

## RESEARCH ARTICLE

# Voluntary sustainability assurance in small and medium-sized entities: The role of country origin in Europe

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## Abstract

The assurance of sustainability information by small and medium-sized entities (SMEs) has not attracted much research interest to date. To rectify this, we draw on a sample of European firms (from the EU, the United Kingdom and Norway) extracted from the Global Reporting Initiative (GRI) database and explore the disclosure variable in relation to country-specific factors. Assurance rates are found to be low among SMEs, and moreover, the level of disclosure is limited. The assurance market is dominated by accounting firms, above all by the Big Four. Legal origin is found to be a highly relevant factor, with Scandinavian countries presenting the highest percentage rates of sustainability report assurance. Among the cultural variables analysed, power distance, masculinity and uncertainty avoidance have a significant negative impact on the decision to assure sustainability information. Overall, the study serves to enhance understanding of SME practices in different countries of origin.

## KEYWORDS

big four, Europe, GRI, SMEs, sustainability assurance, sustainability information

## 1 | INTRODUCTION

Sustainability information has grown markedly in volume over the last few decades; indeed, since the 1990s, the number of firms that provide such information ad hoc has risen dramatically. Yet, in this field of sustainability reporting, assurance represents a particular challenge, the main difficult being one of complexity given that the problem is not only one of having to verify that the information is true but also of having to satisfy the information needs of various stakeholders. Ultimately, however, the multidisciplinary nature of sustainability reports serves to reduce the level of information asymmetry.

Recently, the International Federation of Accountants published a study (IFAC, 2021) of the state of play in global sustainability assurance in which it reported some interesting statistics. A review of the 100 largest companies according to market capitalisation showed that

91% of them report some level of sustainability information, while 51% of these provide some level of sustainability assurance. Of these assurance guarantees, 63% were conducted in the main by audit firms, with 88% of these making use of the International Standard on Assurance Engagements (ISAE) 3000, resulting, predominantly, in a limited opinion (83%). The study, moreover, highlights significant differences in sustainability reporting habits across both jurisdiction and industrial sector, with energy, technology and telecommunications presenting the highest percentage of sustainability reports.

Three major organisations have issued principle-based frameworks for addressing assurance: *AccountAbility* (AA1000), the *International Auditing and Assurance Standards Board* (IAASB) (ISAE 3000) and the *Global Reporting Initiative* (GRI). The AA1000 Assurance Standard seeks to provide stakeholders with assurance on the way an organisation manages sustainability performance and how it communicates

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this information in its sustainability disclosures, without, however, verifying the reliability and quality of the reported information (AccountAbility, 2018a, 2018b). In contrast, the IAAS (by way of ISAE 3000) places greater emphasis on enhancing the degree of confidence of the intended users of the information, while the GRI highlights the quality of the report and the information contained in it.

In the absence of a single framework, companies often simply replicate the assurance practices of the leading and most successful organisations (DiMaggio & Powell, 1983; Meyer & Rowan, 1977). Moreover, the potential users of the reports also differ: Thus, AA1000 clearly focuses on stakeholders concerned about an organisation's activity; GRI on those concerned most about the usefulness of the quality of information; and ISAE 3000 on those concerned with obtaining an opinion about the degree of confidence in an organisation.

The aim of this study is to examine the determinants of assurance in small and medium-sized entities (hereinafter, SMEs) with a specific focus on country differences on the European continent. To do so, we analyse two characteristics: disclosure of information and country-specific features. We opt to focus our study on SMEs based on the conviction that such entities may well differ from larger organisations with more resources—First, their limited capabilities make it more difficult for them to access assurance; and, second, the demand for assurance from stakeholders is not as great as that placed on more visible entities. Moreover, SMEs tend to have stronger ties with the environment in which they operate, making them more sensitive to the idiosyncrasies of their country of origin. To the best of our knowledge, there are, to date, no results in the literature as to how assurance engagement is provided in SMEs in Europe and by whom.

This paper is organised as follows. The first section presents a brief overview of the previous literature on assurance. The second section examines the sample used in this study as taken from the GRI database, presents the variables employed and describes the methodology. The third section reports the results and the fourth discusses these outcomes and addresses the limitations of the study.

The outcomes of this study are encouraging and show that the determinants of the assurance of sustainability information in SMEs are similar to those reported by larger corporations, albeit with some differences. The assurance of reports is not a widespread practice in SMEs and where they are conducted they are primarily undertaken by financial auditors. There is, moreover, considerable variation between sectors and across countries. Our findings suggest that disclosure of information, legal origin and the sociological features of each country are determinants of voluntary assurance, which means this practice is far from homogeneous across Europe.

