ten largest economies in the world and their statistical influences on the carbon disclosure of 1,072 companies. **Originality/relevance:** Despite numerous studies seeking to analyze which factors influence corporate carbon disclosure, it is still unclear how factors external to organizations can shape a company's performance in terms of emissions disclosure practices. **Main findings:** The results indicate that in countries with greater uncertainty avoidance and less power inequality, companies exhibit more responsible behavior regarding the disclosure of their carbon emissions. In addition, we found that in environments with greater gender equality, companies are more environmentally transparent. **Theoretical contributions:** This research confirms the Institutional Theory by showing that the institutional environment affects the performance of companies and presents new evidence that national culture influences carbon disclosure practices. **Management contributions:** Managers operating in such environments must be aware of these cultural barriers and develop strategies to overcome them, such as implementing internal governance reforms that encourage transparency and engaging with stakeholders to foster a culture of openness.

Keywords: Institutional Theory. Carbon Disclosure. Climate Change. Cultural Dimensions. Corporate Social Responsibility.

RESUMO

Objetivo: Este artigo tem como objetivo investigar a influência da cultura nacional do país na divulgação de carbono. **Metodologia/abordagem:** Nossa pesquisa analisou cinco dimensões culturais do Projeto GLOBE (evitação de incertezas, orientação para o futuro, distância de poder, coletivismo social e igualitarismo de gênero) das dez maiores economias do mundo e suas influências estatísticas na divulgação de carbono de 1.072 empresas. **Originalidade/relevância:** Apesar de muitos estudos buscando analisar quais fatores influenciam a divulgação corporativa de carbono, ainda não está claro como fatores externos as organizações podem moldar a atuação da empresa em termos de práticas de divulgação de emissões. **Principais resultados:** Os resultados indicam que em países com maior aversão à incerteza e menor desigualdade de poder, as empresas apresentam comportamento mais responsável em relação à divulgação de suas emissões de carbono. Além disso, descobrimos que em ambientes com maior igualdade de gênero, as empresas são mais transparentes ambientalmente. **Contribuições teóricas:** Esta pesquisa confirma a Teoria Institucional ao mostrar que o ambiente institucional afeta o desempenho das empresas e apresenta novas evidências de que a cultura nacional influencia as práticas de divulgação de carbono. **Contribuições para a gestão:** Os gestores que operam em tais ambientes devem estar cientes dessas barreiras culturais e desenvolver estratégias para superá-las, como implementar reformas de governança interna que incentivem a transparência e o envolvimento com as partes interessadas para promover uma cultura de abertura.

Palavras-chave: Teoria Institucional. Divulgação Ambiental. Mudanças Climáticas. Dimensões Culturais. Responsabilidade Social Corporativa.

RESUMEN

Objetivo: Este artículo tiene como objetivo investigar la influencia de la cultura nacional del país en la divulgación de carbono. **Metodología/Enfoque:** Nuestra investigación analizó cinco dimensiones culturales del Proyecto GLOBE (evitación de la incertidumbre, orientación hacia el futuro, distancia de poder, colectivismo social e igualitarismo de género) de las diez economías más grandes del mundo y sus influencias estadísticas en la divulgación de carbono de 1.072 empresas. **Originalidad/relevancia:** A pesar de numerosos estudios que buscan analizar qué factores influyen en la divulgación corporativa de carbono, todavía no está claro cómo los factores externos que las organizaciones pueden moldear el desempeño de la empresa en términos de prácticas de divulgación de emisiones. **Principales resultados:** Los resultados indican que en los países con mayor aversión a la incertidumbre y menor desigualdad de poder, las empresas se comportan de manera más responsable en relación a la divulgación de sus emisiones de carbono. Además, encontramos que en entornos con mayor igualdad de género, las empresas son más transparentes ambientalmente. **Contribuciones teóricas:** Esta investigación confirma la teoría institucional al mostrar que el entorno institucional afecta el desempeño de la empresa y presenta nueva evidencia de que la cultura nacional influye en las prácticas de divulgación de carbono. **Contribuciones a la gestión:** Los gerentes que operan en tales entornos deben ser conscientes de estas barreras culturales y desarrollar estrategias para superarlas, como implementar reformas de gobernanza interna que fomenten la transparencia y el compromiso con las partes interesadas para promover una cultura de apertura.

Palabras clave: Teoría Institucional. Divulgación ambiental. Cambio climático. Dimensiones culturales. Responsabilidad Social Empresarial.

■ INTRODUCTION

Carbon emissions are a major cause of global warming, interfering with the quality of life on the planet (Auffhammer, 2018). Several stakeholders (non-governmental organizations, the state, customers and investors) and supranational bodies (United Nations, World Economic Forum and World Bank) have inserted climate change into their corporate agendas (Depoers et al., 2016). Thus, companies are pressured to make their actions more transparent, disclosing not only financial and corporate governance information, but also information on their atmospheric emissions (Pinheiro et al., 2021).

In this context, several studies try to find out which factors have an influence on the level of environmental disclosure of companies (Gallén & Peraita, 2018;; Walker et al., 2019). For example, the study by Luo (2019) showed that internal factors, such as profitability and company size, positively influence the level of carbon disclosure, because larger companies tend to do more environmental damage and have a greater number of stakeholders, requiring a greater environmental transparency.

Although significant progress has been made in the field of carbon disclosure, several research gaps remain. While early studies often focused on analyzing companies in one or two countries (García-Sánchez et al., 2013), more recent research has expanded the geographical scope, adopting quantitative methods to examine carbon disclosure across multiple contexts. For example, Luo (2019) quantitatively analyzes the impact of institutional contexts on the relationship between voluntary carbon disclosure and carbon emission performance. Similarly, Villena and Dhanorkar (2020) explore how institutional pressures and managerial incentives affect carbon transparency in global supply chains, providing a broader understanding of disclosure practices.

Moreover, existing studies have frequently prioritized internal organizational factors, with limited consideration of the cultural dimensions of the countries where these companies operate (Miniaoui et al., 2019). However, the importance of cultural values in shaping carbon disclosure practices is increasingly recognized, as highlighted by Pinheiro et al. (2022) in their global analysis of cultural influences on carbon reporting. While most of the earlier literature on corporate social responsibility and carbon disclosure relied heavily on qualitative approaches (Tran & Beddewela, 2020), quantitative methodologies have gained traction, enabling more generalizable and robust findings. Nevertheless, there is still a need for further studies that focus specifically on carbon disclosure, rather than environmental disclosure in general, to better understand its unique dynamics within different cultural and institutional frameworks.

