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The impact of corruption on companies' engagement in sustainability reporting practices: An empirical examination

Abstract

Purpose – This paper aims to investigate whether the perceived level of corruption influences companies' decision to address principles and standards aimed, inter alia, at fighting corruption (i.e., SDGs, UNGC, ISO 26000, and OECD Guidelines) in their sustainability reporting.

Design/methodology/approach – The paper uses a sample of 1,171 sustainability reports published in the year 2017 by organisations from Asia and Africa's low- and middle-income countries.

Findings - Results from the Probit model reveal that corruption negatively affects corporate sustainability reporting activity. Indeed, the more companies are exposed to high levels of corruption, the less likely they appear to engage in sustainability reporting. Furthermore, we find clear regional and sector-level differences in the extent to which companies engage in sustainability reporting. The results show that Asian companies operating in the agricultural and financial services sectors exhibit significantly higher reporting activity, while those operating in the construction and mining sectors report less than their peers.

Originality/value - This paper provides a better understanding of the impact of corruption on companies' reporting behaviour in the context of emerging economies.

Research limitations/implications – Our findings provide important implications for understanding companies' behaviour in their sustainability reporting in emerging economies as well as for designing CSR disclosure initiatives in the future.

Keywords: Corruption, Sustainability reporting, Corporate Social Responsibility, Organisational fields, Emerging countries.

Paper type: Research paper

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1. Introduction

Over the past few years, the increasing corruption scandals around the world have highlighted this phenomenon's complexity and importance as a national and global issue. Even “clean”, or seemingly corruption-free, countries have proven not immune to high-profile money laundering, foreign bribery, and other private sector corruption.¹ This makes it quite clear that corruption is a problem that extends beyond developing countries or former Soviet republics. Corruption is one of the significant barriers to growth, good governance, and economic freedom (Saenz and Brown, 2018); it negatively impacts the economic and social development and political stability of countries, especially poor ones (Malanski and Póvoa, 2021). At the company level, corruption creates market inefficiencies, distorts competition, increases the cost of doing business, negatively impacts stock returns, corrodes public trust, and presents serious legal and reputational risks that slow the pace of business (Donadelli *et al.*, 2014; Urbina, 2020). Furthermore, corruption negatively affects resource allocation, thus hindering long-term foreign and domestic investment (Bryant and Javalgi, 2016) and limiting access to alternative funding sources such as equity crowdfunding (Battaglia *et al.*, 2021). Finally, corruption impairs corporate social responsibility (CSR) performance (Lopatta *et al.*, 2017) and Environmental, Social, and Governance (ESG) disclosure (Baldini *et al.*, 2018).

Over the last few years, anti-corruption measures have become a crucial part of sustainability reporting as well as one of the standards of the Global Reporting Initiative (GRI). Through publicly reporting their anti-corruption initiatives, companies can demonstrate their commitment to addressing this challenge and provide the transparency that is the basis for sustainable and accountable governance (Cardoni *et al.*, 2019). The fact that anti-corruption disclosure is a growing subset of the overall ESG agenda and contributes to controlling corruption and enhancing transparency and accountability confers a particular interest in studying the determinants of corporate sustainability disclosure that include anti-corruption practices.

The Corruption Perception Index (CPI) score, produced and published by Transparency International (2021), reveals that corruption levels in sub-Saharan Africa have not shown significant improvements over the past decade, with a CPI score of 33 out of 100 remaining unchanged from the previous years. 80% of the countries in the region have made little or no progress in the fight against corruption. Some countries, including Botswana, Liberia, Mali and South Sudan, have experienced a significant decline in corruption levels.

¹ See “CPI 2020: Five Cases of Trouble at the Top,” Transparency International, January 28, 2021.

As stated by the Africa Regional Advisor of Transparency International, Samuel Kaninda: “*A decade of stagnating corruption levels has been devastating for Sub-Saharan Africa. Natural resources are plundered, and millions lack access to public services while violent conflicts and terrorist threats rise. Meanwhile, grand corruption allows elites to act with impunity, siphoning money away from the continent and leaving the public with little rights or resources.*”

Although slightly better, the situation in Asian countries is not very different from that in African countries. The lack of progress in the fight against corruption is reflected in the CPI scores of most countries; for example, Cambodia, Bangladesh, and Pakistan show some of the lowest scores in the world (Transparency International, 2021). Widespread corruption, exacerbated by armed conflict, violent power transitions and terrorist attacks, and at the same time fuelled by political misconduct and authoritarianism, has deprived citizens of their fundamental rights and social services and undermined democracy. The empirical research has primarily documented the detrimental impact of corruption on economic growth, public finances, investment, and income inequality in countries across Africa and Asia (see, for example, Sachs and Warner, 1997; Gyimah-Brempong, 2002).

This study focuses on the African and Asian regions for two main reasons. First, most of the countries in these regions (exceptionally the low- and middle-income countries) are characterised by systemic (or endemic) corruption ingrained in the culture to the point that it assumes the features of a political and social phenomenon widely recognised and accepted (Williams-Elegbe, 2018). This type of corruption involves high levels of integration of political, administrative, and economic activity with criminal practices, inducing people to believe that illicit behaviours are part of a well-established practice in transactions between the public sector and firms or individuals. As stated by Klitgaard (2004, p. 1): “*A distinguishing characteristic of systemic corruption is that the many parts of the government that are supposed to prevent corruption have themselves become corrupted - budgeting, auditing, inspection, monitoring, evaluation, and enforcement. This makes the anti-corruption task much more difficult. We cannot simply call for capacity building in these anti-corruption parts of government because their capacity has been bought off and directed away from their ostensible mission.*”

The impact of systemic corruption on sustainability reporting may differ from that of other types of corruption. Focusing on African and Asian countries allows us to explore how the level of corruption in a country influences corporate sustainability disclosure. Second, African and Asian countries generally tend to have weak governance institutions and fragile legal

systems characterised by difficulty enforcing formal regulations and a casuistic implementation of the law. According to the extant literature, these factors can significantly affect ESG disclosure practices (Baldini *et al.*, 2018). High levels of public and corporate corruption combined with weaknesses in institutions and legal systems may lead to bad outcomes in corporate ESG disclosure, especially when the disclosure is voluntary and firms can choose to report ESG information when and where they see fit (Hoang, 2022)². For this reason, it is most likely that corruption could have a different effect on sustainability reporting in highly corrupt and weak institutional settings than elsewhere. The above arguments give us the incentive to examine the role of corruption in encouraging (discouraging) companies to engage in sustainable reporting practices in African and Asian contexts.

