



**DIFERENÇAS CULTURAIS NACIONAIS E RESPOSTAS SOCIOAMBIENTAIS DAS
EMPRESAS DE PAPEL E CELULOSE EM RELAÇÃO À COVID-19**

**NATIONAL CULTURAL DIFFERENCES AND SOCIO-ENVIRONMENTAL
RESPONSES OF PULP AND PAPER COMPANIES IN RELATION TO COVID-19**

Higya Alessandra Merlin

Universidade Federal de Mato Grosso do Sul - UFMS
amerlin.merlin@gmail.com
<https://orcid.org/0000-0002-3968-5524>

Rosamaria Cox Moura Leite Padgett

Universidade Federal de Mato Grosso do Sul - UFMS
rosamaria.leite@ufms.br
<https://orcid.org/0000-0002-3481-6441>

Matheus Wemerson Gomes Pereira

Universidade Federal de Mato Grosso do Sul - UFMS
matheus.pereira@ufms.br
<https://orcid.org/0000-0002-6052-6683>

Resumo

Este estudo investigou se aspectos culturais nacionais influenciaram a divulgação socioambiental (DSA) dos principais produtores globais de celulose e papel durante a pandemia de COVID-19. As hipóteses de pesquisa foram baseadas na teoria da legitimidade e nas dimensões culturais de Hofstede, e testadas através de análise de dados em painel e teste t de médias. A amostra foi composta por 21 empresas de grandes produtores mundiais de papel e celulose, e os dados foram coletados em seus relatórios de Responsabilidade Social Empresarial (RSE) de 2019 e 2020, obtendo-se a DSA dos períodos anterior e posterior ao início da pandemia. Foi encontrada uma relação negativa entre a DSA e as dimensões culturais individualismo e indulgência, e uma relação positiva com as dimensões aversão à incerteza e distância de poder. Foram encontradas diferenças de médias entre a DSA antes e depois do início da COVID-19 para todas as variáveis culturais, exceto para orientação a longo prazo. Os

resultados contribuem para a literatura existente sobre os efeitos da cultura na divulgação de RSE, particularmente para um setor que ainda não foi especificamente estudado neste contexto. Além disso, o estudo colabora com a literatura teórica existente sobre os efeitos da pandemia nas empresas.

Palavras-chave: *Responsabilidade socioambiental; Dimensões de Hofstede; COVID-19; Celulose e papel.*

Abstract

This study investigated whether national cultural aspects influenced the socio-environmental disclosure (SED) of major global pulp and paper producers during the COVID-19 pandemic. The research hypotheses were based on legitimacy theory and Hofstede's cultural dimensions. To test them, panel data analysis and the t-test of means were used. The sample comprised 21 companies from major pulp and paper producing countries globally, and the data were collected from their Corporate Social Responsibility (CSR) reports from 2019 and 2020, obtaining the SED for the periods before and after the pandemic's onset. A negative relationship was found between SED and the cultural dimensions of individualism and indulgence, and a positive relationship with the dimensions of uncertainty aversion and power distance. Differences of means were found between SED before and after the onset of COVID-19 for all cultural variables, except for long-term orientation. The findings add to the existing literature on the effects of culture on corporate social responsibility disclosure, particularly for a sector that has not yet been specifically studied in this context. Furthermore, the study collaborates with the existing theoretical literature on the effects of the pandemic on companies.

Keywords: Socio-environmental responsibility; Hofstede's dimensions; COVID-19; Pulp and paper.

1. Introduction

Corporate social responsibility (CSR) is a comprehensive concept aimed at standardizing societal initiatives to support managers in their actions and to publicize the responsible performance of companies. This highlights the debate about disclosing CSR activities, namely the disclosure of socio-environmental actions taken within a given period. These activities are often compiled in reports that incorporate internationally accepted standards

as crucial tools to ensure transparency, measurement, and communication with stakeholders (Gallén & Peraita, 2017).

The pulp and paper industry, which is considered sensitive due to its reliance on a single raw material and its continuous globalization (Li & Toppinen, 2011), has been the subject of research on CSR disclosure as a means of being accountable to society (Borges, Rosa & Ensslin., 2010; Li & Toppinen, 2011; Kumar & Das, 2018).

Legitimacy theory posits that environmental pressures significantly influence organizational structures (Meyer & Rowan, 1977). Therefore, CSR can adopt a perspective that aims to enhance organizational legitimacy (Garriga & Melé, 2004), and this can be reinforced using tools that demonstrate performance aligned with social expectations (Carvalho, Rodrigues & Branco, 2017).

As management practices and theories are shaped by the national cultural environment where they were developed (Hofstede, 1993), perceptions of organizational legitimacy may vary. Despite being presented as a global idea (Gjølborg, 2009), companies should therefore consider that different national cultures influence the CSR agenda (Martínez-Ferrero & García-Sánchez, 2017; Halkos & Skouloudis, 2017).

The COVID-19 pandemic has led to changes and restrictions on all societies since the beginning of 2020, which is relevant to the current study. Therefore, this study explores the relationship between CSR disclosure and organizational legitimacy, considering national cultural aspects in the context of the COVID-19 pandemic's impact on the pulp and paper industry.

The research question is: What is the relationship between national cultural aspects and the CSR disclosure of companies operating within the pulp and paper sector in the context of the COVID-19 pandemic? The overall aim is to analyze whether national cultural aspects influenced the CSR disclosure of companies in the pulp and paper industry during the crisis caused by COVID-19. More specifically, the study aims to measure the socio-environmental disclosure of companies operating within the pulp and paper sector both before and after the outbreak of the pandemic, and to correlate Hofstede's cultural dimensions (HCD) with the socio-environmental disclosure of these companies both before and after its onset.

This research is justified by the need for more studies on the impact of national culture on CSR disclosure (Halkos & Skouloudis, 2017; Mata, Fialho & Eugénio, 2018; Pucheta-Martínez & Gallego-Álvarez, 2019). Furthermore, no specific studies were identified for the pulp and paper sector regarding this matter (Merlin & Moura-Leite, 2022).

In turn, Barnett, Henriques, and Husted (2020) emphasize that studies on CSR generally focus on the financial performance of companies. Thus, studies focused on socio-environmental aspects become pertinent, as proposed in this research. Similarly, considering the COVID-19 pandemic, it is timely that scientific studies propose to clarify gaps and open paths for more conscious decisions (Verma & Gustafsson, 2020).

As a result, this study provides a contribution to the body of knowledge concerning the influence of culture on CSR disclosure, with a specific focus on the pulp and paper sector, an area not yet extensively explored in this regard. In addition, the research considers the COVID-19 phenomenon, contributing to the theoretical repository of studies on the impacts of the pandemic in the business area. Empirically, alongside better-known and studied variables, such as company size and profit, understanding the influence of national culture can help managers in their actions in search of legitimacy, as well as serve as an instrument for increasing business and social indicators.

Following this introduction, the article presents the literature review and the hypotheses based on legitimacy theory and Hofstede's cultural dimensions. The article then describes the method used, followed by the presentation and analysis of the results and the concluding remarks.

2. Theoretical background

The broad concept of CSR is translated into various international initiatives and standards, with classifications to assist managers in their actions (Colle, Henriques & Sarasvatthy, 2014). While CSR was previously only disclosed in yearly reports, it is now demonstrated on new forms, websites, and in integrated reports (Carvalho et al., 2017; Khan, Lockhart & Bathurst, 2020), including governance aspects (Desai, 2024).