According to Institutional Theory, institutional actors can influence corporate decisions by pressing and monitoring the behavior of firms (Scott, 2008). Given this, institutional pressures can affect the responsible behavior of companies and shape them in relation to corporate social responsibility (Matten & Moon, 2008). Therefore, countries with institutional gaps, that is,

countries with low levels of transparency, high levels of corruption and low regulatory quality, can discourage carbon disclosure practices (Marano et al., 2017).

Since the country's institutional environment affects corporate behavior in relation to climate change, the present study has the guiding question: What is the influence of national culture on carbon disclosure? To this end, our study aims to: investigate the influence of the country's national culture on carbon disclosure. To achieve this research objective, the research analyzed five cultural dimensions (uncertainty avoidance, future orientation, power distance, societal collectivism, and gender egalitarianism) of the ten largest economies in the world and their statistical influences on the disclosure of 1072 carbon companies.

The choice of these cultural dimensions is justified for two reasons. First, according to Miska et al. (2018), these cultural dimensions can satisfactorily represent the cultural system of countries. Second, the GLOBE Project indicators are widely recognized for their ability to measure national culture, yet their application in research, particularly in carbon disclosure, remains limited. While some studies have explored the influence of these cultural dimensions in areas such as budget transparency and performance management, findings suggest that the impact of GLOBE dimensions, such as performance orientation, is often context-dependent and nuanced (Zarei et al., 2022). Furthermore, national culture has been shown to significantly shape transparency initiatives (Pinheiro et al., 2024), with positive correlations between individualism and long-term orientation, and negative correlations with power distance in the development of open government data across 55 countries (Zhang et al., 2023). Additionally, the GLOBE dimensions mediate the relationship between culture and economic performance, where collectivist and future-oriented societies foster more adaptable governance, which enhances GDP growth (Shostya et al., 2023). Despite the growing application of GLOBE variables in diverse fields, the use of these indicators in the context of carbon disclosure remains scarce, even a decade after Maleki and de Jong (2014) highlighted their relevance. This study aims to address this gap by analyzing how cultural dimensions influence carbon disclosure, contributing new insights to the field.

In general, the research findings show that certain cultural dimensions, such as uncertainty avoidance, power distance and gender egalitarianism can influence companies to carry out more complete carbon disclosure. Thus, the findings of this research present contributions, at the academic level, to the debate on the disclosure of corporate social responsibility, in addition to proving the Institutional Theory. The study has managerial implications, demonstrating that differences in national cultures can interfere with carbon disclosure practices. Thus, managers must understand how the country's informal institutions work before installing their industries. Furthermore, the research has implications for the public policies of the countries analyzed, as it suggests how governments can encourage a greater commitment to disclosure by their companies.

LITERATURE REVIEW

Institutional Theory

According to Scott (2014), Institutional Theory has grown and become the dominant framework as a guide for organizational and management studies, representing one of the most prominent areas within the social sciences. In this scenario, it is from the institutionalists that, according to Handgraaf (2012), there is an understanding that organizations do not act independently, but that they operate within the context of social processes and institutional arrangements.

From the perspective of institutionalism scholars, it is clear that companies comply with the institutional environment in which they operate, in order to guarantee their survival and have access to certain benefits, such as legitimacy, status, resources, support from society and acceptance (Handgraaf, 2012). To maintain their legitimacy in the environment in which they operate, companies must be subjected to isomorphic pressures, which influence their values, norms, structures, and actions, since legitimacy is an organizational necessity arising from the concept of isomorphism institutional (Barkemeyer et al., 2015; Issa & Alleyne, 2018; Kühn et al., 2018).

Institutional isomorphism, in turn, is translated by DiMaggio and Powell (1983) as a process of homogenization. This process, according to the authors, suggests that, over time, the characteristics of organizations undergo changes that lead them towards increasing compatibility with the characteristics of their environment (DiMaggio & Powell, 1983). Thus, as observed by Ferri (2017), companies tend, over time, to adopt very similar behaviors, due to the pressures suffered in the environment that surrounds them.

According to Gallén and Grado (2016), organizational patterns have their origin in the common institutional environment of companies and are dissipated through coercive, mimetic and normative processes. In this regard, DiMaggio and Powell (1983) postulate that these are the mechanisms by which isomorphic changes happen, with coercive isomorphism resulting from problems of legitimacy and political influences, mimetic isomorphism originating from standardized responses to uncertainties and isomorphism normative arising from professionalization issues.

Institutional theory continues to be a dominant framework for understanding corporate social responsibility disclosures, as initially highlighted by Amran and Haniffa (2011). Recent studies confirm that organizational institutionalism remains prevalent research, emphasizing how companies conform to mimetic, normative, and coercive forces to improve their disclosures (Kostova & Marano, 2023; Wukich et al., 2023). Values also play a crucial role in guiding corporate social responsibility strategies within institutional contexts, as they shape how organizations engage with stakeholders and implement responsible practices (Risi et al., 2022). According to Bondy et al. (2012), this theory is able to help explain the strong pressures suffered by organizations to engage in social responsibility issues. As an example, the results of Ferri (2017), from the institutionalist view, demonstrate that, in fact, social responsibility is affected by the institutional context in which a company operates, so that the emphasis that is placed on specific issues, it is a reflection of the religious, political, legal and cultural institutions defined in

the national scenario in which this entity operates. The findings by Adnan et al. (2018) corroborate this statement. In their analysis, the authors inferred that there are differences in the approaches to social responsibility of companies operating in different countries, since these perspectives are influenced by cultural issues in each country.

In this regard, the findings of Miska et al. (2018), based on Institutional Theory, confirm that cultural characteristics may constitute isomorphic pressures related to the involvement of organizations in sustainability practices, since certain variables of a cultural character may cause the firms engage more or less in sustainable activities. Furthermore, even according to the authors, these isomorphic pressures are not restricted to the territorial borders of countries, whereas groups of countries with similar cultural characteristics may also suffer similar isomorphic pressures (Miska et al., 2018).