Based on a sample of 1,171 sustainability reports and a quantitative methodology, this paper investigates whether the perceived level of corruption influences companies' decision to address principles and standards aimed, among other things, at fighting against corruption in their sustainability reporting. In particular, we refer to (I) UN Sustainable Development Goals (SDGs); (II) United Nations Global Compact (UNGC); (III) International Standards Organisation (ISO) 26000; and (IV) Organisation for Economic Co-operation and Development (OECD) Guidelines. We use the Corruption Perceptions Index score (CPI) to pose three questions. First, does the perceived level of corruption affect the likelihood of companies addressing standards and principles (i.e., SDGs, UNGC, OECD Guidelines, and ISO 26000) that promote the fight against corruption in their sustainability reports? Second, do companies from different sectors show different propensities for addressing standards and principles (i.e., SDGs, UNGC, OECD Guidelines, and ISO 26000) that promote the fight against corruption in their sustainability reports? Third, do companies from different regions show different propensities for addressing standards and principles (i.e., SDGs, UNGC, OECD Guidelines, and ISO 26000) that promote the fight against corruption in their sustainability reports?

Our results reveal that the perceived level of corruption negatively affects the likelihood that a company's sustainability reports would address standards and principles that promote the fight against corruption. Companies operating in countries perceived to be highly corrupt were found to be less forthcoming in sustainability disclosure. Findings also show substantial differences in reporting at regional and sector levels, with Asian companies operating in the agricultural

² In almost all Asian and African countries there is currently no mandatory ESG reporting legislation. In the remaining countries, mandatory sustainability reporting is mostly applied only to state-owned companies, large corporations, or listed companies (Songi and Dias, 2019).

and financial services sectors showing significantly higher reporting activity and those operating in construction and mining reporting less than their peers.

This paper makes several significant contributions to the literature.

First, it adds to the academic literature that analyses the factors that influence the employment of sustainability disclosure practices (e.g., Chantziaras *et al.*, 2020) by providing novel evidence on the relationship between a country's level of corruption and companies' transparency in low- and middle-income countries in Asia and Africa. Since most studies have focused on Western countries and large economies (e.g., Mazzi *et al.*, 2018), little has been known about low- and middle-income Asian and African countries. We fill this gap in the literature by providing a better understanding of the impact of corruption on companies' reporting behaviour in the context of emerging economies. Moreover, most preliminary studies on the effects of corruption on sustainability reporting have focused on single countries (e.g., Branco and Matos, 2015; Branco *et al.*, 2019). This study, in contrast, contributes to the understanding of corruption's impact by using data from 39 low- and middle-income Asian and African countries. Second, this study advances an emerging branch of business research literature which seeks to explain the relationship between corruption and corporate social responsibility. Most of the studies published in this strand of literature focus on the effect of corruption on corporate sustainability performance (e.g., Ucar and Staer, 2020). We enrich this literature by examining the behavioural aspect of corporate sustainability disclosure and showing the significant role of corruption in preventing firms from resorting to anti-corruption practice reports more intensively. Disclosure and performance are related but different aspects of CSR activities; firms with better disclosure may not necessarily have better CSR performance. Therefore, our results provide an essential contribution to the previous literature. Third, this paper contributes to the existing literature on corporate engagement in sustainability reporting by advancing our understanding of the association between corruption and sustainability disclosure by exploring its heterogeneous nature across industry sectors. Finally, we contribute to the body of literature investigating the cost of corruption to society (e.g., Svensson, 2005) by showing that the negative impact of corruption on firms' tendency to disclose non-financial information represents an additional cost to society.

The paper is organized as follows: Section 2 examines the literature. Section 3 discusses the hypotheses. Section 4 describes the research design, and Section 5 presents the estimated results. Lastly, Section 6 provides our concluding remarks and policy implications.

2. Literature review

Although there is no agreement on defining corruption, it is clear that corruption is a complex phenomenon: it is caused by the same factors that constitute it, which creates a vicious cycle that is difficult to interrupt (Jain, 2001; Cosenz and Noto, 2014; de Jong and van Ees, 2014; Troisi *et al.*, 2021). The main task of a state is to define what is allowed and what is not and to provide sufficient protection for citizens against injustice by holding accountable those responsible. Through its executive, judicial, and legislative powers, the state guarantees that individuals can rely on the courts to enforce their rights when they are restricted or violated by the state or other citizens. If the state cannot fulfil this task and cannot provide its citizens with the necessary protections, citizens start looking for a different authority to offer them protection instead. As citizens' distrust of their governments grows, the door opens to corruption. Citizens' mistrust of their governments and their experiences of corruption creates a vicious cycle in the relationship between the two phenomena. Encounters with corruption undermine citizens' trust in governments and public services, while a lack of trust in public institutions promotes dishonest practices in people's interactions with the government. Greater fairness, honesty, and accountability may be the only way to break the link between corruption and distrust of the state.

Levels of corruption vary across countries, with some countries plagued with more corruption than others (Donadelli *et al.*, 2014; Amin and Soh, 2019). The broader literature recognises that, when it comes to corruption, there are disadvantages to being a country located in the developing regions of Africa, Asia, Latin America, and the Middle East (Hope, 2017). Countries in these regions suffer from bad governance, weak institutions, and a lack of respect for and enforcement of the law. These conditions create fertile ground for the spread of corruption, which is rarely detected or reported, and when it is investigated, adequate sanctions are usually not imposed (Hauser and Hogenacker, 2014; Rose-Ackerman and Palifka, 2016). Corruption in African and Asian countries, especially low- and middle-income ones, is hampering progress toward more balanced, inclusive, and sustainable economic and social development that can improve public education and healthcare, reduce poverty, and enhance living conditions (Hauser and Hogenacker, 2014; Gründler and Potrafke, 2019; Ajide and Olayiwola, 2020).