For Shabana, Buchholtz and Carroll (2017), isomorphic forces were primarily responsible for the dissemination of reporting practices across companies. Although criticized, for instance, for potentially prioritizing report completion over social impacts (Colle et al., 2014), CSR reporting has the potential to instill a sense of responsibility among members of organizations (Colaço & Simão, 2018; Khan et al., 2020) and to serve as an important tool for legitimizing operations (Deegan, 2002; Carroll & Shabana, 2010; Khan et al., 2020).

Although reporting has changed gradually and unevenly over time, the convergence towards a shared practice highlights the importance of institutional isomorphisms for corporate reporting (Wright, 2025). In this context, a company's CSR expenditures benefit not only its stakeholders but also the creation and enhancement of its reputation (Baruah & Panda, 2024).

The forest-based industry is notable among environmentally sensitive sectors due to its high environmental impact (Mandeep, Gupta and Shukla, 2020). As a result, economic and environmental reports are institutionalized in the sector (Mikkilä & Toppinen, 2008; Borges et al., 2010), and social reports are also being increasingly disclosed (Li & Toppinen, 2011).

Organizational legitimacy and its roots in institutional theory allow us to understand that many organizational structures emerge from institutional rules (Meyer & Rowan, 1977). According to Du, Fei and Lv (2022), who carried out a bibliometric review of the literature on Legitimacy Theory, the foundations of this theory, especially Suchman's (1995) assumptions, have been widely used in studies on environmental disclosures and CSR in general.

Thus, not only technical efficiency is an issue, but also environmental pressures (Dimaggio & Powell, 1991). To enhance legitimacy and ensure survival, organizational structures tend to adopt practices and procedures institutionalized in society (Meyer & Rowan, 1977). Even with new practices and new organizations, organizational actors create an environment that fosters organizational homogeneity. Dimaggio and Powell (1991) referred to this phenomenon as isomorphism and identified three mechanisms by which institutional isomorphic changes occur.

Coercive isomorphism stems from the formal and informal pressures exerted on organizations by other organizations, society and the demands of the state. Mimetic isomorphism arises from technological or symbolic uncertainties and ambiguous goals that cause organizations to mirror others considered successful. Normative isomorphism derives from pressures of collective struggles of professions, the training base of these professionals and the management and decision-making models implemented according to that training (Dimaggio & Powell, 1991).

As legitimacy reflects embeddedness in a system of institutionalized beliefs and scripts of action, legitimate organizations become almost self-replicating (Suchman, 1995). In other words, organizations come to maintain congruence between the social values of their activities and the norms of acceptable behavior in the broader social system of which they are a part (Dowling & Pfeffer, 1975).

For Suchman (1995), legitimacy is a generalized perception, representing a reaction of observers to the organization. And one of the ways to increase legitimacy is to disclose social and environmental performance information, which can occur through corporate social reporting (Carroll & Shabana, 2010). By demonstrating that they operate according to ethical social criteria, companies can build a reputation, while failing to do so can be risky (Carvalho et al., 2017), especially in relation to social aspects (Baruah & Panda, 2024).

Also in the institutional context, culture must be considered in the behavior of organizations, and several authors have dedicated themselves to this topic, such as Schwartz and Bilsky (1987), House (2002) and Schwartz (2008). However, the Dutch psychologist Geert Hofstede was a pioneer, and his cultural dimensions can be identified in common and even complementary elements to those proposed by Trompenaars (Lacerda, 2011), and Schwartz and House (Carolina, 2019).

Regarding the GLOBE culture, proposed by House (2002), no cultural dimension was introduced that is not analogous or a sub-dimension of Hofstede's dimensions (Peterson, 2004). Hofstede's cultural values framework changed the paradigm in cross-country research (Halkos & Skouloudis, 2017), and its validity is supported by many researchers, especially when it is desired to evoke national cultures (García-Meca, Uribe-Bohórquez & Cuadrado-Ballesteros, 2018).

Thus, despite criticisms of his model, such as the neglect of internal diversity within nations (McSeeney, 2015), and the real predictive power of his generalizations when confronted with empirical data (McSweeney, Brown & Iliopoulou, 2016), Hofstede's dimensions are frequently used in the field of CSR (García-Sánchez, Rodríguez-Ariza & Frías-Aceituno, 2013; Miska, Szócs & Schiffinger, 2018), which provides opportunities for comparisons and contributions to the evolution of knowledge in this area (Pucheta-Martínez & Gallego-Álvarez, 2019). Given the above, and because CSR is the focus of this study, Hofstede's model was chosen as the basis for the cultural dimensions used in this research.

From analyzing over 116,000 questionnaires applied between 1967 and 1978, Hofstede (1983) identified four different aspects of national culture, which he called dimensions: individualism versus collectivism, power distance, uncertainty aversion, and masculinity versus femininity. Later, the dimensions of long-term versus short-term orientation and indulgence were added. All of them vary on a scale ranging from zero to 100. The closer the score is to 100, the more the country is individualistic, masculine, indulgent, tolerates a large power distance, has a greater long-term orientation, and has greater uncertainty aversion.

To support the understanding of the relationship between HCD and CSR disclosure, a systematic review of the literature was conducted using the Scopus, Web of Science, Emerald Insights, ScienceDirect, OneFile/GALE and SAGE databases. Peer-reviewed articles were selected in English, Spanish and Portuguese, with no temporal restrictions.

The research axes were Hofstede's cultural dimensions and CSR disclosure, with the following search terms: ("Hofstede") AND ("Corporate social responsibility reporting" OR "CSR disclosure" OR "CSR report" OR "Sustainability reporting" OR "Voluntary disclosure"

OR "Website reporting"). The selection took place on March 12, 2021, yielding a total of 395 articles, of which 15 met the review proposal (Table 1).

Table 1. Relationship between Hofstede's dimensions and CSR disclosure

<i>Hofstede Dimension</i>	<i>(+)</i>	<i>(-)</i>	<i>(ns)</i>	<i>Total Articles</i>
Power distance (high)	1 (7.69%)	7 (53.85%)	5 (38.46%)	13
Individualism	2 (15.38%)	8 (61.54%)	3 (23.08%)	13
Masculinity	2 (14.29%)	10 (71.43%)	2 (14.29%)	14
Uncertainty aversion (high)	6 (46.15%)	3 (23.08%)	4 (30.77%)	13
Long-term orientation	8 (72.73%)	1 (9.09%)	2 (18.18%)	11
Indulgence	3 (42.86%)	4 (57.14%)	-	7

Source: prepared by the author, with data from the SLR (2021).

Notes.

(+): positive and significant relationship between HCD and SED

(-): negative and significant relationship between HCD and SED

ns: not statistically significant

Table 1 shows that the four original dimensions (individualism versus collectivism, power distance, uncertainty aversion, masculinity versus femininity) were the most studied, which is understandable because they have been in the scientific discussion for a longer time. The fifth dimension (long-term versus short-term orientation) has slightly fewer analyses, and the sixth (indulgence), which was included in 2010, has the fewest.

Even though they are the most studied, the first four dimensions, proposed by Hofstede in 1983, yield results that fit a positive, negative, or not statistically significant relationship, opening the way for further studies along these lines. Furthermore, no study has specifically analyzed companies in the pulp and paper sector.

2.1 Individualism versus collectivism

According to Hofstede, Hofstede and Minkov (2010), the meaning of collectivist societies revolves around the power of the group, while in individualistic ones the interests of the individual prevail, and a person who does not depend on a group is considered healthy. Regarding CSR disclosure, most of the studies analyzed showed a negative relationship with individualism (Table 1), assuming that an individualistic culture can discourage organizations from disclosing their socio-environmental practices.