The main conclusion to be derived from this study is that assurance is not a generalised practice among SMEs and that it is, in the main, conducted by accountants. However, the greater the amount of sustainability information disclosed, the more likely it is for that information to be assured. Scandinavian SMEs are more likely to assure reports than enterprises elsewhere in Europe while a shorter power distance, stronger feminine values and less tendency to avoid uncertainty encourage this assurance decision.

## 2 | BACKGROUND

The assurance of sustainability information has been studied from a range of different perspectives. (Below, Figure 1 showcases the main elements that have been involved in examining assurance.) Here, we adopt a deductive approach, one that takes as its starting point a global analysis of each of the following issues:

1. *Why assure?*: Assurance has been examined from various perspectives, but, primarily, from those afforded by legitimacy, stakeholder and institutional theories, it being concluded that the motivation to publish assurance reports responds to either a substantive or symbolic intention on the part of the given firm (Boiral & Gendron, 2011).
2. *Determinants*: The extant literature has analysed both the drivers and inhibitors of assurance as determinants of the process and they include both internal—size, leverage, real and potential costs and profitability—and external factors—institutional, cultural, country-specific, and so on.
3. *Who assures and how?*: Undertaken by both accountants and non-accountants, applying one or other of two sets of rules or standards—specifically, ISAE 3000 or AA1000 Assurance Standard.
4. *Output*: Typically, authors have examined such characteristics as quality, reliability and credibility of sustainability reports, producing critical reviews of assurance practices and documenting their effects on firms.

This general framework allows us to firmly locate our particular focus of interest. Here, by focusing our study on one specific type of

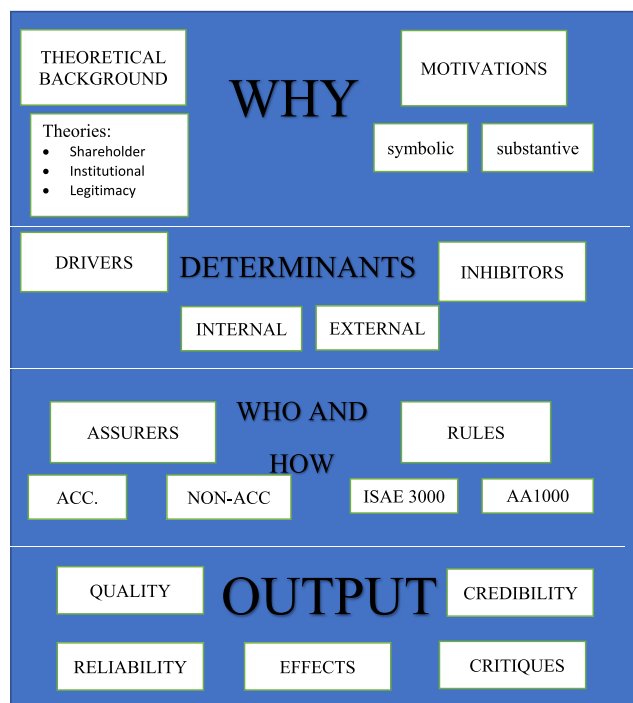


FIGURE 1 Development of assurance process in sustainability

entity, it is the determinants of sustainability assurance and the assurers themselves that attract most of our attention.

## 2.1 | Drivers and inhibitors

The determinants of assurance tend to be external and firm-specific (Alrazi et al., 2015; Farooq & de Villiers, 2017; Simnett et al., 2009). Farooq and De Villiers (2017) categorise them according to the factors that drive the demand for, and inhibit the supply of, assurance. In a similar vein, Perego and Kolk (2012) stress the relevance of both external institutional pressures and internal resources as drivers of assurance, again identifying inhibitors that can impede adoption (including, cost and time, the lack of regulatory pressure and the cost of reputational impact) (Park & Brorson, 2005).