While the multiple causes and effects of corruption appear inevitable, many governments and international bodies are trying to reduce the severity of associated disruptions to the economy and society through timely and stringent mitigating actions and sustainable corruption

prevention strategies. However, the fight against corruption is not only a social responsibility but also a part of broader corporate ESG activities (Yu *et al.*, 2018). As corruption increases, so do organisational pressures on businesses to implement corruption prevention plans.

Corporate Sustainability is founded on activities encouraging managers' affirmative contribution to sustainable dimensions. Allais *et al.* (2017, p. 214) argued, "*Sustainability creates a competitive advantage for proactive companies both from the possibility of being rewarded by the market and from avoiding risks. [...] In contrast, passive or unsustainable strategy results in negative effects (e.g., credibility losses that impact trust between the company and financial institutions, markets or employees).*" Following this perspective, previous studies have considered sustainable corporate governance and sustainable strategies to prevent corruption. According to Sanz and Brown (2018), companies should employ strong anti-corruption measures and practices to protect the reputation and interests of their stakeholders.

Sustainability reports play an essential role in this context. CSR disclosure derives from the reporting of information about companies' responsibilities and all their ethical activities. Sustainability reports disclose information to various stakeholders about managerial, environmental, labour, and social responsibility matters. According to institutional theory, they are essential in legitimizing a company's conduct toward stakeholders (Roberto *et al.*, 2020). Thus, bribery and corruption represent one of the main issues within sustainable governance's scope. Corruption is a barrier for companies that aim to implement sustainable business models; it negatively affects their efforts to embrace social and environmental processes and policies.

For this reason, in the literature, there has been a rise in interest in assessing the positive impact of disclosure about anti-corruption strategies and measures implemented (D'onza *et al.*, 2017; Silvestre *et al.*, 2018). In their study, for example, Cardoni *et al.* (2019) reveal that the disclosure of anti-corruption measures has a "remedial effect" on organisational legitimacy after the occurrence of corruption. Moreover, Cardoni *et al.* (2019) argued that managers should consider anti-corruption tools and structures when implementing corporate strategies based on the ESG paradigm. Based on the results of their studies, Alvarez Extiberria and Aldaz Odriozola (2018) argue that anti-corruption disclosures are positively correlated with the reputation of European firms. Focusing on emerging economies, Tran (2022) investigates the connection between corporate-risk taking and corruption and finds that information disclosure mitigates the effect of corruption on risk-taking. In their work, Xue *et al.* (2022) find that firms are more inclined to use CSR to enhance firm value due to the difficulty in obtaining

government funding after an anti-corruption campaign. Schwartz and Tilling (2009) also considered anti-corruption measures legitimacy-seeking tools by stakeholders. Several authors have proposed models for integrating anti-corruption policies within companies in the literature, mainly using an integrative approach to ESG (Baumgartner and Ebner, 2010; Asif *et al.*, 2011; Eccles *et al.*, 2012; Whitelock, 2019).

Although corporate disclosure on anti-corruption practices has become crucial for companies to prevent corruption, there is still a limited body of literature examining the disclosure of anti-corruption procedures as an integral part of corporate social responsibility themes or sustainability reporting (Issa and Alleyne, 2018). In addition, mainly because of data limitations, the existing research on the topic is either largely conceptual or discusses only individual corruption cases. This study aims to fill this gap in the literature by empirically investigating whether the level of perceived corruption influences companies' decision to openly communicate their commitment to preventing, monitoring and tackling corruption by addressing anti-corruption principles and standards as part of their sustainability reporting.

3. Hypotheses development

At the firm level, corruption negatively affects good corporate governance (Ucar and Staer, 2020). As Saney and Brown (2018, p. 259) stated, *“For companies, corruption impedes the growth of the business, increases costs, and presents serious legal and reputational risks. It also elevates transaction costs, undermines fair competition, impedes long-term foreign and national investment, and distorts development priorities”*.

Previous studies have shown that corruption fuels distrust towards government and public institutions, leading to a greater willingness to violate regulations and lower corporate morale and information transparency (Dass *et al.*, 2016). In high-corruption environments, some companies' managers and employees may tend to disregard social responsibility and engage in illegal actions and unethical practices to reduce costs or increase their market share (Ioannou and Serafeim, 2012). Furthermore, since corruption is contagious (Dong, Dulleck, and Torgler, 2012), such behaviours will encourage other companies to engage in unethical practices to remain competitive. This promotes the spread of bad governance practices that allow or encourage corruption and reduces the propensity to engage in CSR-related policies (Ucar and Staer, 2020). According to Kahan (1998), people overestimate the likelihood of escaping punishment and underestimate the stigma of misconduct when observing that many of their peers commit misconduct or crime.

The institutional theory provides exciting insights into understanding the effect of the level of corruption on the definition of corporate policies. By operating in contexts where unethical practices take the form of repetitive and potentially permanent actions to the point of being considered established behavioural patterns, companies may not recognise CSR reports as an efficient strategy to legitimise their activities. As a result, companies may be less willing to bear the high costs associated with investing in CSR disclosure in highly-corrupt areas as they do not consider this legitimisation strategy advantageous.

Following the institutional theory and assuming that sustainability reporting represents a vital tool for companies to disclose non-financial information (such as the anti-corruption principles and strategies applied), we hypothesize the following:

Hypothesis 1. The perceived level of corruption affects the likelihood of companies addressing standards and principles (i.e., SDGs, UNGC, OECD Guidelines, and ISO 26000) that promote the fight against corruption in their sustainability reports.

In light of the above arguments, we expect corruption to be associated with lower corporate information transparency as companies in highly corrupt environments may not recognise sustainability reporting as an efficient strategy to legitimise their activities.