According to García-Sánchez et al. (2013), organizations located in collectivist societies tend to disclose their CSR practices more, due to their characteristics of concern for the quality of life of the group. Similarly, several other studies have also demonstrated a positive relationship between a collectivist culture and socio-environmental disclosure (Prado-Lorenzo & García-Sánchez, 2013; Martínez-Ferrero & García-Sánchez, 2017; García-Meca et al., 2018; García-Sánchez, Gómez-Miranda, David & Rodríguez-Ariza, 2019; Pucheta-Martínez & Gallego-Álvarez, 2019; Lu & Wang, 2021).

Due to the pandemic, various adaptations were needed quickly and could only be achieved by working together. Additionally, the pulp and paper industry faces social pressure to increase transparency in order to gain legitimacy. Therefore, the following is proposed:

H1a: In countries with a higher level of individualism, pulp and paper companies tend to disclose less about their socio-environmental actions.

H1b: After the pandemic started, organizations in the pulp and paper sector located in individualistic countries disclosed socio-environmental information differently from those in collectivist countries.

2.2 Power distance

Power distance reflects how a society deals with inequalities. In this sense, although people are naturally physically and intellectually unequal, some societies allow these inequalities to extend into power and wealth inequalities, which can perpetuate and lose their relationship with physical and intellectual abilities (Hofstede, 1983).

In societies with a large power distance, there is a hierarchical structure where people hold different levels of power. This is considered normal and often leads to people with less power showing less interest in asserting their social rights (Hofstede et al., 2010). Companies from societies with a large power distance may not be willing to disclose their socio-environmental practices, as shown in the studies of Garcia-Sanchez, Cuadrado-Ballesteros and Frias-Aceituno (2016), Martínez-Ferrero and García-Sánchez (2017), Adnan, Hay and Staden, (2018), García-Meca et al. (2018), Fuhrmann (2019), and Lu and Wang (2021).

Considering the perspective of organizational legitimacy, and in view of the COVID-19 pandemic, which put social issues in the spotlight, companies from societies with a short power distance are expected to be more likely to disclose their socio-environmental actions, since such societies are less accepting of great inequalities and pay more attention to social issues.

In this regard, it is worth noting that the aforementioned studies did not focus on companies in the pulp and paper industry, which is increasingly on the radar of stakeholders critical of socio-environmental issues (Luhmann & Theuvsen, 2016). That said, the following is proposed:

H2a: In countries with a greater degree of power distance, pulp and paper companies tend to disclose less about their socio-environmental actions.

H2b: After the pandemic started, organizations in the pulp and paper sector located in countries with a large power distance disclosed socio-environmental information differently from those in countries with a short power distance.

2.3 Uncertainty aversion

The ways of dealing with uncertainty are part of any human society in any country (Hofstede et al., 2010). Certain societies handle it more naturally, taking more risks and accepting different opinions. Others do not tolerate uncertainty as well, producing several laws and norms to avoid it (Hofstede, 1993).

From studying the disclosure of organizations located in different countries, García-Sánchez et al. (2016), Gallego-Álvarez and Ortas (2017), Fuhrmann (2019), Pucheta-Martínez and Gallego-Álvarez (2019), and Lu and Wang (2021) found a positive relationship with high uncertainty aversion, precisely because of the inherent tendency of society to produce norms to deal with uncertainty.

Other studies, which are fewer in number, have not found a statistically significant relationship between socio-environmental disclosure and high uncertainty aversion, such as those of Bowring (2013), García-Sánchez et al. (2013), Prado-Lorenzo and García-Sánchez (2013) and Adnan et al. (2018). In turn, García-Meca et al. (2018), Halkos and Skouloudis (2017), and Martínez-Ferrero and García-Sánchez (2017) showed a statistically negative relationship.

However, none of the studies above have specifically analyzed the pulp and paper industry. Added to this is the COVID-19 phenomenon, which is highly representative of uncertainty because it emerged suddenly and unexpectedly, and was previously unknown, even by the scientific community. Thus, considering the socio-environmental demands inherent to the pulp and paper industry, as well as the uncertainty related to COVID-19, the following is proposed:

H3a: In countries with a greater degree of uncertainty aversion, pulp and paper companies tend to disclose more about their socio-environmental actions.

H3b: After the pandemic started, organizations in the pulp and paper sector located in countries with high uncertainty aversion disclosed socio-environmental information differently from those in countries with low uncertainty aversion.

2.4 Masculinity versus femininity

This dimension is approached from the perspective of the degree of division of social roles between the sexes. In masculine societies, men and women value presentation and earning money. In feminine societies, the emphasis is on relationships between people and protecting quality of life, the environment, and others, especially the weakest (Hofstede, 1983).

The research on companies' socio-environmental disclosure shows that masculinity is strongly associated with a lower level of disclosure. Of the 14 articles that included the dimension as a variable, 10 found a negative relationship. García-Sánchez (2013), for example, pointed out that companies located in feminine societies are at the forefront of socio-environmental disclosure, using integrated reports. Prado-Lorenzo and García-Sánchez (2013) found that companies from countries with a feminine culture tend to disclose more relevant social information because stakeholders show a greater concern for common social welfare.

During a global crisis, such as the COVID-19 pandemic, companies in countries with feminine cultures are expected to disclose their socio-environmental actions more, as in such societies there is greater concern for the quality of life. Therefore, with regard to legitimacy, socio-environmental disclosure can be valued by society for its attention to common well-being, especially in a critical situation, such as an unknown disease.

Considering how important the sector under analysis is to CSR and the connection between socio-environmental disclosure and organizational legitimacy, the following is proposed:

H4a: In countries with a high level of masculinity, pulp and paper companies tend to disclose less about their socio-environmental actions.

H4b: After the pandemic started, organizations in the pulp and paper sector located in countries with a high level of masculinity disclosed socio-environmental information differently from those located in feminine countries.

2.5 Long-term versus short-term orientation

Based on a study conducted by Michael Harris Bond in 23 countries, this dimension posits that in long-term oriented societies, future-oriented values such as thrift and persistence predominate. These are referred to as pragmatic societies, which encourage saving and

educational effort, and are more willing to learn from those who are different (Hofstede et al., 2010).

In contrast, a short-term orientation represents the promotion of virtues related to the past and the present, with an emphasis on respect for tradition and the fulfillment of social obligations. They are also called normative societies, which prefer to maintain time-honored traditions, while viewing social change with suspicion (Hofstede et al., 2010).

From systematically analyzing the studies on socio-environmental disclosure related to long-term orientation, we can see that the relationship is positive in most of them (72.73% of the articles). Only the studies of Orji (2010) and García-Sánchez et al. (2013) found no statistically significant relationship. Pucheta-Martínez and Gallego-Álvarez (2019) found a negative relationship, which contradicts the hypothesis that environmental and sustainability issues show their benefits in the long term. However, the authors also found limited reporting in short-term cultures.

Among the authors who found a positive relationship between a long-term orientation and CSR disclosure, Lu and Wang (2021), for example, mentioned the studies that addressed engagement in CSR activities as a way to protect companies' reputation, such that managers use CSR actions to signal firms' long-term orientation to stakeholders. Moreover, improving socio-environmental performance requires making sacrifices now to benefit future generations.