The main external elements can be identified as follows:

- **Country characteristics:** These may play a pivotal role in accounting for the motivation to assure relevant information (Fernández-Feijoo et al., 2019; Zorio et al., 2015). Factors that can contribute to differences between countries include enforcement within the legal system (Mancilla & Saavedra, 2015; Martínez-Ferrero & García-Sánchez, 2017), regulatory pressures (Gillet-Monjarret, 2018) and the costs of litigation (Kolk & Perego, 2010; Simnett et al., 2009). The orientation towards shareholders or stakeholders (Braam & Peters, 2018; Simnett et al., 2009) can also account for differences in assurance practices. In a stakeholder-oriented system, the demand for more comprehensive reporting of an organisation's performance drives an increase in the extension of CSR reporting (see, for example, Alrazi et al., 2015; Deegan & Blomquist, 2006; Hahn & Kühnen, 2013; Maroun, 2020; Patten, 2002). In this environment, companies provide more detailed corporate social responsibility (CSR) disclosures to ensure that the information needs of stakeholders are satisfied (Deegan & Blomquist, 2006; Solomon, 2010). They are also more likely to have the disclosures assured independently (Simnett et al., 2009) to signal the credibility of these reports (Hahn & Kühnen, 2013; Simnett et al., 2009).
- **Investor protection:** Herda et al. (2014) and Perego and Kolk (2012) find that firms working in a weak investor protection environment are more likely to rely on higher quality assurance services. As such, weak investor protection is inversely related to the use of assurance (Kolk & Perego, 2010). The relationship between the rule of law and the use of external assurance is a matter of debate: Some authors conclude it to be negative (Herda et al., 2014; Simnett et al., 2009); others insist it is positive and serves to reinforce a firm's legitimacy (Solomon, 2010). The stakeholder-oriented environment associated with CSR assurance (Herda et al., 2014; Kolk & Perego, 2010; Simnett et al., 2009) is also characterised by codified best practice for corporate governance. It would be reasonable to assume that companies with sound corporate governance systems are able to understand sustainability/CSR issues better than other entities.
- **Industry:** For more than 25 years, researchers have explored CSR reporting by industrial sector (Cowen et al., 1987; Gray et al.,

1995; Patten, 1991, among others). The firms with a larger social or ecological footprint, and those that need to enhance their credibility tend to assure CSR information (De Villiers & Alexander, 2014; Kolk & Perego, 2010; Perego & Kolk, 2012; Simnett et al., 2009; Vaz-Ogano et al., 2018). This is probably because increased environmental and social risks cause the level of stakeholder scrutiny to rise (De Villiers & Maroun, 2017). However, other studies conclude that industry has no effect on assurance (Mancilla & Saavedra, 2015; Segui-Mas et al., 2015 for cooperatives). The business sector in which the company operates is also a determinant of its level of regulatory compliance (Branco et al., 2014; Cho et al., 2014; Sierra-Garcia et al., 2018; Zorio et al., 2013, among others). Maroun (2020) stresses that the sector is a key determinant of the environmental and social impact of the industry (Herda et al., 2014; Kolk & Perego, 2010; Simnett et al., 2009).

- **Cultural values:** A growing number of studies have investigated the impact of culture on financial reporting practices (Chen et al., 2015; Gray et al., 2015; Han et al., 2010; Jaggi & Low, 2000; Tsakumis, 2007, among others). The findings reveal a narrow association with different cultural aspects, including accounting rules, cash holdings and the adoption of IFRS rules. The relationship with non-financial reporting also reveals the significant impact of Hofstede's cultural dimensions (Gallego-Alvarez & Ortas, 2017; Garcia-Sanchez et al., 2016; García-Sánchez et al., 2013; Khelif, 2016; Orij, 2010). Assurance has also been analysed in relation to national culture (Kolk & Perego, 2010; Maroun, 2017; Maroun, 2018; Simnett et al., 2009), specifically in integrated reporting (IR) assurance.

The main internal, firm-specific, factors can be identified as follows:

- **Size:** Crucial in the sense that the larger the firm, the greater the probability it will assure its CSR information (Branco et al., 2014; De Villiers & Alexander, 2014; Gillet-Monjarret, 2018; Patten, 1991; Simnett et al., 2009; Zorio et al., 2015). Moreover, the extensiveness of a firm's reports is a good indication of the availability of resources for operating the reporting infrastructure (Cho et al., 2014; Cohen & Simnett, 2015; Maroun & Atkins, 2015; Perego & Kolk, 2012). Yet, smaller firms with lower profitability may also be associated with the existence of assurance reports (Herda et al., 2014), given that public entities are more likely to use assurance (Mancilla & Saavedra, 2015; Vaz-Ogano et al., 2018 in Mexico).
- **Financial indicators:** Including such factors as leverage and profitability. While Simnett et al. (2009) found that they are not always determinants of CSR assurance, Branco et al. (2014) in the Portuguese setting and Cho et al. (2014) for a sample of Fortune 500 companies report slightly different results. Other authors suggest that having the resources to cover the cost of these services is the main reason well-established companies assure their reports (Conradie et al., 2020; Park & Brorson, 2005). On average, there is a positive association between firm size, profitability and leverage, on the one hand, and the use of assurance, on the other (Branco

et al., 2014; Maroun, 2020; Perego, 2009; Zorio et al., 2013). This is especially the case when mature corporate governance systems are in place and when sustainability is seen as a strategic issue, rather than as a compliance exercise (Cheng et al., 2015; Kend, 2015).