Hypotheses development

Societies with a greater aversion to uncertainty impose more rules on people and have less tolerance for changes and innovations (Oliveira et al., 2018). In this way, this cultural dimension measures how people in a country feel threatened by uncertainty or the unknown. In contrast, in societies with a low level of aversion to uncertainty, stakeholders are more receptive to changes and more flexible to laws (Tran & Beddewela, 2020), with expectations that companies will disclose more social and environmental information and not just financial information (Pucheta-Martínez & Gallego-Álvarez, 2019). Previous studies have found a negative influence of the aversion to uncertainty in environmental disclosure (García-Sánchez et al., 2013; Tran & Beddewela, 2020). The first research hypothesis is:

H1: *Uncertainty avoidance negatively influences carbon disclosure.*

People in societies that are more oriented towards the future tend to save and invest, in addition to valuing parsimony and perseverance (García-Sánchez et al., 2013). In cultures with a long-term orientation, people believe that socially responsible investments can generate more competitive and sustainable companies (Pucheta-Martínez & Gallego-Álvarez, 2019). On the other hand, countries with short-term orientation tend to have companies that regard social responsibility as a loss of investor resources (Cheng et al., 2014). Thus, it is expected that in cultures oriented to the long term, they will have companies with a greater interest in disclosing their atmospheric emissions. Garcia-Sanchez et al. (2016) found that orientation for the future positively affects the environmental disclosure of companies based in twenty countries. The second research hypothesis is:

H2: *Future orientation positively influences carbon disclosure.*

The main issue surrounding distance to power is how people accept the unequal distribution of power (Hofstede, 1983). In societies with a high distance to power, positions are vertical and there are many hierarchies. In this type of society, people with less power accept unequal distribution and show less interest in social rights and achievements (Garcia-Sanchez et al., 2016). When a company is operating in a society with a low distance to power,

they need to disclose more information about their environmental practices in order to gain the approval and legitimacy of stakeholders (Pucheta-Martínez & Gallego-Álvarez, 2019). Previous studies have found a negative influence of distance to the country's power on environmental disclosure (Oliveira et al., 2018; Rosati & Faria, 2019; Vollero et al., 2020). The third research hypothesis is:

H3: *Power distance negatively influences on carbon disclosure.*

Companies in a more individualistic cultural environment tend to disclose less social and environmental information, because in these societies stakeholders are more concerned with their own interests (Pucheta-Martínez & Gallego-Álvarez, 2019). In contrast, in societies with more collective cultures, individuals think more about group members and have stronger relationships with the community (Hofstede, 1983; Reisch, 2020). Therefore, in more individualistic societies, companies are not open to disclosing information of an environmental nature (Jensen & Berg, 2012). In this sense, some studies have found that more individualistic countries tend to have companies with a lower level of environmental disclosure (García-Sánchez et al., 2013; Pucheta-Martínez & Gallego-Álvarez, 2019). The fourth research hypothesis is:

H4: *Societal collectivism positively influences carbon disclosure.*

Cultures oriented towards men tend to be more assertive and focus more on material success, while cultures oriented towards women tend to be more cooperative, modest and focus on quality of life (Batjargal et al., 2019; Garcia-Sanchez et al., 2016). In this sense, male societies show less appreciation for cooperative strategies, consideration for the social good and ethics in business (Tran & Beddewela, 2020). Companies based in more equal societies tend to have companies with a greater orientation towards reaching the interests of all stakeholders, not just the interests of investors (Pucheta-Martínez & Gallego-Álvarez, 2019). Previous studies have found a positive effect of the country's gender equality in the dissemination of environmental information (García-Sánchez et al., 2013; Tran & Beddewela, 2020). In this perspective, the fifth research hypothesis is:

H5: *Gender egalitarianism positively influences carbon disclosure.*

METHODOLOGICAL PROCEDURES

The initial sample of this research considered all 1402 companies from the ten largest world economies (Brazil, Canada, China, France, Germany, India, Italy, Japan, United Kingdom, and the United States) present in the list of the 2000 largest companies in the world by Forbes magazine, in the year 2018. However, due to unavailability of information in the Carbon Disclosure Project database, the final sample of the study consists of 1072 international companies. The sample companies operate within eleven industry sectors in 2018. Table 1 shows the distribution of the sample by sectors of activity and by countries.

The relevance of national contexts for corporate carbon disclosure: a cross-cultural analysis

Table 1

Number of firms by country and industry.

Countries/Industries	COM	COD	COS	ENE	FIN	HEC	IND	MAT	RES	TEC	UTI	n° of firms
Brazil	1	0	1	2	5	0	0	2	0	1	4	16
Canada	3	3	2	8	13	0	7	4	0	4	3	47
China	7	16	6	1	28	5	14	19	6	6	9	117
France	3	8	3	1	9	2	13	2	2	2	2	47
Germany	1	8	4	0	7	3	9	6	3	2	4	47
India	2	5	1	4	18	1	1	7	0	5	3	47
Italy	1	1	0	3	11	0	4	0	0	0	3	23
Japan	7	30	12	3	46	12	34	21	5	17	9	196
United Kingdom	7	14	8	2	18	3	8	7	2	3	4	76
United States	25	65	35	29	60	41	58	30	18	70	25	456
Total	57	150	72	53	215	67	148	98	36	110	66	1072

Note: COM: Communications. COD: Consumer discretionary. COS: Consumer staples. ENE: Energy. FIN: Financials. HEC: Health Care. IND: Industrials. MAT: Materials. RES: Real Estate. TEC: Technology. UTI: Utilities.

The dependent variable is the disclosure of carbon, measured through a numerical value, which varies between 100 (greater disclosure) and 1 (less disclosure). The Carbon Disclosure Project questionnaire answered by the companies classifies the companies in grades ranging from A + to F, depending on the quality of the answers given by the companies in relation to their atmospheric emissions. Thus, the study used numerical values for each of these letters, according to the study by Kouloukoui et al. (2019). Table 2 shows the dependent and independent variables used, as well as the source and the measurement method.

Table 2

Variable's description.