Previous studies have revealed that differences in social, political, and cultural factors at national and regional levels can affect CSR practices and disclosure in both developed and developing countries (e.g., Baughn *et al.*, 2007; Ali *et al.*, 2017). CSR is an evolving concept, built in relation to the socio-political context and increasingly focused on the intersection of economic, social, and environmental responsibility (Aslaksen *et al.*, 2021; Carroll, 2021). The fact that CSR is social-oriented and, therefore, influenced by wider movements in the social, political and economic realms, implies that the same corporate behaviour can be considered acceptable in one place and unacceptable in another place. As a result, the types of CSR disclosures may vary depending on differences in the national contextual factors in which companies operate. Some authors have pointed out how national values and cultures, as well as political and economic systems, may influence companies' environmental performance and the amount of voluntary CSR disclosure information provided in their annual reports (e.g., Williams, 1999). The socio-cultural environment influences the beliefs and values of organisational members, shaping their actions and, therefore, their sustainable practices and environmental performance. The political-economic environment affects national laws and

regulations, which, in turn, push organisations to be environmentally responsible (Cicchello *et al.*, 2022). If, on one hand, these factors help to establish the rules of the game through which companies acquire legitimacy in society increasing their level of sustainability reporting, corruption, on the other hand, distorts the rules of the game, draining companies of assets that could be employed for socio-environmental purposes. Corruption may be used by companies to avoid having to comply with regulatory constraints, including those aimed at corporate social and environmental responsibility. Therefore, it is reasonable to assume that CSR is positively related to the absence or low level of corruption in a given country.

Roy and Goll (2014) claim that the economic freedom of a country plays a positive role in increasing the level of corporate sustainability reporting. According to the authors, national economic freedom, together with a strong culture of sustainability, can reduce the negative effects of corruption and encourage companies to take responsibility for their impact on social well-being. A country's human development and civic engagement also can play an important role in reducing corruption and increasing sustainable development (Sims *et al.*, 2012). In their study, Baughn *et al.* (2007) find evidence that Asian firms have higher scores of both social and environmental CSR in countries characterised by economic and political freedom and low levels of corruption. Lambsdorff (2007) pointed out that local legislation influences firms' adoption of anti-corruption models. Compliance with specific local, sustainable programs is also a determinant of adopting anti-corruption tools. These programs can involve internal and external actors that can proactively work together to implement anti-corruption principles. Then, the actors should disclose these principles using several tools, such as sustainable reports. Ethical behaviour is also essential for fighting corruption and implies a set of moral, ethical, and anthropological attitudes linked to the local contexts in which companies operate. Gordon and Wynhoven (2003) argued that sectors and countries could affect the information related to anti-corruption models given to stakeholders. The above-mentioned studies all reveal a strong relationship between CSR and countries' economic, political, and social contexts. In addition to the country of origin, the disclosure of CSR information is also influenced by the industry sector in which companies operate. According to the literature, companies in environmentally sensitive or highly polluting sectors (e.g., chemical, mining, gas and petroleum, transportation, manufacturing, and construction) tend to disclose a higher quantity and quality of environmental information in their annual reports (e.g., Buniamin, 2010; Kumar *et al.*, 2021). Assuming that the context, such as the sector and the geographical location, can influence companies' adoption of sustainable strategies based on anti-corruption principles, we developed two further hypotheses:

Hypothesis 2. There will be differences at the sector level in companies' willingness to address standards and principles (i.e., SDGs, UNGC, OECD Guidelines and ISO 26000) that promote the fight against corruption in their sustainability reports.

Hypothesis 3. There will be differences at the regional level in companies' willingness to address standards and principles (i.e., SDGs, UNGC, OECD Guidelines and ISO 26000) that promote the fight against corruption in their sustainability reports.

4. Research design

Data sources and sample

We use hand-collected data from the GRI (Global Reporting Initiative) Sustainability Disclosure Database to answer our research questions. The GRI database displays information about organisations that publish sustainability/integrated reports, whether GRI guidelines-based (e.g., G3, G3.1, and G4) or otherwise, signalling for each of them the presence of any explicit reference to the UNSDGs. From the GRI database, we obtained data on 1,171 organisations in Asia and Africa's low- and middle-income countries (i.e., countries with a gross national income per capita between \$996 and \$3,895) that have published a sustainability report following the G4 Sustainability Reporting Guidelines (G4 Guidelines) in the year 2017. In particular, we collected the following types of information on each organisation:

- Name;
- Size (i.e., small, medium, and large);
- The industry sector in which it operates;
- The country of origin;
- The ownership structure (e.g., private vs non-private³); and
- The status (i.e., listed and non-listed).

Furthermore, we collected information on the integrated nature of the report and on the adoption and the level of external assurance made by professional accountants (i.e., reasonable/high, limited/moderate, combination, or not specified). Companies can take

³ Non-private companies include (i) State-Owned Companies (legal entities created by the government to undertake commercial activities on the government's behalf); (ii) Cooperatives (organisations jointly owned and democratically controlled by the employees and/or end-users of the goods and services produced to meet their common needs); (iii) Subsidiaries (companies controlled by another company through the ownership of 50% or more of the voting stock); (iv) Public Institutions (administrative units of government); and (v) Partnerships (formation of businesses and/or individuals to advance their business interests).

advantage of external assurance services to ensure transparency and improve the credibility, robustness, accuracy, and trustworthiness of information disclosed in their sustainability reports. External assurance services are independent professional services designed to lead to published conclusions about the quality of a report and the information included therein (Global Reporting Initiative, 2013). External assurance service providers are usually professional accountants with expertise and competency in sustainability management processes and disclosures. Assurance providers offer two levels of assurance: “reasonable assurance” (i.e., high but not absolute) or “limited assurance” (i.e., moderate). These two levels can be used individually or in combination. The level of assurance indicates the extent and depth of the work the assurance provider has undertaken and, therefore, the degree of confidence that report users should be able to have in the assured report. The higher the level of assurance, the more rigorous the assurance process is. As a result of cost constraints and other feasibility issues, an organisation may also choose to have a reasonable level of assurance for some indicators and a limited level for others.