Factors related with the disclosure of information:

- The emphasis firms place on the role of the GRI guidelines has been confirmed by recent studies (Mahoney et al., 2013). Those that follow the GRI framework appear to have higher levels of commitment to CSR. Some authors criticise this finding from a theoretical point of view because the sustainability principle seems to be widely dispersed (Joseph, 2012; Moneva et al., 2006) and the volume of reporting is of a more symbolic legitimacy (Ball et al., 2000; De Villiers & Alexander, 2014). Michelon et al. (2015) found a weak significant and positive association between the use of the GRI guidelines and the performance completeness disclosure index.
- IR has achieved a high degree of recognition and success in recent years. The original intention was that the integration of information would provide a better tool for decision-making. However, Flower (2015) concludes that IR has largely abandoned sustainability accounting. The interconnection between sustainability performance and integrated thinking is excluded from conventional assurance engagements (Dando & Swift, 2003; Maroun, 2017). Lai et al. (2016) find no evidence of a symbolic approach to IR in the international setting (in contrast to Michelon et al., 2015). Romero et al. (2019) found that companies issuing sustainability reports and integrated reports provide higher quality information than companies that include their sustainability information within the annual report.
- Other variables to be borne in mind include media pressure (Gillet-Monjarret, 2015) and the fact of being a family-run business (García-Sánchez & Martínez-Ferrero, 2018).

## 2.2 | Assurers and rules

Accountants and non-accountants (consultants, non-governmental organisations [NGOs] and public administration) are the main providers of assurance. No single professional group holds a monopoly of the market (Channuntapipat et al., 2020; Cohen & Simnett, 2015). In general, it appears that a variety of factors—size, profitability, liquidity and country of origin (Fernández-Feijoo et al., 2019; Wong et al., 2016)—play a role in the choice of assurer.

Skill levels and independence have been widely discussed in the extant literature. For example, Gillet-Monjarret (2015) asks if auditors have the necessary skills to perform a CSR assurance engagement (see also Dando & Swift, 2003; Gray, 2010; Maroun & Atkins, 2015; The International Integrated Reporting Council [IIRC], 2013; Wallage, 2000), given that certain aspects—such as the environmental assessment and the stakeholder commitment—call for skills that

auditors may not possess (Gray, 2010; Manetti & Becatti, 2009). As for independence, Wong and Millington (2014) examine the perceptions of diverse stakeholder groups towards assurance and signal that they clearly prefer specialist assurers to financial auditors.

## 2.3 | Research questions

The determinants of the voluntary assurance of sustainability information are disparate. In the case of SMEs, while some of the drivers identified above presumably remain valid, differences are likely to emerge given that stakeholders tend to be closer to the business—that is, operating in the same local market or community with a closer relationship with the staff—than is the case in larger entities. Based on the discussions reported in Simnett et al. (2009) and Hahn and Kühnen (2013), we, therefore, formulate the following research question concerning the relationship between the disclosure of information and sustainability assurance in SMEs:

Research Question 1 (RQ1): Is the disclosure of sustainability and financial information related to assurance?

Our expectation is that the more information SMEs disclose, the greater their interest will be in demonstrating their credibility; hence, the more likely they will be to seek to assure this information. In short, linkages between disclosure and assurance seem highly plausible.

We are also interested in testing the role played by specific industrial sectors in the decision to seek sustainability assurance. Here, we are particularly concerned in identifying the attitude of those sectors with the largest social and/or ecological footprints towards assurance (Kolk & Perego, 2010; Perego & Kolk, 2012; Vaz-Ogano et al., 2018):

Research Question 2 (RQ2): Which industries are more likely to assure their sustainability information, and, more specifically, are sectors with larger social and/or ecological footprints more inclined to assure their sustainability reports?

Our expectation is that those industries with larger ecological and social footprints will be more interested in providing credible and verified information.