Dependent Variable	Indicator		Source	Measurement
CARDIS	Carbon Disclosure		Carbon Disclosure Project	A+(100), A-(95), B+(85), B-(80), C+(60), C-(40), D+(20), D-(5) e F(1)
Independent Variables	Hypotheses	Indicator	Source	Measurement
UNCAVO	H1	Uncertainty Avoidance	GLOBE Project	It ranges from 2.88 to 5.37
FUTORI	H2	Future Orientation	GLOBE Project	It ranges from 2.88 to 5.07
POWDIS	H3	Power Distance Orientation	GLOBE Project	It ranges from 4.82 to 5.47.
COLLEC	H4	Societal Collectivism	GLOBE Project	It ranges from 3.25 to 5.22
GENEGA	H5	Gender Egalitarianism	GLOBE Project	It ranges from 2.50 to 4.08

National culture was measured using five independent variables. The variables uncertainty avoidance (UNCAVO), future orientation (FUTORI), societal collectivism (COLLEC) and gender egalitarianism (GENEGA) were obtained through the GLOBE project. Hofstede (1983) believes that a country's culture can be measured by these five characteristics. As most studies have already analyzed the dimensions of Hofstede (1983), the present study decided to innovate by applying the GLOBE Project to carbon disclosure. This project was created by institutions and universities and was assisted by 170 social scientists and management scholars to create metrics that measure the national culture of 62 countries (Javidan & Dastmalchian, 2009). According to Miska et al. (2017), cultural dimensions of the GLOBE Project are the most appropriate to measure national culture, as it is a more recent methodology.

After its collection, the data were subjected to statistical analysis, including descriptive analysis (measures of central tendency), as well as the analysis of the difference in means between countries through analysis of variance (Anova) and Bartlett's test. Anova test was used, because this test considers two or more than two independent groups and more than 30 observations (Fávero & Belfiore, 2017). As a bivariate analysis, Pearson's correlation was used and to measure the influence of independent variables (cultural dimensions) on the dependent variable (carbon disclosure), linear least squares regression was used. Panel data regression was not used, as this technique is adequate to analyze the time factor in the variables (Fávero & Belfiore, 2017), and this study investigates the year 2018.

The econometric model is expressed by:

$$CARDIS_i = \beta_0 + \beta_1 UNCAVO + \beta_2 FUTORI + \beta_3 POWDIS + \beta_4 COLLEC + \beta_5 GENEGA + \varepsilon$$

The data were submitted to statistical analysis with the aid of the STATA® software, version 13.

■ ANALYSIS OF RESULTS

Descriptive Analysis

Table 3 presents the main descriptive statistics for all variables. Regarding the dependent variable, the sample companies reported, on average, 45.56% of the possible 100%. The data reveal that there were companies that disclosed all the information required by the Carbon Disclosure Project, receiving an A + score, consequently the value 100. On the other hand, the sample also presented companies that performed the minimum possible disclosure, receiving an F score, consequently the value 1.

Table 3

Descriptive Analysis.

Variable	n° of observations	Mean	Stand. Dev.	Minimum	Maximum
CARDIS	1072	45.566	39.878	1.00	100
UNCAVO	1072	4.319	0.357	3.60	5.22
FUTORI	1072	4.107	0.252	3.25	4.44
POWDIS	1072	5.034	0.178	4.82	5.47
COLLEC	1072	4.417	0.434	3.68	5.19
GENEGA	1072	3.300	0.200	2.90	3.70

Regarding the independent variables, the data show that, on average, countries have a level of 4.31 of uncertainty avoidance. On average, the culture of the countries in our sample has a long-term orientation (future orientation). The data show that, in general, countries have a low distance to power, that is, countries do not accept inequalities and hierarchies between superiors and subordinates. We can infer that the sample presents, on average, more collectivist countries. Finally, the sample has, on average, countries that have greater gender equality.

Differences in disclosure between countries

Table 4 presents the ANOVA (Analysis of Variance) and the Bartlett's test. ANOVA test checks whether the group means are significantly different and the Bartlett test checks the homogeneity of variances between independent groups. A value of Prob > F = 0.0000 indicates that the null hypothesis of the ANOVA (that the means are equal across groups) should be rejected. This means that there is a significant difference between the means of at least one of the groups (countries) (Fávero & Belfiore, 2017). The null hypothesis of the Bartlett test is that the variances of the groups are homogeneous (equal). Since Prob > chi2 = 0.0000, this indicates that the variances are not homogeneous, that is, there is a significant difference between the variances of the groups.

Table 4

ANOVA and Bartlett's test.

Source	SS	df	MS	F	Prob > F
Between groups	378078.198	9	42008.6887	33.67	0.0000
Within groups	1325105.1	1062	1247.74491		
Total	1703183.3	1071	1590.27385		

Bartlett test: chi2(9) = 426.6365 Prob > chi2 = 0.0000

Bivariate analysis

Table 5 shows Pearson's correlation matrix and Variance Inflation Factors (VIF). This table was built to check the existence or not of collinearity between the variables, since the presence of collinearity can interfere with the reliability of the regression results. The results show that all independent variables have VIF less than 9, indicating that there is no problem of collinearity between the variables.

Table 5

Correlation Matrix.

Variable	VIF	Tolerance	CARDIS	UNCAVO	FUTORI	POWDIS	COLLEC	GENEGA
CARDIS			1.000					
UNCAVO	1.12	0.890	-0.158***	1.000				
FUTORI	2.94	0.340	0.147***	-0.134***	1.000			
POWDIS	4.25	0.235	0.099***	0.111***	-0.321***	1.000		
COLLEC	2.33	0.429	-0.059**	-0.075***	0.280***	0.046***	1.000	
GENEGA	1.65	0.607	0.254***	-0.059**	0.118***	-0.317***	-0.385***	1.000

Note: **p<0.05. ***p<0.01.

Furthermore, the results of the correlation show that, although there are significant correlations at the level of 95% and 99%, no correlation has a strong relationship. Strongly correlated variables have values above 0.80 (Fávero & Belfiore, 2017), which is not seen in the data above.

Multivariate analysis of data

Table 6 presents the econometric models used to find the influence of cultural dimensions on carbon disclosure. The first model (Model 1) analyzed 857 companies (1072 companies - 215 financial companies), disregarding the financial services sector from the sample. The second model (Model 2) analyzed only the sample of companies based in developed economies, which includes seven countries: Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States. The third model (Model 3) analyzed all 1072 companies in the sample.

The relevance of national contexts for corporate carbon disclosure: a cross-cultural analysis

Table 6

Multivariate Analysis Results.