However, it is important to note that the mentioned studies did not focus on the pulp and paper industry and its repeated sensitivity to socio-environmental aspects and their impacts on organizational legitimacy and reputation. Moreover, it is worth studying whether CSR disclosure increased as a result of the COVID-19 pandemic, considering that pragmatic actions, based on education to obtain future results, which are linked to cultures with a long-term orientation, apply to the attitudes encouraged worldwide to face the pandemic. Therefore, the following is proposed:

H5a: In countries with a greater long-term orientation, pulp and paper companies tend to disclose more about their socio-environmental actions.

H5b: After the pandemic started, organizations in the pulp and paper sector located in countries with a long-term orientation disclosed socio-environmental information differently from those located in countries with a short-term orientation.

2.6 Indulgence

According to Hofstede et al. (2010), the dimension related to indulgence reflects the degree of control that people have over their impulses and desires. It is about satisfying desires to enjoy life, rather than satisfying human desires in general.

Countries with a high degree of indulgence have a greater tendency to satisfy their impulses and desires, seeking happiness and pleasure. Countries with low indulgence are more restrained in their emotions, showing extreme seriousness in meeting deadlines and commitments, given the conviction that gratifications and pleasures should be regulated by strict social norms (Hofstede et al., 2010).

Being the newest dimension, proposed in 2010, it is natural that it has not been the subject of as much research as the others. Of the 15 studies selected in the SLR, indulgence was scored a 7 (seven). Gallego-Álvarez and Ortas (2017), Fuhrmann (2019), Pucheta-Martínez and Gallego-Álvarez (2019), and Lu and Wang (2021) found a negative relationship between CSR disclosure and indulgence, meaning that indulgent countries disclose less about their CSR practices. According to the authors' reasoning, less indulgent countries disclose more because there is more control over the impulse to enjoy life, and therefore firms are more encouraged to engage in socio-environmental practices.

However, García-Meca et al. (2018), who analyzed the influence of indulgence as a moderating variable, observed a positive relationship, in line with the hypothesis that organizations from indulgent societies disclose their CSR practices more due to the characteristics of their individuals to satisfy their impulses and desires, tending to have positive attitudes. Halkos and Skouloudis (2017) and Martínez-Ferrero and García-Sánchez (2017) also described a positive relationship.

The fact that this dimension has only recently been included inevitably leads to the need for further studies. In addition, the above-mentioned studies did not focus on the pulp and paper sector, which is highly sensitive in terms of socio-environmental issues. Gallego-Álvarez and Ortas (2017), Fuhrmann (2019), Pucheta-Martínez and Gallego-Álvarez (2019), and Lu and Wang (2021), who all found a negative relationship, studied global companies from different economic sectors. The same was the case in the studies that found a positive relationship, such as those of Halkos and Skouloudis (2017) and Martínez-Ferrero and García-Sánchez (2017). García-Meca et al. (2018) looked specifically at the banking sector.

Another point of interest is the pandemic context, which is strongly related to behavioral aspects, requiring everyone to adapt routines and restrictive ways of facing reality. In this

understanding, companies located in more contained countries are expected to disclose more about their socio-environmental practices, as such societies naturally tend to control impulses and cope better with restrictions.

Conversely, indulgent societies do not prioritize the satisfaction of human desires in general, which implies less disclosure of their socio-environmental practices. In sum, based on the issues of organizational legitimacy, where companies seek disclosure as a way of synchronizing with societies, the following is proposed:

H6a: In countries with a higher level of indulgence, pulp and paper companies tend to disclose less about their socio-environmental actions.

H6b: After the pandemic started, organizations in the pulp and paper sector located in indulgent countries disclosed socio-environmental information differently from those located in non-indulgent countries.

3. Methodology

3.1 Research methods and data collection procedures

This is a predominantly quantitative research, with descriptive objectives and the use of bibliographic and documentary procedures. The sample was selected from the five largest paper (China, the United States, Japan, Germany and India) and pulp (the United States, Brazil, Canada, China and Sweden) producing countries in the world, based on the year 2019 (FAO, 2021), as they are home to the largest companies in the sector, thus providing national and global representativeness.

To define the companies, the Global Reporting Initiative (GRI) database and the stock exchanges of the countries were consulted. The inclusion criterion was to have published a sustainability report for one of the last two years before the start of the pandemic (2019 or 2018) and for 2020, resulting in a sample of 21 companies from four countries: Brazil (7), Canada (2), the United States (6) and Sweden (6).

The dependent variable corresponded to socio-environmental disclosure (SED), measured based on the adaptation of Zafalon's (2021) model, which meets the specificities of the pulp and paper sector. The instrument had 27 analysis items and is available in the supplementary material. To obtain the SED, 42 CSR reports (two years for each company) of 21 companies were analyzed using a Likert-type scale, where the company:

(0) did not disclose the item

(1) only mentioned the item

(2) presented some details on the item

(3) presented the item in great detail

The independent variables were the six HCD, with scores obtained from the Hofstede Insights website (Hofstede Insights, 2021). To test hypotheses H1a-H6a, we used the original value of the HCD for each country, which ranges from zero to 100. To test H1b-H6b, we used the recommendations of Orij (2010), Adnan et al. (2018), and Lu and Wang (2021), among others, using the median of the dimensions to establish dummy variables. Countries above the median received a score of 1, and those below received a score of 0.

A control variable was also defined at the country level and another at the organizational level. Since evolved corporate governance practices are associated with greater CSR disclosure (Lu & Wang, 2021) and contribute to a strong orientation toward disclosure commitment (Gallego-Álvarez & Ortas, 2017), the Worldwide Governance Indicators (WGI) were chosen for the country level, with data from the World Bank.

Since larger companies have more comprehensive disclosure practices (Kumar & Das, 2018; García-Sánchez et al., 2013) and can allocate more resources to responsible practices (Prado-Lorenzo & García-Sánchez, 2013), the control variable at the organizational level was total assets, with data extracted from the companies' balance sheets. Standardization was performed by converting to US dollars, with values inflated by each country's Harmonized Index of Consumer Prices (HICP), obtained from the Global-rates website (2021).

3.2 Data analysis procedures

To test H1a-H6a, panel data regression was used, which was chosen due to the presence of time series (Gujarati & Porter, 2011), specifically of actions practiced before the beginning of the COVID-19 pandemic and after its onset. To test H1b-H6b, the t-test was used to compare means. In both cases, the STATA[®] software was used.

Panel data regression was chosen due to the presence of time series data, being suitable for examining the dynamics of change, detecting and better measuring effects that cannot be observed in a pure cross-section or a pure time series (Gujarati & Porter, 2011).

To choose the estimation technique within the panel data regression, we tested the ordinary least squares model for stacked data (OLS), the fixed effects model (FEM), and the random effects model (REM). Chow's test rejected the null hypothesis that the intercepts are equal for all individuals, indicating that FEM is better than OLS.

The Hausman test did not reject the null hypothesis (the FEM and REM are not significantly different), indicating that the REM is more appropriate than the FEM. Finally, the

Breusch-Pagan LM test allowed us to reject the hypothesis that there are no random effects, showing that the REM is more appropriate than OLS.

To avoid multicollinearity, the HCD were regressed in separate models, according to Lu and Wang (2021). The Wooldridge test ruled out autocorrelation, and the Wald test showed the presence of heteroskedasticity. Robust standard errors were used in the estimations to correct for this.