We also extracted information about explicit references to, or the application in, the sustainability reports of the following standards and principles that promote, among other things, anti-corruption as a core subject of social responsibility and sustainable development:

- (i) the OECD Guidelines defining standards for responsible business conduct in areas such as labour rights, human rights, environment, information disclosure, bribery prevention, consumer interests, competition, taxation, and intellectual property rights;
- (ii) the United Nations Global Compact (UNGC), whose tenth Principle states that “Businesses should work against corruption in all its forms, including extortion and bribery” (see Appendix 1);
- (iii) ISO 26000 clauses addressing various core subjects of social responsibility including anti-corruption commitment;
- (iv) the UN Sustainable Development Goals (SDGs) (see Appendix 2), whose GOAL 16 aims to “Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels,” and whose TARGET 16.5 aims, more specifically, to “Substantially reduce corruption and bribery in all their forms.” The 17 SDGs are integrated - that is, they recognize that action in one area will affect outcomes in other areas and that development must balance social, economic, and environmental sustainability.

Finally, we matched the names of the 1,171 companies extracted from the GRI database to entries in the Orbis database in order to collect data on the financial performance of the organisations (i.e., return on assets (ROA) and Tobin's q). After combining the two databases, we obtained a final sample of 1,171 observations. Table 1 presents the characteristics of the sample by region and country. Table 2 presents the characteristics of the sample by region and sector.

[INSERT TABLES 1 AND 2]

Identification strategy

Participation in the UN Global Compact variables was used as dependent variables to track whether the reporting company had indicated that its report addresses one of the standards mentioned above or principles promoting, among other things, anti-corruption as a core subject of social responsibility and sustainable development. Therefore, we include in our model the following dependent variables:

- “SDGs”—a binary variable taking value 1 when the company addresses the UN SDGs in its sustainability report, and 0 otherwise;
- “UNGC”—a binary variable taking value 1 when the company addresses the UNGC principles in its sustainability report, and 0 otherwise;
- “OECD”—a binary variable taking value 1 when the company addresses the OECD guidelines in its sustainability report, and 0 otherwise; and
- “ISO”—a binary variable taking value 1 when the company uses the ISO clauses in its sustainability report, and 0 otherwise.

The independent variable of interest is the Corruption Perceptions Index score (“CPI”), which captures country-level variations in corruption exposure. The CPI is a composite index based on subjective perceptions produced by Transparency International. The index currently ranks 180 countries on a scale from 0 (high level of corruption) to 100 (low level of corruption). Accordingly, we used sector affiliation and region of origin as independent variables to indicate sectoral and regional differences in anti-corruption reporting. We carefully considered and recorded other variables that, according to prior research, may be correlated with sustainability reporting (Ali *et al.*, 2017; Girón *et al.*, 2022a, 2022b). First, since previous studies have shown that levels of socioeconomic development impact the likelihood of reporting quality (Fifka, 2013; Cicchiello *et al.*, 2021), we include the 2019 Human Development Index (HDI) calculated by the United Nations Development Programme (UNDP, 2020). The HDI is a

composite index measuring average achievement in three basic dimensions of human development: long and healthy life, knowledge, and a decent standard of living. We consider the HDI a key indicator of socioeconomic development within the regions analysed since it ranks countries in terms of their healthcare, education, and income per capita statistics. In addition, since the company size (small, medium, or large) and its status (listed or non-listed) have long been identified as drivers of corporate sustainability disclosures (e.g., Ali *et al.*, 2017; Kazemikhasragh *et al.*, 2021), we included them as control variables. Following Girón *et al.* (2020), we control companies' financial performances by including the Return on Assets (ROA) and Tobin's q. ROA is given by the ratio of net income to total assets. Tobin's q is the ratio of market capitalization to total assets. It measures the wealth generated by a company for its shareholders, assessing how much more a company is worth compared to its assets' book value. A Tobin's q above 1 indicates that the company is worth more than the sum of its assets. These variables have been extensively used in the empirical literature as a proxy for firm performance (Zhang, 2012; Arayssi *et al.*, 2016; Kazemikhasragh *et al.*, 2021). Data sources and descriptions of variables are presented in Table 3.

[INSERT TABLE 3]

To investigate whether the perceived level of corruption influences companies' decision to address principles and standards aimed, among other things, at the fight against corruption in their sustainability reporting, we use the Probit model with the following model specification:

$$Y = \beta_0 + \beta_1(X) + \varepsilon_i \quad (1)$$

Where Y represents our set of different dependent variables (i.e., SDGs, UNGC, OECD Guidelines, and ISO), X defines the independent variables (i.e., CPI, region, sectors, and so on), and ε_i represents the error term. We prefer to use the Probit model because our dependent variables of interest are binary, and this methodology is commonly used in the economic literature (see, for example, Stock and Watson, 2015; Martínez-Ferrero and García-Sánchez, 2017). Tables 4 reports the summary statistics.

[INSERT TABLE 4]

The summary statistics show that 94% of the companies in our sample are located in Asia. Only 29% of the companies are active in the financial sector, and 18% are involved in the

mining sector. Moreover, 36% of the firms in the sample used the SDGs in reporting, 22% used the UNGC, and 18% applied the ISO clauses. Finally, 43% of the organisations adopted external assurance services for their sustainability reports provided by an independent service provider such as an accountancy firm, an engineering firm, or a small consultancy firm in the form of reasonable or limited assurance.

5. Empirical results and discussion

Table 5 summarizes the research findings of our analysis. Results reveal that the perceived level of corruption is significantly related to companies' disclosure of standards and principles that promote, among other things, the fight against corruption. Specifically, the analysis shows that companies operating in countries perceived to be highly corrupt are significantly less likely to address SDGs in their sustainability reports (SDGs, $b = -0.02$, $p < .05$). Therefore, Hypothesis 1 predicts that the perceived level of corruption affects the likelihood of companies to address standards and principles that promote the fight against corruption in their sustainability reports is supported. These findings confirm previous studies examining the link between the level of corruption in a country and the level of ESG disclosure (e.g., Baldini *et al.*, 2018). According to these studies, companies are more likely to engage in unethical practices in countries characterized by high levels of corruption. Therefore, to avoid revealing corrupt acts, they tend to have lower levels of information transparency in their reporting.