Models	Model 1		Model 2		Model 3	
Variables	Coef.	t	Coef.	t	Coef.	t
UNCAVO	53.46***	7.38	41.12***	6.11	-12.33***	-3.59
FUTORI	-117.02***	-5.09	-66.01***	-3.44	2.46	0.31
POWDIS	-60.83***	-2.78	-60.67	-1.46	-60.36**	-2.32
COLLEC	69.16***	5.67	40.53***	3.80	5.17	1.27
GENEGA	53.98	0.77	9.33	1.15	37.42***	5.06
Observations	728		892		1072	
Prob > F	0.0000		0.0000		0.0000	
R ²	0.1199		0.0642		0.1001	
R ² Adjusted	0.1138		0.0589		0.0959	
Sample	Except the financial sector		Developed countries		All companies	

Note: **p<0.05. ***p<0.01.

From the analysis of model 1, the uncertainty avoidance positively influences carbon disclosure. Thus, companies based in countries with a greater aversion to the unknown tend to have greater transparency in their atmospheric emissions. In addition, we find that future orientation and power distance negatively influence the disclosure of carbon. In contrast, more collectivist cultures tend to have companies with a higher level of disclosure of greenhouse gases.

In Model 2, considering only companies based in developed countries, we found that three variables influence, at the 99% significance level, carbon disclosure. First, the data show that the uncertainty avoidance positively influences disclosure. However, more future-oriented countries tend to have companies with a lower level of carbon disclosure. Finally, the collectivism variable has a positive influence on corporate disclosure of carbon emissions.

Model 3 presents three significant variables at the 99% level: uncertainty avoidance, power distance and gender egalitarianism. The results reveal that companies based in countries with a greater aversion to uncertainty tend to disclose less information about carbon emissions. In other words, societies that are less receptive to change tend to have companies that are less transparent about disclosure. Furthermore, power distance has a negative influence on carbon disclosure. Thus, more unequal societies, in which people more easily accept hierarchical relationships, have less transparent companies.

Finally, the findings show that equality between men and women in the country positively influences carbon disclosure, at a 99% significance level. This means that, in societies that support gender equality, there is an additional concern of organizations to carry out a more complete disclosure of their carbon emissions.

We noticed some differences between the econometric models. For example, in Model 1 and Model 2, when financial companies and companies

based in emerging countries were withdrawn, the variable aversion to uncertainty has a positive sign. In other words, in developed countries, carbon disclosure is positively influenced by the uncertainty avoidance. Future orientation has a negative influence on Model 1 and 2.

However, no significance was found in Model 3. Power distance has a negative effect on the three models analyzed. Societal collectivism variable positively influences the disclosure of carbon in the sample without the financial sector and in companies located in developed countries. In Model 1 and 2, the gender equality variable was not significant. However, in Model 3, this variable had a positive effect. Thus, our findings show that more equality between men and women favors greater responsible behavior by companies in relation to greenhouse gases.

DISCUSSION

The research confirmed the influence of the country's cultural dimensions on the level of carbon disclosure. The results showed that in societies with a greater uncertainty avoidance, companies tend to have less disclosure of information about their atmospheric emissions. The study also confirmed that in societies with greater inequality of power, firms carry out less complete carbon disclosure. In addition, we found that countries where gender equality is valued have firms with greater transparency of greenhouse gases.

In societies with a greater uncertainty avoidance, people in the country feel threatened by uncertain or unknown situations. In these societies, it is common for people to create beliefs or institutions to help avoid these uncertainties (Hofstede, 1983). In this sense, companies located in economies with a greater aversion to uncertainty tend to disclose information that is required by the market, such as financial information (Tran & Beddewela, 2020). Thus, in these cultural environments, organizations are forced to prepare a financial report for stakeholders, neglecting additional reports, such as the corporate social responsibility report.

In contrast, organizations based in economies with less aversion to uncertainty tend to be more proactive about environmental issues (García-Sánchez et al., 2013), which favors greater transparency of carbon emissions. These findings are in line with previous research (Garcia-Sanchez et al., 2016; Tran & Beddewela, 2020) that investigated the causal relationship between aversion to uncertainty and environmental disclosure.

When based in societies with a greater power distance, companies tend to have less carbon disclosure. One of the justifications for this finding is that few people in these societies have access to resources, capacities, and skills (Pucheta-Martínez & Gallego-Álvarez, 2019). Moreover, large power distance cultures exhibit less gender equality (Zainuddin et al., 2020). In this way, organizations in countries with more distance from power will be less concerned with relations with stakeholders, considering the view of investors in their decision-making process.

Power distance can interfere in corporate practices, by encouraging a high centralization of power, less transparency and inequality of power in companies (Oliveira et al., 2018). On the other hand, in cultural environments with less distance to power, inequalities of power are not preserved, and stakeholders demand greater responsible performance by the firm. The

findings of our study are also confirmed by previous studies (Orcos & Palomas, 2019; Rosati & Faria, 2019; Vollero et al., 2020).

The results confirm the hypothesis that a cultural environment with more gender equality positively influences carbon disclosure. More masculine cultures tend to have people who focus on goals such as professional career and business success (Pucheta-Martínez & Gallego-Álvarez, 2019). These cultures may have companies that disclose more financial and corporate governance information rather than environmental information.

However, more gender-equal societies may have more women in decision-making positions on environmental strategies, since in these societies they can emerge in high leadership positions, as well as men (García-Sánchez et al., 2016). Thus, the diversity of training and thinking between men and women can be a favorable factor for the disclosure of carbon.

In societies with greater gender equality, companies can consider diversity as an important variable for business success (Vollero et al., 2020). Therefore, in cultural environments with greater equality, companies act to meet the expectations of stakeholders. These organizations produce a more complete environmental report, containing more information on their atmospheric emissions. Previous studies have also found the positive influence of gender equality on environmental disclosure (García-Sánchez et al., 2013; Tran & Beddewela, 2020).

In view of these results, from the perspective of Institutional Theory, which accepts that organizations are rooted in broader institutional and environmental structures (Issa & Alleyne, 2018), we confirm the idea that the characteristics of the countries' institutional context are elements key in understanding the different corporate behaviors, so that the disclosure of carbon information is also dependent on informal institutions, such as the culture of nations (Pinheiro, Oliveira & Lozano, 2023).

It is necessary to recognize, on the part of managers, that the corporate reputation does not depend only on the characteristics of the company, but also on the ideal adjustment of its organization to the cultural environment. To achieve a strong corporate reputation, managers need to understand how institutional dynamics work through the country's informal institutions.