To test hypotheses H1b - H6b, seeking to verify whether the difference in SED between 2019 and 2020 was significant by HCD, the t-test for comparing means was employed, as it is most used for comparing means between observation groups (Virgillito, 2017). For this comparison, H_0 is assumed as the difference between means equal to zero, and H_a indicates that the difference between disclosure values is not statistically equal to zero.

4. Results

Table 2 shows the descriptive statistics and the correlation matrix between the variables, with the total assets variable (ASS) transformed into logASS to make the data more homogeneous, since its non-linear distribution was observed. Since the control variable WGI was highly correlated with the cultural variables, it was excluded from the final model.

Table 2. Descriptive statistics and correlation matrix

Variable	Mean	Standard deviation	1	2	3	4	5	6	7	8	9
1 SED	59.5476	9.5769	1.000								
2 INDIV	66.5714	21.8343	-0.559	1.000							
3 POWER_ DIST	47	16.1487	0.557	-0.823	1.000						
4 UNC_AV	51.3333	19.0566	0.526	-0.726	0.984	1.000					
5 MASC	40.4285	23.2747	0.113	0.108	0.469	0.604	1.000				
6 LONG_OR	40.6666	10.6488	0.166	-0.553	-0.017	-0.167	-0.882	1.000			
7 INDULG	67.8571	7.5436	-0.466	0.578	-0.935	-0.980	-0.747	0.354	1.000		
8 WGI	842857	79277	-0.529	0.763	-0.984	-0.967	-0.514	0.096	0.931	1.000	
9 logASS	14.8638	1.9575	-0.123	0.031	-0.074	-0.076	-0.073	0.052	0.081	0.083	1.0000

Source: data from the research.

Table 3 shows the results of the panel data models for the relationship between HCD and SED.

Table 3. REM results, with estimation considering robust standard errors

	Coefficient (p-value)	Cultural variable HCD	logASS	Overall R ² **	Rho**
Independent variables	INDIV	-.2491212 (0.004) (-)	-.4384281 (0.729)	0.3239	.81457148
	POWER_DIST	.3356207 (0.001)(+)	-.3264796 (0.749)	0.3171	.81646482
	UNC_AV	.2672548 (0.002)(+)	-.32715 (0.734)	0.2842	.82499868
	MASC	.0431092 (0.594)(ns)	-.4421721 (0.630)	0.0259	.87178393
	LONG_OR	.1513563 (0.440)(ns)	-.5236308 (0.621)	0.0449	.86919664
	INDULG	-.5922203 (0.007)(-)	-.330018 (0.713)	0.2250	.83849934

Source: data from the research.

Notes.

(+): positive and significant relationship between HCD and SED, at a 95% confidence interval ($p < 0.05$).

(-): negative and significant relationship between HCD and SED, at a 95% confidence interval ($p < 0.05$).

ns: not statistically significant at a 95% confidence interval ($p < 0.05$).

When analyzing Table 3, statistical significance was found for the HCD INDIV, POWER_DIST, UNC_AV and INDULG, with a 95% confidence interval (p -value < 0.05). In contrast, no statistically significant result was obtained for MASC and LONG_OR (p -value > 0.05 for both). For all HCD, the logASS variable was not statistically significant (p -value > 0.05).

Regarding the HCD INVID, a negative and significant relationship is observed with the SED of the companies, supporting H1a, in line with the studies of García-Sánchez et al. (2013), Prado-Lorenzo and García-Sánchez (2013), Kumar (2013), Martínez-Ferrero and García-Sánchez (2017), García-Meca et al. (2018), García-Sánchez et al. (2019), Pucheta-Martínez and Gallego-Álvarez (2019), and Lu and Wang (2021). All these authors analyzed a variety of companies. The results allow us to add the pulp and paper sector to this list.

In accordance with Hofstede's (1983) framework, collectivist societies exhibit a stronger orientation towards enhancing the quality of life for the group, while individualistic societies prioritize individual and predominantly material advantage. As Corporate Social Responsibility initiatives are inherently linked to the common welfare, this alignment explains the greater disclosure observed in collectivist nations, providing support for H1a.

As for the HCD POWER_DIST, its relationship with the firms' SED was positive and significant, rejecting H2a. These results are contrary to those of García-Sánchez et al. (2016), Martínez-Ferrero and Gallego-Álvarez (2017), Adnan et al. (2018), García-Meca et al. (2018), Fuhrmann (2019), and Lu and Wang (2021), who found a negative and significant relationship.

On the other hand, 38.46% of the SLR studies did not show statistical significance. Only García-Sánchez et al. (2019) found a positive and significant relationship.

The UNC_AV variable was positive and significant in relation to SED, supporting H3a, as in the studies of García-Sánchez et al. (2016), Gallego-Álvarez and Ortas (2017), Fuhrmann (2019), Pucheta-Martínez and Gallego-Álvarez (2019), and Lu and Wang (2021). In a scenario of high uncertainty aversion, institutions follow the risk avoidance characteristic (Hofstede, 1983), which is reflected in the higher level of CSR disclosure. In this sense, the pulp and paper sector follows the findings of most studies.

The HCD MASC and LONG_OR did not show a statistically significant relationship, which does not support H4a and H5a, respectively. For the MASC variable, the results differed from most studies, and the non-significance for the pulp and paper industry is consistent with the findings of Bowring (2013) and Halkos and Skouloudis (2017).

Contrary to most studies, the LONG_OR variable did not show statistical significance. For discussion, it is worth revisiting the findings of Pucheta-Martínez and Gallego-Álvarez (2019), who found a negative relationship, but emphasized that disclosure was also limited in short-term oriented cultures.

For the HCD INDULG, a negative and significant relationship was found, supporting H6a, in line with Gallego-Álvarez and Ortas (2017), Fuhrmann (2019), Pucheta-Martínez and Gallego-Álvarez (2019), and Lu and Wang (2021). Thus, in the pulp and paper sector, there is support for the argument that firms located in more contained societies are more likely to disclose socio-environmental practices.

In relation to SED comparison test before and after the start of the COVID-19 pandemic, Table 4 presents the results of the t-test for comparing means, where H_0 indicates that there is no difference in the average SED between the period before and after the start of the pandemic, while H_1 indicates that there is a difference.

Table 4. Results of the comparison of SED by cultural dimension

diff = group (0) - group (1)	INDIV	POWER_DIST	UN_AV	MASC	LONG_OR	INDULG
P-value H_1 : diff < 0	0.9898	0.0102 ⁽⁺⁾	0.0102 ⁽⁺⁾	0.9475	0.8403	0.9898
P-value H_1	0.0204	0.0204	0.0204	0.1049	0.3194	0.0204
P-value H_1 : diff > 0	0.0102 ⁽⁻⁾	0.9898	0.9898	0.0525 ^(ns)	0.1597 ^(ns)	0.0102 ⁽⁻⁾

Source: data from the research.

Notes.

(+): positive and significant relationship between HCD and SED, at a 95% confidence interval ($p < 0.05$).

(-): negative and significant relationship between HCD and SED, at a 95% confidence interval ($p < 0.05$).

ns: not statistically significant at 95% confidence interval ($p < 0.05$).

The tests reject H_0 (95%) for the variables INDIV, POWER_DIST, UNC_AV and INDULG (p-value H_1 : < 0.05). For the variables MASC and LONG_OR, it is not possible to say that the difference in SED is statistically different from zero with 95% confidence (p-value H_1 : > 0.05).

Regarding INDIV, organizations located in collectivist countries (group (0)) show a greater difference in SED in 2020 than in 2019 compared to those located in individualistic countries (group (1)), and this difference is statistically greater than zero (p-value H_1 : $\text{diff} > 0 = 0.0102$). Hypothesis H1b is therefore confirmed.