Findings also show substantial differences in regional and sector-level sustainability reporting supporting Hypotheses 2 and 3. Results show evident differences at the regional level across the sample, with Asian companies showing a significantly higher level of sustainability disclosure than African companies. These results can be explained by the severe corruption problems existing in Africa. According to the 2021 Corruption Perceptions Index (CPI), 44 out of 49 African countries assessed on the CPI index still score below 50 out of 100. Sub-Saharan Africa shows an average score of 33 out of 100, with no significant improvement in the CPI over the last years.

In contrast, countries in Asia (especially in the Asia Pacific) have made great strides in controlling bribery. However, an average score of 45 out of 100 on the CPI in the region shows that much more needs to be done to solve its corruption problems. These results, moreover, may be due to the distribution of the sample, which is made up predominantly of Asian organisations. Looking at the four sectors included in the sample, agriculture and financial services companies show significantly higher reporting activity than those operating in the

construction and mining sectors, which report less frequently than their peers. This evidence reflects the different impacts of corruption across sectors (Luo, 2011) and sector-specific differences in corporate non-financial reporting (Rosati and Faria, 2019). Here, we confirm previous results from different sectors that hold low- and middle-income countries in Asia and Africa (Barkemeyer *et al.*, 2015)—according to a report by the Organisation for Economic Co-operation and Development (OECD, 2014), drilling for oil and digging for minerals top a new list of the world’s most corrupt industries.

Along with construction, they make up the top three. Among the 427 cases of bribery in international business analysed, 19% and 15% of the cases occurred in the mining and construction industries, respectively. In most cases, management-level employees were the ones who paid or authorized the bribes, whereas the company chief executives were involved in 12% of the cases. They either paid the bribes themselves or authorized them. In contrast to these sectors, there is a lower risk of corruption, extortion, or fraud in agriculture and financial services.

Regarding the control variables, our results are generally consistent with those obtained from previous studies. With Khasru *et al.* (2019), we report that the level of socio-economic development positively impacts companies’ decision to report by addressing sustainability principles and standards and, thus, increasing transparency. Results show a direct and significant relationship between the Human Development Index (HDI) and all dependent variables (i.e., SDGs, UNGC, ISO 26000, and OECD Guidelines). In the more socio-economically developed countries, characterized by a high degree of press freedom, access to information about public expenditure, more robust standards of integrity for public officials, and independent judicial systems, corruption is less tolerated or accepted. Grand corruption thrives in socio-economic contexts plagued by untrustworthy and malfunctioning public institutions such as the police and judiciary. In these contexts, anti-corruption laws (where they exist) are often skirted or ignored, and a culture of impunity prevails among politicians, prosecutors, and oligarchs. Companies unduly influence laws and institutions to shape policies, the legal environment, and the broader economy to their interests. The population becomes tolerant of bribery and has no faith in the possibility of positive change through anti-corruption reforms. In contrast, extortion becomes perceived as usual in public and private life.

Among the results, company size shows a significant negative impact on SDGs reporting. These results could be explained by the fact that larger companies may be more vulnerable and exposed to extortion by corrupt officials due to their greater “ability to pay.” On the other hand, smaller companies can more easily make informal arrangements to avoid taxes, regulations,

and interactions with bureaucrats. Such informality could help smaller companies avoid corruption (Schiffer *et al.*, 2001). Higher levels of economic performance (measured by the ROA) give organisations the opportunity (and in some cases the obligation⁴) to dedicate resources to implementing internal control measures and adopting anti-corruption programs. Results also show that listed companies are more likely than unlisted ones to address one of the many principles and standards against corruption in their sustainability reporting. ROA shows a significant positive impact only on OECD Guidelines. Finally, results reveal that external assurance has a positive and significant relationship with SDGs and OECD guidelines. This result is in line with the voluntary nature of adopting an external assurance, which requires a certain level of transparency. According to Simnett *et al.* (2009), companies that voluntarily decided to ensure their sustainability reports were less likely to misbehave during the assurance process to avoid harming their reputations. Furthermore, Simnett *et al.* (2009) provide evidence that demand for assurance engagements tends to be higher in countries with a rigorous legal environment, where the risk of corruption is lower, and the perceived credibility of assurance is strongest.

[INSERT TABLE 5]

6. Summary and conclusions

In this paper, we investigate whether an important feature of the institutional context, namely the perceived level of corruption, affects the corporate strategic decision to address principles and standards aimed, among other things, at fighting corruption (i.e., SDGs, UNGC, ISO 26000, and OECD Guidelines) in their sustainability reporting. Second, we expand our investigation to capture whether the industry and geographical origin context condition this relationship. In this light, we seek to understand whether and to what extent institutional elements, which are beyond the immediate control of managers, affect the instigation of sustainability disclosures, a strategy through which firms signal their commitment towards local communities and the environment, manage stakeholder pressures, and gain the legitimacy they need to succeed (Hahn and Kühnen, 2013). We find that the perceived level of corruption

⁴ The new Foreign Corrupt Practices Act (FCPA) in the United States and the expansion of the new French legal framework for the fight against corruption, SAPIN II, make it compulsory for companies with more than 100 million Euros in annual turnover to implement an anti-corruption compliance programme.

is negatively associated with organisations' sustainability reporting practices, becoming more resilient in the construction and mining sectors. In light of the institutional theory, we argue that in highly corrupt contexts—where “the pursuit of opportunistic private gains is prioritised over values such as the common good and collectivity” (Chantziaras *et al.*, 2020, p.371)—the adoption of dubious practices, corrupt behaviour models, and self-serving managerial activities are more likely to be conceived of as normal. In such contexts, managers may consider adopting socially responsible behaviours and guidelines less necessary. Consequently, they may be reluctant to engage in sustainability reporting activities since their appeal to legitimacy would, in any case, be limited.

The implications of our findings are important for both companies and policymakers. First, our evidence indicates that the perceived level of corruption in the country influences companies' general approach to sustainability reporting, reducing the breadth of information provided in these reports. This evidence could stimulate companies to implement severe and effective anti-corruption measures and policies in their strategies and operations. Although there is no single cure for the disease of corruption, making the fight against corruption an integral part of the company culture and operations and adopting a zero-tolerance policy can discourage corrupt practices while promoting sustainability reporting. Making inroads against corruption requires better and more open processes, professional accountability systems, and innovative technologies to capture, analyse, and share data to prevent, detect, and deter corrupt behaviour (Trequattrini *et al.*, 2022). In the business context, the fight against corruption could bring long-term benefits that far outweigh the costs of corruption phenomena, even if both benefits and costs are difficult to measure (Malanski and Pòvoa, 2021).