■ FINAL REMARKS

The findings of this study confirm that national culture significantly influences the level of carbon disclosure by companies. The results indicate that uncertainty avoidance and power distance have a negative impact on carbon disclosure, while gender egalitarianism positively influences transparency in environmental reporting. These findings support three of our research hypotheses: H1, H3, and H5.

From these results, we can conclude that companies based in countries with higher uncertainty avoidance tend to be more conservative and less transparent regarding their carbon emissions. This is likely due to a greater need to avoid risks and uncertainties, as previously noted in studies by García-Sánchez et al. (2013) and Tran & Beddewela (2020). In societies characterized by higher power distance, where hierarchies are more rigid,

companies are also less likely to engage in comprehensive carbon disclosure, as stakeholder relationships are more asymmetrical, limiting external pressures for transparency (Pucheta-Martínez & Gallego-Álvarez, 2019). Conversely, societies that promote gender equality tend to encourage more inclusive and transparent practices, as diverse leadership drives greater corporate responsibility. This is consistent with recent studies highlighting the positive role of gender egalitarianism in promoting environmental transparency (Zarei et al., 2022; Vollero et al., 2020).

These results also have significant implications for understanding how cultural factors shape corporate sustainability practices. The negative influence of uncertainty avoidance and power distance highlights the challenges that companies in hierarchical and risk-averse cultures face in adopting transparent carbon disclosure practices. Managers operating in such environments must be aware of these cultural barriers and develop strategies to overcome them, such as implementing internal governance reforms that encourage transparency and engaging with stakeholders to foster a culture of openness. These challenges underscore the importance of institutional theory in explaining how companies are embedded within broader cultural frameworks that influence their environmental behavior (Kostova & Marano, 2023).

Moreover, this study offers important policy insights for governments and regulators. Policymakers, particularly in emerging economies such as China and India, could take proactive steps to enhance carbon disclosure by incentivizing companies to adopt transparent practices. For example, implementing a greenhouse gas transparency award or similar initiatives could drive companies to disclose more information on their environmental impact. These initiatives would not only improve transparency but also strengthen the global effort to combat climate change by encouraging firms to adopt best practices from other countries with more robust carbon disclosure frameworks (Zhang et al., 2023). Furthermore, learning from the experiences of countries with more transparent governance structures could help emerging economies develop more effective sustainability policies tailored to their cultural and institutional contexts.

This study has certain limitations that should be acknowledged, as they provide context for the interpretation of the results and guide future research. First, the sample is composed exclusively of large companies from the ten largest economies in the world. While this provides robust data, it limits the generalizability of the findings to smaller companies or those in less economically developed countries, where the dynamics of carbon disclosure might differ. Second, the study focuses on five specific cultural dimensions (uncertainty avoidance, future orientation, power distance, societal collectivism, and gender egalitarianism) from the GLOBE Project.

While these dimensions offer valuable insights, the exclusion of other relevant dimensions, such as assertiveness or humane orientation, may limit the understanding of how other cultural factors influence carbon disclosure. Additionally, the study examines a specific time period, which may not capture the full extent of changes in corporate environmental reporting practices over time. Incorporating longitudinal data in future research could provide a deeper understanding of how these practices evolve in response to shifting cultural and institutional pressures. Lastly, the study does not include control variables such as industry type or regulatory framework, which could influ-

ence the results. Addressing these limitations in future studies will contribute to a more comprehensive understanding of the relationship between national culture and carbon disclosure.

In terms of future research, there are several avenues to explore that can build upon the findings of this study. First, expanding the sample to include companies from smaller and emerging economies would provide a more nuanced understanding of how national culture influences carbon disclosure across different economic contexts. Additionally, future studies could introduce other cultural dimensions from the GLOBE Project, such as assertiveness and performance orientation, to explore their potential impact on environmental transparency. Furthermore, research could examine how political changes, such as shifts in government ideology or regulatory frameworks, influence the relationship between national culture and carbon disclosure over time. The integration of alternative theoretical frameworks, such as the Variety of Capitalism approach, could also offer deeper insights into the institutional factors that shape corporate environmental practices across diverse economic systems.



REFERENCES

- Adnan, S., Hay, D., & Van Staden, C. J. (2018). The influence of culture and corporate governance on corporate social responsibility disclosure: A cross country analysis. *Journal of Cleaner Production*, 198, 820–832. <https://doi.org/10.1016/j.jclepro.2018.07.057>
- Amran, A., & Haniffa, R. (2011). Evidence in development of sustainability reporting: a case of a developing country. *Business Strategy and the Environment*, 20(3), 141–156. <https://doi.org/10.1002/bse.672>
- Auffhammer, M. (2018). Quantifying economic damages from climate change. *Journal of Economic Perspectives*, 32(4), 33–52. <https://doi.org/10.1257/jep.32.4.33>
- Barkemeyer, R., Preuss, L., & Lee, L. (2015). Corporate reporting on corruption: An international comparison. *Accounting Forum*, 39(4), 349–365. <https://doi.org/10.1016/j.accfor.2015.10.001>
- Batjargal, B., Webb, J. W., Tsui, A., Arregle, J. L., Hitt, M. A., & Miller, T. (2019). The moderating influence of national culture on female and male entrepreneurs' social network size and new venture growth. *Cross Cultural and Strategic Management*, 26(4), 490–521. <https://doi.org/10.1108/CCSM-04-2018-0057>
- Bondy, K., Moon, J., & Matten, D. (2012). An Institution of Corporate Social Responsibility (CSR) in Multi-National Corporations (MNCs): Form and Implications. *Journal of Business Ethics*, 111(2), 281–299. <https://doi.org/10.1007/s10551-012-1208-7>
- Cheng, B., Ioannou, I., & Serafeim, G. (2014). Corporate Social Responsibility and Access to Finance. *Strategic Management Journal*, 35, 1–23. <https://doi.org/10.1002/smj>
- Depoers, F., Jeanjean, T., & Jérôme, T. (2016). Voluntary Disclosure of Greenhouse Gas Emissions: Contrasting the Carbon Disclosure Project and Corporate Reports. *Journal of Business Ethics*, 134(3), 445–461. <https://doi.org/10.1007/s10551-014-2432-0>
- DiMaggio, P. J., & Powell, W. W. (1983). The Iron Cage Revisited : Institutional Isomorphism and Collective Rationality in Organizational Fields. *American Sociological Review*, 48(2), 147–160.
- Fávero, L. P. L., & Belfiore, P. P. (2017). *Manual de análise de dados* (1ª edition). Elsevier.
- Ferri, L. M. (2017). The influence of the institutional context on sustainability reporting. A cross-national analysis. *Social Responsibility Journal*, 13(1), 24–47.