For POWER_DIST, it can be concluded that organizations located in countries with a short power distance (group (0)) have a smaller difference in SED than those located in countries with a large power distance (group (1)), and this difference is statistically less than zero (p-value H_1 : $\text{diff} < 0 = 0.0102$). Thus, there was a difference in socio-environmental disclosure, but not with the expected negative relationship, which does not support H2b.

For UNC_AV, organizations located in countries with low uncertainty aversion (group (0)) show a smaller difference in SED in 2020 compared to those located in countries with high uncertainty aversion (group (1)), and this difference is statistically less than zero (p-value H_1 : $\text{diff} < 0 = 0.0102$), supporting H3b.

With regard to MASC, organizations located in feminine countries (group (0)) show a greater difference in SED in 2020 compared to organizations located in masculine countries (group (1)). This difference is statistically greater than zero (p-value H_1 : $\text{diff} > 0 = 0.0525$), supporting H4b, but with a smaller confidence interval ($p > 0.1$) than the others.

For LONG_OR, no statistical significance was found for the mean SED different from zero (p-value = 0.3194), which does not support H5b. For INDULG, organizations located in non-indulgent countries (group (0)) show a greater difference in SED in 2020 than in 2019 compared to indulgent countries (group (1)), and this difference is statistically greater than zero (p-value H_1 : $\text{diff} > 0 = 0.0102$), supporting H6b. Figure 1 summarizes the results.

Figure 1. Summary of results found

Variable	Hypothesis	Expected relationship	Relationship found	Result
Individualism	H1a H1b	(-)	(-)	Not rejected
Power distance	H2a H2b	(-)	(+)	Rejected
Uncertainty aversion	H3a H3b	(+)	(+)	Not rejected

Masculinity	H4a H4b	(-)	ns	Rejected
Long-term orientation	H5a H5b	(+)	ns	Rejected
Indulgence	H6a H6b	(-)	(-)	Not rejected

Source: prepared by the author (2021).

Notes.

(+): positive and significant relationship between HCD and SED, at a 95% confidence interval ($p < 0.05$).

(-): negative and significant relationship between HCD and SED, at a 95% confidence interval ($p < 0.05$).

ns: not statistically significant at a 95% confidence interval ($p < 0.05$).

In particular, the POWER_DIST variable differs from in most of the studies reviewed. According to Hofstede (1983), the level of power distance is related to the degree of centralization of authority. Considering that the pulp and paper companies studied are among the largest producers in the world, the positive statistical significance raises the question of the institutionalization of transparency.

Thus, a large power distance would be related not only to the issue of attention to the social context, but also to the commitment to the disclosure of practices, since it is a sector exposed to social demands, which implies a great weight given to disclosure to shareholders. In addition to the debate, a part of the articles analyzed did not show statistical significance, which reinforces the call for further studies.

Expanding the reflection to the pandemic scenario, the comparison of the means corroborates the reasoning. Beyond the acceptance or non-acceptance of inequalities by society, socio-environmental disclosure was statistically higher in 2020 than in 2019, bringing to the discussion the possibility of treating the large power distance as an aspect aligned with the hierarchization that values the disclosure of its actions also as a form of legitimacy.

To further the debate, it is added that a portion of the articles analyzed in the SLR showed no statistical significance for this dimension. In agreement with Halkos and Skouloudis (2017) and Pucheta-Martínez and Gallego-Álvarez (2019), this fact supports the call for more studies regarding cultural influence. Consequently, specific sectors, such as the pulp and paper industry, represent inviting fields for academic in-depth analysis.

Based on organizational legitimacy and its national manifestation, the significant and negative relationships found between SED and INDIV, and between SED and INDULG shed light on the collective importance given by these societies to individual interests as a way to achieve the common good, and to the immediate enjoyment of life and the fulfillment of impulses and desires, respectively. And this collective mental programming (Hofstede, 1993)

is present in a lower socio-environmental disclosure than in more collectivist and less indulgent societies, where it is normal to understand that one's own gratifications and pleasures are regulated by social norms (Hofstede, Hofstede & Minkov, 2010).

In a general analysis, and in line with Deegan (2002), it is admissible to recognize that CSR reports constitute mechanisms for companies to increase legitimacy. However, the materialization of this legitimacy can be influenced by some national cultural aspects, given that, as Hofstede (1983) defined, culture is a collective mental programming.

Considering that management practices are limited by the cultural environment (Hofstede, 1993), and that it is beneficial for managers to know the cultural antecedents that influence CSR (Halkos & Skouloudis, 2017), the findings of this study reinforce the view that it is necessary to look beyond economic results to obtain legitimacy. In decision making, it is about an influence that goes beyond the aspects of technical efficiency and takes into account the pressures of the environment in which organizations are embedded (Meyer & Rowan, 1977).

In addition, the history of the pulp and paper sector reveals an increase in social and environmental disclosure, driven by the increasing adoption of international certifications (Li & Toppinen, 2011). In this line, it is possible to invoke Dimaggio and Powell's (1991) isomorphism, as certifications set standards to be followed. If there is a call for socio-environmental issues to be relevant to companies, this discussion must be included in their strategic decisions, since legitimacy corresponds to a reaction of observers in relation to the organization (Suchman, 1995).

Following the view of Colaço and Simão (2018), this standardized disclosure of CSR contributes to fostering a social reality that dedicates greater attention to socio-environmental aspects. Consequently, failing to observe this movement can cost an organization its legitimacy. Given the increasing societal demand for companies to consider socio-environmental issues relevant, this discussion must be integrated into their strategic decisions, as legitimacy, in Suchman's (1995) seminal conception, represents the reaction of observers towards the organization.

Still concerning the homogeneity of actions, it is relevant to consider that the pressures of the State, with its various norms and legislations, especially environmental ones, characterize coercive isomorphism in the pulp and paper sector. Not surprisingly, the environmental category was the most disclosed by all the companies studied. In the case of the Covid-19 pandemic and its consequent uncertainties, the State was also present in all countries, with various protocols instituted by governments. In this sense, companies located in countries with

high uncertainty avoidance, eager for the control of the uncertain through regulations, had a higher average CSR disclosure in 2020 than before the pandemic (2019).

Mimetic isomorphism, resulting from environmental uncertainties, can also be considered in the sector, since if companies deemed legitimate by society are following certain protocols, it is natural that others will start to do so. In the case of the pandemic, technological uncertainty in the face of a novel pathogen led companies and societies in general to take measures without knowing for sure whether they would yield fruitful results or not. In any case, there was a need to react in some way, and this influenced mimicry in decision-making.

Normative isomorphism, in turn, can be verified in the similarities of the behaviors of managers and health professionals who communicated the guidelines for coping with the disease. However, despite these clear isomorphic forces, the difference between the disclosures made was evident, which leads to the reflection of legitimacy as a perception of society, and each society has its own cultural aspects.

Even though CSR is a global idea (Gjølberg, 2009), it has local cultural influences. It cannot be said that companies with less SED are less legitimate in the societies where they are located. The argument goes another way: the interpretation of legitimacy according to local culture. It is in this reading that statistically significant relationships for greater or lesser socio-environmental disclosure were shown, which was also consistent in the COVID-19 pandemic scenario.