Second, we question whether anti-corruption disclosure standards - used by organisations as part of broader sustainability reporting - are truly effective tools in the fight against corruption, given that, in the most corrupt countries, businesses continue not to disclose information on the subject. When approaching anti-corruption efforts at the country level, policymakers should put institutional systems and incentives in place to prevent corruption. At the same time, they should introduce the highest standards of integrity to help foster greater trust and accountability and to build clean, accountable, and transparent governments, particularly in more fragile environments.

In most African and Asian countries, there is still no mandatory ESG reporting legislation; where it exists, it only covers publicly listed companies (Songi and Dias, 2019). For sustainability reporting to become an effective tool in the fight against corruption, African and Asian regulators must move away from self-regulatory sustainability reporting models and opt

for sanction-based models or hybrid models that combine mandatory and voluntary approaches. The International Financial Reporting Standards Foundation (IFRS) is creating a new standard-setting board - International Sustainability Standards Board (ISSB)- to set IFRS Sustainability Standards. Policymakers in emerging economies should expand the category of the companies that must adopt IAS\IFRS so they will also adopt the IFRS sustainability standards that ISSB will issue.

Finally, our findings reinforce the urgent need for Asian and African governments to increase the effectiveness of anti-corruption commitments and initiatives to alleviate the devastating effects of corruption on the local population, businesses and society (Ajide and Olayiwola, 2020).

We also note some limitations, which may inspire future research. First, like previous studies on sustainability reporting, this study looks only at organisations that have published sustainability reports following the G4 Sustainability Reporting Guidelines (G4 Guidelines). Therefore, a longitudinal study examining the effect of corruption on sustainability reporting over time would make a valuable contribution to the literature. Second, we focus on organisations in Asia and Africa's low- and middle-income countries, and the degree to which our findings may be generalized to other regions is not addressed. Thus, extending our analysis to a larger sample that would be richer in terms of country of origin appears to be warranted. Third, there are complex dynamics regarding the various host countries in which the analysed organisations operate, which are, in turn, likely to influence engagement in sustainability reporting. This area warrants further research. Fourth, in this paper, we use the country where the company is headquartered to determine the perceived level of corruption. However, due to the lack of data, we could not examine large MNEs (Multinational Enterprises) operating in multiple countries where the level of corruption can be very different from the country where they are headquartered. Future studies should investigate this aspect. Fifth, current understandings of sustainable reporting practices in corrupt contexts could be further enriched by employing behavioural and organisational frameworks as well as alternative research methods, such as in-depth interviews. Finally, future studies could investigate whether the negative impact of corruption on corporate sustainability disclosure is stronger for heavy-polluter firms than their counterparts.

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Table 1. Characteristics of the sample by region and country.

Asian regions and countries	N	(%)
Bahrain	1	0.1%
Bangladesh	5	0.4%
Cambodia	1	0.1%
Hong Kong	49	4.2%
India	52	4.4%
Indonesia	55	4.7%
Israel	11	0.9%
Japan	74	6.3%
Kazakhstan	1	0.1%
Korea, Republic of	58	4.9%
Kuwait	2	0.2%
Macao	2	0.2%
Mainland China	78	6.7%
Malaysia	24	2.0%
Mauritius	1	0.1%
Oman	3	0.3%
Pakistan	4	0.3%
Palestinian Territories	1	0.1%
Philippines	14	1.2%
Qatar	2	0.2%
São Tomé and Príncipe	1	0.1%
Saudi Arabia	3	0.3%
Singapore	34	2.9%
Sri Lanka	56	4.8%
Taiwan	443	37.8%
Thailand	76	6.5%
Turkey	26	2.2%
United Arab Emirates	11	0.9%
Vietnam	17	1.4%
Total Asia	1105	94.4%
African regions and countries	N	(%)
Cote d'Ivoire	3	0.3%
Egypt	3	0.3%

Kenya	1	0.1%
Lebanon	1	0.1%
Madagascar	1	0.1%
Marocco	1	0.1%
Nigeria	6	0.5%
South Africa	44	3.8%
Uganda	1	0.1%
Zimbabwe	5	0.4%
Total Africa	66	5.6%

Table 2. Characteristics of the sample by region and sector.

Region	Sectors	N	(%)
Asia			
	Agriculture	146	13.2
	Construction	152	13.7
	Financial services	309	26.4
	Mining	189	17.1
	Others	309	28
Africa			
	Agriculture	2	3
	Construction	8	12.1
	Financial services	35	53
	Mining	16	24.2
	Others	5	7.6

Table 3. Description of variables and data sources.

Variable	Symbol	Description	Data sources
<i>Dependent variables</i>			
SDGs reporting	<i>SDGs</i>	Dummy variable equals to 1 whether the organisation reports with addressing SDGs, and 0 otherwise.	GRI
UNGC membership	<i>UNGC</i>	Dummy variable equals to 1 whether the organisation reports with addressing UNGC and its principles, and 0 otherwise.	GRI
OECD Guidelines	<i>OECD</i>	Dummy variable equals to 1 whether the organisation reports with addressing OECD guidelines, and 0 otherwise.	GRI
ISO 26000	<i>ISO</i>	Dummy variable equals to 1 whether the organisation uses ISO clauses, and 0 otherwise.	GRI
<i>Independent variables</i>			
Corruption Perceptions Index	<i>CPI</i>	The perceived levels of public sector corruption in a given country, scoring from 0 (highly corrupt) to 100 (very clean).	Transparency International
Region	<i>Region</i>	Dummy variable equals to 1 whether the company headquarter is located in Asia, and 0 otherwise	GRI
Agriculture	<i>Agr</i>	Dummy variable equals to 1 whether the company operates in the agriculture sector, and 0 otherwise.	GRI
Construction	<i>Con</i>	Dummy variable equals to 1 whether the company operates in the construction sector, and 0 otherwise.	GRI
Financial Services	<i>Fin</i>	Dummy variable equals to 1 whether the company operates in the financial services sector, and 0 otherwise.	GRI
Mining	<i>Min</i>	Dummy variable equals to 1 whether the company operates in the mining sector, and 0 otherwise.	GRI
Other sectors	<i>Oth</i>	Dummy variable equals to 1 whether the company operates in sectors other than agricultural, construction, financial services and mining, and 0 otherwise.	GRI