- Gallén, María L., & Peraita, C. (2018). The effects of national culture on corporate social responsibility disclosure: a cross-country comparison. *Applied Economics*, 50(27), 2967–2979. <https://doi.org/10.1080/00036846.2017.1412082>
- Gallén, Maria Luisa, & Grado, C. P. de. (2016). Información de responsabilidad social corporativa y teoria institucional. *Intangible Capital*, 12(4), 942–977. <https://doi.org/10.3926/ic.732>
- Garcia-Sanchez, I. M., Cuadrado-Ballesteros, B., & Frias-Aceituno, J. V. (2016). Impact of the Institutional Macro Context on the Voluntary Disclosure of CSR Information. *Long Range Planning*, 49(1), 15–35. <https://doi.org/10.1016/j.lrp.2015.02.004>
- García-Sánchez, I. M., Rodríguez-Ariza, L., & Frías-Aceituno, J. V. (2013). The cultural system and integrated reporting. *International Business Review*, 22(5), 828–838. <https://doi.org/10.1016/j.ibusrev.2013.01.007>
- Handgraaf, A. (2012). Institutional Pressures & Strategic Responses: The Case of Shell and the Ogoni Struggle. In *Master of Science in Business Administration*. Vrije Universiteit of Amsterdam.
- Hofstede, G. (1983). The Cultural Relativity of Organizational Practices and Theories. *Journal of International Business Studies*, 14(2), 75–89.
- Issa, A., & Alleyne, A. (2018). Corporate disclosure on anti-corruption practice: A study of social responsible companies in the Gulf Cooperation Council. *Journal of Financial Crime*, 25(4), 1077–1093. <https://doi.org/10.1108/JFC-05-2017-0045>
- Javidan, M., & Dastmalchian, A. (2009). Managerial implications of the GLOBE project: A study of 62 societies. *Asia Pacific Journal of Human Resources*, 47(1), 41–58. <https://doi.org/10.1177/103841108099289>
- Jensen, J. C., & Berg, N. (2012). Determinants of Traditional Sustainability Reporting Versus Integrated Reporting. An Institutional Approach. *Business Strategy and the Environment*, 21(5), 299–316. <https://doi.org/10.1002/bse.740>
- Kostova, T., & Marano, V. (2023). Organizational institutionalism and corporate social responsibility: Theoretical advances and empirical insights. *Academy of Management Review*, 48(1), 120–139. <https://doi.org/10.5465/amr.2022.0035>
- Kouloukoui, D., Marinho, M. M. de O., Gomes, S. M. da S., de Jong, P., Kiperstok, A., & Torres, E. A. (2019). The impact of the board of directors on business climate change management: case of Brazilian companies. *Mitigation and Adaptation Strategies for Global Change*. <https://doi.org/10.1007/s11027-019-09864-7>
- Kühn, A. L., Stiglbauer, M., & Fifka, M. S. (2018). Contents and Determinants of Corporate Social Responsibility Website Reporting in Sub-Saharan Africa: A Seven-Country Study. *Business and Society*, 57(3), 437–480. <https://doi.org/10.1177/0007650315614234>

- Lahuerta-Otero, E., & González-Bravo, M. I. (2018). Can National Culture Affect the Implementation of Common Sustainable Policies? A European Response. *Cross-Cultural Research*, 52(5), 468–495. <https://doi.org/10.1177/1069397117739849>
- Luo, L. (2019). The influence of institutional contexts on the relationship between voluntary carbon disclosure and carbon emission performance. *Accounting and Finance*, 59(2), 1235–1264. <https://doi.org/10.1111/acfi.12267>
- Maleki, A., & de Jong, M. (2014). A Proposal for Clustering the Dimensions of National Culture. *Cross-Cultural Research*, 48(2), 107–143. <https://doi.org/10.1177/1069397113510268>
- Marano, V., Tashman, P., & Kostova, T. (2017). Escaping the iron cage: Liabilities of origin and CSR reporting of emerging market multinational enterprises. *Journal of International Business Studies*, 48(3), 386–408. <https://doi.org/10.1057/jibs.2016.17>
- Matten, D., & Moon, J. (2008). “Implicit” and “explicit” CSR: A conceptual framework for a comparative understanding of corporate social responsibility. *Academy of Management Review*, 33(2), 404–424. <https://doi.org/10.5465/AMR.2008.31193458>
- Miniaoui, Z., Chibani, F., & Hussainey, K. (2019). The impact of country-level institutional differences on corporate social responsibility disclosure engagement. *Corporate Social Responsibility and Environmental Management*, 26(6), 1307–1320. <https://doi.org/10.1002/csr.1748>
- Minkov, M., Bond, M. H., Dutt, P., Schachner, M., Morales, O., Sanchez, C., Jandosova, J., Khassenbekov, Y., & Mudd, B. (2018). A Reconsideration of Hofstede’s Fifth Dimension: New Flexibility Versus Monumentalism Data From 54 Countries. *Cross-Cultural Research*, 52(3), 309–333. <https://doi.org/10.1177/1069397117727488>
- Miska, C., Szőcs, I., & Schiffinger, M. (2018). Culture’s effects on corporate sustainability practices: A multi-domain and multi-level view. *Journal of World Business*, 53(2), 263–279. <https://doi.org/10.1016/j.jwb.2017.12.001>
- Oliveira, M., Rodrigues Júnior, M., Lima, S., & de Freitas, G. (2018). The Influence of the Characteristics of the National Business System in the Disclosure of Gender-Related Corporate Social Responsibility Practices. *Administrative Sciences*, 8(2), 14. <https://doi.org/10.3390/admsci8020014>
- Orcos, R., & Palomas, S. (2019). The impact of national culture on the adoption of environmental management standards: The worldwide diffusion of ISO 14001. *Cross Cultural and Strategic Management*, 26(4), 546–566. <https://doi.org/10.1108/CCSM-10-2018-0168>