5. Conclusion

This research aimed to analyze whether national cultural aspects influenced the socio-environmental disclosure of companies in the pulp and paper sector in the face of the COVID-19 pandemic. Based on Hofstede's legitimacy theory and cultural dimensions, it was hypothesized that national culture influences companies' socio-environmental disclosure index.

The results showed that the higher the degree of individualism and indulgence, the lower the SED, and the higher the uncertainty aversion and power distance, the greater the SED. No statistically significant relationships were found for the masculinity and long-term orientation dimensions.

Regarding the difference of means between the SED before and after the beginning of the COVID-19 pandemic, a significant difference was found for all cultural variables, except for the long-term orientation variable. The average SED was lower for groups of countries that were individualistic, had a large power distance, were masculine, indulgent, and had less uncertainty aversion.

In light of legitimacy theory, pulp and paper companies located in countries that are considered collective, with a large power distance, high uncertainty aversion, and not indulgent, tend to disclose more about their socio-environmental actions because they are concerned about their reputation and performance in relation to social assumptions. Therefore, the influence of not only technical but also social aspects, such as culture, stands out.

Theoretically, the results contribute to the literature on the influence of culture on CSR disclosure, especially regarding the pulp and paper sector, which had not been specifically studied in this sense until now. Furthermore, the research considers the COVID-19 phenomenon, collaborating with the theoretical repository of studies on the pandemic's impacts in the business area.

The practical implications relate to the understanding of national culture, which, alongside more well-known and studied variables, can assist managers in their actions in pursuit of legitimacy, as well as serve as an instrument for increasing business and social indicators.

Limitations include the collection of documentary data only, without triangulation with other sources, and the impossibility of obtaining data from relevant global producing countries such as China, Germany and Japan.

For future research, we suggest verifying between reports and practices, including interviews with those directly involved. Another suggestion is to measure whether the difference in SED remains with the waning of the COVID-19 pandemic. We suggest paying special attention to the HCD power distance, which differed from in most previous studies, as a way to promote discussion based on the results of this study for the pulp and paper sector.

6. References

Adnan, M. S., Hay, D., & 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(1), 820-832. <https://doi.org/10.1016/j.jclepro.2018.07.057>

Barnett, M., Henriques, I., Husted, B. W. (2020). Beyond good intentions: designing CRS initiatives for greater social impact. *Journal of Management*, 46(6), 937-964. <https://doi.org/10.1177/0149206319900539>

Baruah, L., Panda, N. M. (2024). Can different corporate social responsibility expenditure impact reputation of a company differently? *NMIMS Management Review*, 32(3), 174-184. <https://doi.org/10.1177/09711023241292184>

Borges, A. P., Rosa, F. S., & Ensslin, S R. (2010). Evidenciação voluntária das práticas ambientais: um estudo nas grandes empresas brasileiras de papel e celulose. *Produção*, 20(3),

404-417.

Bowring, A. R. (2013). Corporate social and environmental reporting in the Caribbean. *Social Responsibility Journal*, 9(2), 259-280. <https://doi.org/10.1108/srj-08-2011-0074>

Branco, M. C., & Rodrigues, L. L. (2006). Corporate social responsibility and resource-based perspectives. *Journal of Business Ethics*, 69(2), 111–132.

Carolina, T. (2019). Dimensions of national culture: cross-cultural theories. *Studies in Business and Economics*, 14(3), 220-230. <https://doi.org/10.2478/sbe-2019-0055>

Carroll, A. B., & Shabana, K. M. (2010). The business case for corporate social responsibility: a review of concepts, research and practice. *International Journal of Management Reviews*, 12(1)85-105.

Carvalho, A. O., Rodrigues, L. L., & Branco, M. C. (2017). Factors influencing voluntary disclosure in the annual reports of portuguese foundations. *International Journal of Voluntary and Nonprofit Organizations*, 28(5), 2278–2311. <https://doi.org/10.1007/s11266-017-9883-8>

Colaço, R., & Simão, J. (2018). Disclosure of corporate social responsibility in the forestry sector of the Congo Basin. *Forest Policy and Economics*, 92, 136-147.

Colle, S., Henriques, A., & Sarasvatthy, S. (2014). The paradox of corporate social responsibility standards. *Journal of Business Ethics*, 125, 177-191.

Deegan, C. (2002). The legitimising effect of social and environmental disclosures: a theoretical foundation. *Accounting & Accountability Journal*, 15(3), 282–311. <https://doi.org/10.1108/09513570210435852>

Desai, R. (2024). Analysing the firm value effects of environmental, social and governance disclosure: empirical study for Indian firms. *NMIMS Management Review*, 32(1), 58-67.

Du, X., Fei, F., & Lv, W. (2022). Bibliometric overview of organizational legitimacy research. *Sage Open*, 12(2). <https://doi.org/10.1177/21582440221099524>

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. <https://doi.org/10.2307/2095101>

Dowling, J., & Pfeffer, J. (1975). Organizational legitimacy: social values and organizational behavior. *The Pacific Sociological Review*, 18(1), 122-136. <https://doi.org/10.2307/1388226>

- Food and Agriculture Organization of the United Nations. (n.d.). *FAOSTAT - Forestry production and trade*. Retrieved January 12, 2021, from <http://www.fao.org/faostat/en/#data/FO>
- Fuhrmann, S. (2019). A multi-theoretical approach on drivers of integrated reporting - uniting firm-level and country-level association. *Meditari Accountancy Research*, 28(1), 168-205.
- Gallego-Álvarez, I., & Ortas, E. (2017). Corporate environmental sustainability reporting in the context of national cultures: a quantile regression approach. *International Business Review*, 26(2), 337-353. <https://doi.org/10.1016/j.ibusrev.2016.09.003>
- Gallén, M. L., & Peraita, C. (2017). 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>
- García-Meca, E., Uribe-Bohórquez, M. V., & Cuadrado-Ballesteros, B. (2018). Culture, board composition and corporate social reporting in the banking sector. *Administrative Sciences*, 8(41).
- García-Meca, E., Uribe-Bohórquez, M. V., Cuadrado-Ballesteros, B. (2018). Culture, board composition and corporate social reporting in the banking sector. *Administrative Sciences*, 8(41). <https://doi.org/10.3390/admsci8030041>
- García-Sánchez, 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>
- García-Sánchez, I. M., Gómez-Miranda, M. E., David, F., & Rodríguez-Ariza, L. (2019). The explanatory effect of CSR committee and assurance services on the adoption of the IFC performance standards, as a means of enhancing corporate transparency. *Sustainability Accounting Management and Policy Journal*, 10(5), 773-797. <https://doi.org/10.1108/sampj-09-2018-0261>
- Garriga, E., & Melé, D. (2004). Corporate social responsibility theories: mapping the territory. *Journal of Business Ethics*, 53, 51-71. <https://doi.org/10.1023/b:busi.0000039399.90587.34>
- Gjølberg, M. (2009). Measuring the immeasurable? Constructing an index of CSR practices and CSR performance in 20 countries. *Scandinavian Journal of Management*, 25, 10-22.

Global Reporting Initiative. (n.d.). *Our mission and history*. Retrieved January 9, 2021, from <https://www.globalreporting.org/about-gri/mission-history/>

Global-Rates. (n.d.). *Inflation - summary of current international inflation figures*. Retrieved September 16, 2021, from <https://www.global-rates.com/en/economic-indicators/inflation/inflation.aspx>

GRI Sustainability Disclosure Database. (n.d.). *Search*. Retrieved August 8, 2021, from <https://database.globalreporting.org/search/>

Gujarati, D. N., & Porter, D. C. (2011). *Econometria básica* (5a ed.). AMGH Editora.