IFC standard	<i>IFC</i>	Dummy variable equals to 1 whether the organisation uses IFC standards, and 0 otherwise.	GRI
Human Development Index	<i>HDI</i>	The Human Development Index (HDI) is a summary measure of average achievement in key dimensions of human development.	UNDP
Company size	<i>Size</i>	Dummy variable equals to 1 whether the organisation is small, equals to 2 whether organisation is medium and equals to 3 whether organisation is large.	GRI
Company status	<i>Status</i>	Dummy variable equals to 1 whether the organisation is listed on the stock exchange, and 0 otherwise.	GRI
Return on Assets	<i>ROA</i>	Net income/total assets	ORBIS
Tobin's Q	<i>Tob</i>	Market Capitalisation/Total Assets.	Orbis
External Assurance	<i>External</i>	Dummy variable equals to 1 whether the sustainability reporting is verified by an external assurance provider, and 0 otherwise.	GRI

Table 4. Summary statistics.

Variable	Obs.	Mean	Std. Dev	Min	Max
Region	1,171	0.943638	0.230718	0	1
Agr	1,171	0.125821	0.272077	0	1
Con	1,171	0.136767	0.280236	0	1
Fin	1,171	0.293511	0.370237	0	1
Min	1,171	0.175213	0.334424	0	1
Oth	1,171	0.268688	0.357139	0	1
Size	1,171	2.461144	0.612534	1	3
Status	1,160	0.717931	0.408949	0	1
SDGs	1,171	0.363792	0.481295	0	1
UNGC	1,171	0.222886	0.416361	0	1
ROA	1,064	4.526939	9.657233	-72.19	68.542
Tob	908	0.844276	1.196667	0.03	13.65
External	1,171	0.432963	0.495697	0	1
IFC	1,171	0.015372	0.123078	0	1
ISO	1,171	0.187874	0.390778	0	1
CPI	1,168	52.48973	16.63088	17	84
HDI	726	0.790748	0.105316	0.525	0.941

Table 5. Results of statistical analysis.

Variables				
(dependent variable)	SDGs	UNGC	OECD	ISO
CPI	-0.02*** (-5.34)	-0.01*** (-3.21)	-0.05*** (-5.55)	0.01 (1.36)
Agr	0.05** (2.27)	0.08** (1.99)	0.14** (2.21)	0.27** (2.32)
Con	-0.12** (-2.47)	-0.13** (-2.42)	-0.19** (-2.13)	-0.06** (-2.00)
Fin	0.01** (2.23)	0.02** (2.06)	0.02** (2.32)	0.36** (2.29)
Min	-0.18** (2.44)	-0.22** (2.42)	-0.27** (-2.66)	-0.07** (-2.27)
Oth	0.02** (2.24)	0.01** (2.22)	0.02** (1.99)	0.38** (2.58)
Region	0.26* (-1.70)	0.85** (-3.25)	0.55 (0.31)	0.24** (2.16)
Size	0.10 (0.98)	0.07 (0.65)	-0.54*** (-2.76)	0.12 (0.93)
Status	0.70* (1.89)	0.63* (1.70)	1.74*** (2.72)	0.03** (2.22)
ROA	0.01 (0.95)	0.01 (1.44)	0.07** (2.41)	-0.01 (-0.82)
Tob	-0.05 (-0.74)	-0.03 (-0.46)	-0.16 (-1.47)	0.00 (0.03)
External	0.64*** (5.01)	0.48*** (3.60)	0.67*** (2.59)	0.30** (2.09)
IFC	0.20 (0.56)	0.55 (1.40)	0.96** (2.10)	0.01 (0.01)
HDI	3.28*** (4.08)	3.18*** (3.78)	3.58*** (9.67)	2.60*** (3.15)
Intercept	Yes	Yes	Yes	Yes
Prob>Chi2	0,000**	0,00**	0,00**	0,00**

***p value < 0.01, **p value < 0.05, and *p value < 0.1. t-statistics in parentheses.

Appendix 1. The Ten Principles of the UN Global Compact

Human Rights

- Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights; and
- Principle 2: make sure that they are not complicit in human rights abuses.

Labour

- Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;
- Principle 4: the elimination of all forms of forced and compulsory labour;
- Principle 5: the effective abolition of child labour; and
- Principle 6: the elimination of discrimination in respect of employment and occupation.

Environment

- Principle 7: Businesses should support a precautionary approach to environmental challenges;
- Principle 8: undertake initiatives to promote greater environmental responsibility; and
- Principle 9: encourage the development and diffusion of environmentally friendly technologies.

Anti-Corruption

- Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.

Appendix 2. The Sustainable Development Goals (SDGs)

1. No poverty: End poverty in all its forms everywhere.
2. Zero hunger: End hunger, achieve food security and improved nutrition and promote sustainable agriculture.
3. Good health: Ensure healthy lives and promote well-being for all at all ages.
4. Education: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.
5. Gender equality: Achieve gender equality and empower all women and girls.
6. Clean water: Ensure availability and sustainable management of water and sanitation for all.
7. Clean energy: Ensure access to affordable, reliable, sustainable and modern energy for all.
8. Economic growth: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.
9. Industry and infrastructure: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.
10. No inequality: Reduce inequality within and among countries.
11. Sustainability: Make cities and human settlements inclusive, safe, resilient and sustainable.
12. Responsible consumption: Ensure sustainable consumption and production patterns.
13. Climate action: Take urgent action to combat climate change and its impacts.
14. Life underwater: Conserve and sustainably use the oceans, seas and marine resources for sustainable development.
15. Life on land: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.
16. Peace & justice: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.

17. Partnership: Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development.