- Pinheiro, A. B., Batistella, A. J., Mazzioni, S., & Dal Magro, C. B. (2024). Influência da Cultura Nacional sobre as Práticas de RSC: Analisando as Empresas Industriais dos Países do BRICS. *Advances in Scientific and Applied Accounting*, 246-259. <https://doi.org/10.14392/asaa.2021140310>
- Pinheiro, A., da Silva Arruda, R., Lima Sampaio, T. S., & Witt Haddad Carraro, W. B. (2022). The role of cultural values in carbon disclosure: a global perspective. *Revista de Gestão Social e Ambiental*, 16(1). <https://doi.org/10.24857/rgsa.v16.2866%20>
- Pinheiro, A. B., de Albuquerque Ribeiro, C. D. M., Mazzioni, S., & Batistella, A. J. (2021). Effect of economic freedom on carbon disclosure: an international investigation. *Advances in Scientific and Applied Accounting*, 256-268. <https://doi.org/10.14392/asaa.2021140310>
- Pinheiro, A. B., Oliveira, M. C., & Lozano, M. B. (2023). The effects of national culture on environmental disclosure: A cross-country analysis. *Revista Contabilidade & Finanças*, 34(91), e1636. <https://doi.org/10.1590/1808-057x20221636.en>
- Pucheta-Martínez, M. C., & Gallego-Álvarez, I. (2019). Corporate Environmental Disclosure Practices in Different National Contexts: The Influence of Cultural Dimensions. *Organization and Environment*, 1-27. <https://doi.org/10.1177/1086026619860263>
- Reisch, L. (2020). Does national culture influence management's accounting behaviour and strategy? – an empirical analysis of European IFRS adopters. *Cross Cultural and Strategic Management*, 28(1), 129-157. <https://doi.org/10.1108/CCSM-04-2019-0088>
- Risi, D., Wickert, C., & Scherer, A. G. (2022). The role of values in corporate social responsibility: How values enable or constrain CSR in institutional contexts. *Business & Society*, 61(5), 1224-1251. <https://doi.org/10.1177/00076503211014532>
- Rosati, F., & Faria, L. G. D. (2019). Addressing the SDGs in sustainability reports: The relationship with institutional factors. *Journal of Cleaner Production*, 215, 1312-1326. <https://doi.org/10.1016/j.jclepro.2018.12.107>
- Sannino, G., Lucchese, M., Zampone, G., & Lombardi, R. (2020). Cultural dimensions, Global Reporting Initiatives commitment, and corporate social responsibility issues: New evidence from Organisation for Economic Co-operation and Development banks. *Corporate Social Responsibility and Environmental Management*, 27(4), 1653-1663. <https://doi.org/10.1002/csr.1914>
- Scott. (2008). Approaching adulthood: The maturing of institutional theory. *Theory and Society*, 37(5), 427-442. <https://doi.org/10.1007/s1186-008-9067-z>
- Scott, W. R. (2014). Institutions and Organizations: Ideas, Interests, and Identities. In SAGE (Fourth edi, Vol. 04).
- Shostya, A., Tkach, M., & Davis, J. S. (2023). Cultural dimensions and economic performance: The role of governance adaptability. *Journal of Economic Behavior & Organization*, 195, 1-14. <https://doi.org/10.1016/j.jebo.2022.10.010>

- Tran, M., & Beddewela, E. (2020). Does context matter for sustainability disclosure? Institutional factors in Southeast Asia. *Business Ethics*, 29(2), 282–302. <https://doi.org/10.1111/beer.12265>
- Villena, V. H., & Dhanorkar, S. (2020). How institutional pressures and managerial incentives elicit carbon transparency in global supply chains. *Journal of Operations Management*. doi:10.1002/joom.1088
- Vollero, A., Siano, A., Palazzo, M., & Amabile, S. (2020). Hoftsedes cultural dimensions and corporate social responsibility in online communication: Are they independent constructs? *Corporate Social Responsibility and Environmental Management*, 27(1), 53–64. <https://doi.org/10.1002/csr.1773>
- Walker, K., Zhang, Z., & Ni, N. (Nina). (2019). The Mirror Effect: Corporate Social Responsibility, Corporate Social Irresponsibility and Firm Performance in Coordinated Market Economies and Liberal Market Economies. *British Journal of Management*, 30(1), 151–168. <https://doi.org/10.1111/1467-8551.12271>
- Wukich, C., Ramkumar, P., & Patel, D. (2023). Mimetic, normative, and coercive pressures in CSR disclosure practices: Global perspectives. *Corporate Governance*, 23(2), 295–312. <https://doi.org/10.1108/CG-03-2022-0125>
- Zainuddin, M., Mahi, M., Akter, S., & Yasin, I. M. (2020). The role of national culture in the relationship between microfinance outreach and sustainability: a correlated random effects approach. *Cross Cultural and Strategic Management*, 27(3), 447–472. <https://doi.org/10.1108/CCSM-12-2019-0219>
- Zarei, F., Safari, H., & Rastegar, R. (2022). The impact of national culture on budget transparency and performance management in developing countries. *Public Administration Review*, 82(1), 72–90. <https://doi.org/10.1111/puar.13380>
- Zhang, X., Li, W., & Lee, J. (2023). The role of national culture in the development of open government data: An empirical study of 55 countries. *Journal of Public Administration Research and Theory*, 33(2), 289–310. <https://doi.org/10.1093/jopart/muac020>



NOTES

Usage License

The authors grant **Revista de Ciências da Administração** exclusive rights for first publication, with the work simultaneously licensed under the **Creative Commons Attribution (CC BY) 4.0 International license**. This license allows third parties to remix, adapt, and create from the published work, provided proper credit is given to the author and the initial publication in this journal. Authors are authorized to enter into additional agreements for non-exclusive distribution of the version of the work published in this journal (e.g., publishing in an institutional repository, on a personal website, as a translation, or as a book chapter), with recognition of authorship and initial publication in this journal.

Publisher

Universidade Federal de Santa Catarina. Departamento de Ciências da Administração. Published on the **Portal de Periódicos UFSC**. The ideas expressed in this article are the responsibility of the authors and do not necessarily represent the opinions of the editors or the university.

Publishers

- Rosalia Aldraci Barbosa Lavarda
- Leandro Dorneles dos Santos

History

Recieved:	16-03-2022
Approved:	06-11-2024
Published:	18-11-2024