Halkos, G., & Skouloudis, A. (2017). Revisiting the relationship between corporate social responsibility and national culture. *Management Decision*, 55(3), 595-613. <https://doi.org/10.1108/md-12-2016-0868>

Hofstede Insights. (n.d.). *Home*. Retrieved January 7, 2021, from <https://www.hofstede-insights.com/>

Hofstede, G. (1983). Cultural dimensions for project management. *International Journal of Project Management*, 1(1), 41-48.

Hofstede, G. (1993). Cultural constraints in management theories. *Academy of Management Executive*, 7, 81-94.

Hofstede, G., Hofstede, G. J., & Minkov, M. (2010). *Cultures and organizations: software of the mind*, (3rd ed.). McGraw-Hill.

House, R., Javidan, M., Hanges, P., & Dorfman, P. (2002). Understanding cultures and implicit leadership theories across the globe: an introduction to project GLOBE. *Journal of World Business*, 37, 3-10.

Khan, M., Lockhart, J., & Bathurst, R. (2020). A multi-level institutional perspective of corporate social responsibility reporting: a mixed-method study. *Journal of Cleaner Production*, 265, 1-14. <https://doi.org/10.1016/j.jclepro.2020.121739>

Kumar, A., & Das, N. (2018). Sustainability reporting practices in emerging economies: a cross-country study of BRICS nations. *Problemy Ekorozwoju – Problems of Sustainable Development*, 13(2), 17-25.

Kumar, G. (2013). Voluntary disclosures of intangibles information by U.S.-listed Asian companies. *Journal of International Accounting, Auditing and Taxation*, 22, 109-118.

Lacerda, D. P. (2011). Cultura organizacional: sinergias e alergias entre Hofstede e Trompenaars. *Revista de Administração Pública*, 45(5), 1285-1301.

Li, N., & Toppinen, A. (2011). Corporate responsibility and sustainable competitive advantage in forest-based industry: complementary or conflicting goals? *Forest Policy and Economics*, 13(2), 113–123. <https://doi.org/10.1016/j.forpol.2010.06.002>

Lu, J., & Wang, J. (2021). Corporate governance, law, culture, environmental performance and CSR disclosure: a global perspective. *Journal of International Financial Markets, Institutions & Money*, 70, 1-20. <https://doi.org/10.1016/j.intfin.2020.101264>

Luhmann, H., & Theuvsen, L. (2016). Corporate social responsibility in agribusiness: literature review and future research directions. *J Agric Environ Ethics*, 29, 673-696.

Mandeep, Gupta, G. K., & P. Shukla. (2020). Insights into the resources generation from pulp and paper industry wastes: challenges, perspectives and innovations. *Bioresource Technology*, 297. <https://doi.org/10.1016/j.biortech.2019.122496>

Martínez-Ferrero, J., & García-Sánchez, I. M. (2017). Coercive, normative and mimetic isomorphism as determinants of the voluntary assurance of sustainability reports. *International Business Review*, 26, 102-118. <https://doi.org/10.1016/j.ibusrev.2016.05.009>

Mata, C., Fialho, A., & Eugénio, T. (2018). A decade of environmental accounting reporting: what we know? *Journal of Cleaner Production*, 198, 1198-1209. <https://doi.org/10.1016/j.jclepro.2018.07.087>

McSweeney, B. (2015). GLOBE, Hall, Hofstede, Huntington, Trompenaars: common foundations, common flaws. In Y. Sánchez & C. F. Brühwiller (Eds.), *Transculturalism and Business in the BRIC States* (pp. 13-58). Gower.

McSweeney, B., Brown, D. & Iliopoulou, S. (2016). Claiming too much, delivering too little: testing some of Hofstede's generalisations. *Irish Journal of Management*, 35(1), 34-57. <https://doi.org/10.1515/ijm-2016-0003>

Merlin, H. A., & Moura-Leite, R. C. (2022). A influência da cultura nacional no disclosure da responsabilidade social empresarial: Uma revisão sistemática da literatura. In *Anais do Encontro da ANPAD* (Vol. 46). Associação Nacional de Pós-Graduação e Pesquisa em Administração. Retrieved October 10, 2022, from <http://www.anpad.org.br>

Meyer, J. W., & Rowan, B. (1977). Institutionalized organizations: formal structure as myth and ceremony. *American Journal of Sociology*, 83(2), 340-363. <https://doi.org/10.1086/226550>

- Mikkilä, M., & Toppinen, A. (2008). Corporate responsibility reporting by large pulp and paper companies. *Forest Policy and Economics*, 10, 500-506.
<https://doi.org/10.1016/j.forpol.2008.05.002>
- Miska, C., Szöcs, I., & Schiffinger, M. (2018). Culture's effects on corporate sustainability practices: a multi-domain and multi-level view. *Journal of World Business*, 53, 263-279.
<https://doi.org/10.1016/j.jwb.2017.12.001>
- Orij, R. (2010). Corporate social disclosures in the context of national cultures and stakeholders theory. *Accounting, Auditing & Accountability Journal*, 23(7), 868-889.
- Peterson, M. F. (2004). Book review: Culture, leadership, and organizations: The GLOBE study of 62 societies. *Administrative Science Quarterly*, 49(4), 641-647.
- Prado-Lorenzo, J. M., & García-Sánchez, I. M. (2013). El impacto del sistema cultural en la transparencia corporativa. *Revista Europea de Dirección y Economía de la Empresa*. 22(3), 143–154. <https://doi.org/10.1016/j.redee.2013.04.001>
- Pucheta-Martínez, M. C., & Gallego-Álvarez, I. (2019). Corporate environmental disclosure practices in different national contexts: the influence of cultural dimensions. *Organization & Environment*, 33(4), 597- 623. <https://doi.org/10.1177/1086026619860263>
- Schwartz, S. H. (2008). *The 7 Schwartz cultural value orientation scores for 80 countries. Culture level values*. Retrieved April 9, 2021, from https://www.researchgate.net/publication/304715744_The_7_Schwartz_cultural_value_orientation_scores_for_80_countries/citation/download
- Schwartz, S. H., & Bilsky, W. (1987). Toward a universal psychological structure of human values. *Journal of Personality and Social Psychology*, 53(3), 550-562.
- Shabana, K. M., Buchholtz, A. K., & Carroll, A. B. (2017). The institutionalization of corporate social responsibility reporting. *Business & Society*, 58(8), 1107–1135.
<https://doi.org/10.1177/0007650316628177>
- Suchman, M. (1995). Managing legitimacy: strategic and institutional approaches. *Academy of Management Review*, 20, 571-611.
- Verma, S., & Gustafsson, A. (2020). Investigating the emerging covid-19 research trends in the field of business and management: a bibliometric analysis approach. *Journal of Business Research*, 118, 253-261.
- Virgillito, S. B. (2017). *Estatística aplicada*. Saraiva.

World Bank. (n.d.). *Worldwide Governance Indicators*. World Bank DataBank. Retrieved October 5, 2021, from <https://databank.worldbank.org/source/worldwide-governance-indicators>

Wright, C. (2025). Licence to operate: the institutionalisation of Australian company annual reports, 1910-2018. *Accounting History*. <https://doi.org/10.1177/10323732241306150>

Zafalon, V. (2021). *Variáveis institucionais dos países e o disclosure socioambiental das empresas que atuam no setor de papel e celulose*. Dissertação de mestrado, UFMS.