Our third and fourth questions concern the legal rules and the quality of their enforcement, henceforth, the *legal origin*, of the countries included in our study (Kolk & Perego, 2010; Perego & Kolk, 2012). Legal origin has been analysed by La Porta et al. (1997) in a study that related the development of financial markets to the legal systems operating across countries, that is, English common law, and French, German and Scandinavian varieties of civil law. Civil law countries, in particular those of French origin, have the weakest investor protections and the least developed capital markets, especially when compared to those of the common law countries. As such, it is apparent that differences in legal environments matter for financial markets. Here, in relation to sustainability assurance, we wish to address the following research question:

TABLE 1 Selected variables

Variables	Description
Assurance (ASS)	0 where assurance is absent and 1 where it is present
Auditors (AUD)	1 if the auditors are auditing firms, otherwise 0
Level of assurance:	1: limited/moderated 2: reasonable/high
Assurance standard	1: AA1000AS 2: ISAE3000 3: NATIONAL
Year	Year of the report
<b>1. Variables of disclosure (DISCLij)</b>	
Global reporting imitative guidelines (GRI)	1 if the firm issues the report according to the GRI guidelines, otherwise 0.
Integrated reporting (INTG):	1 if the firm issues an integrated report, otherwise 0.
Details (DET)	1 if the report details are verified and submitted to GRI, otherwise 0.
Financial information (FINF)	1 if it is available at AMADEUS or in the web, otherwise 0.
<b>2. Industry variables (INDij)</b>	
Industry (IND)	Industry according to GRI website.
GROUP (GROUP)	1: agriculture 2: manufacturing 3: commerce 4: services 5: utilities 6: construction 7: non-profit 8: other
Oil and gas	1 for firm in oil and gas and chemical sectors, otherwise 0.
Utilities (UTI)	1 for firm in utilities sector, otherwise 0.
Manufacturing (MAN)	1 in manufacturing sector, otherwise 0.
Finance (FIN)	1 firm in banking and insurance sector, otherwise 0.
ESSI	Environmental and Socially Sensitive Industries. According to Michelin et al. (2015), these include the following sectors: pharmaceutical, alcohol, defence, chemical, mining, metals, paper, petroleum, utilities. If ESSI = 1, the firm belongs to one of these industries, at least. Otherwise, ESSI = 0.
HZIND	Hazardous industry membership. According to Shabana et al. (2016), these include oil and gas, chemical and petroleum industries. If HZIND = 1, the firm operates in one of these industries. Otherwise, HZIND = 0.
<b>3. Country origin variables</b>	
Country (CONT)	Country origin
Legal origin (LEG)	leg = 1 if the firm is from a common law country (the United Kingdom, Ireland or Cyprus). leg = 2 if the firm is from a French civil law country (France, Benelux, Italy, the Netherlands, Romania, Spain). leg = 3 if the firm is from a German civil law country (Germany, Austria, Estonia, Latvia, Slovenia, Portugal, Greece, Bulgaria, Greece, Hungary, Poland, Slovakia). leg = 4 if the firm is from a Scandinavian civil law country (Denmark, Norway, Sweden, Finland).
Rule of law (ROL)	Quality of county's legal environment measured by WJP Rule of law index: 0 for weaker adherence to the rule of law. 1 for stronger adherence to the rule of law.
Responsibility index (RES)	National corporate responsibility index by Amor-Esteban et al. (2019) referred to 2014.
Sustainable Development Report (SDR)	Global assessment of countries progress towards achieving the Sustainable Development Goals, extracted from Sachs et al. (2021).
Domestic to total firms (DOM)	Domestic firms/total population of firms by each country used by La Porta et al. (1997).

TABLE 1 (Continued)

Variables	Description
<i>Power distance (PDI)</i>	Measures the extent to which the less powerful members of organisations and institutions (like the family) accept and expect that power is distributed unequally.
<i>Individualism (IDV)</i>	The degree to which individuals are integrated into groups.
<i>Masculinity (MAS)</i>	Masculinity versus its opposite, femininity. Women's values differ less among societies than men's values. Men's values are associated with very assertive and competitive traits, opposite to women's value more related to modest and caring.
<i>Uncertainty avoidance (UAI)</i>	Deals with a society's tolerance for uncertainty and ambiguity. It indicates to what extent the members feel either uncomfortable or comfortable in novel, unknown, surprising and different from usual situations.
<i>Long-term orientation (LTO)</i>	Distinguish the difference in thinking between the East and West.
<i>Hofstede aggregate index (HFS)</i>	The aggregate of power distance, individualism, masculinity, uncertainty avoidance and long-term orientation.
4. Control variables	
<i>Firm size (LSIZ)</i>	Natural log of firm is revenues in year <i>t</i> .
<i>Capital intensiveness (I)</i>	Capital investment measured by natural log of equity.

Research Question 3 (RQ3): Does legal origin account for the presence of sustainability assurance in SMEs?

A number of different sociological variables have been the specific focus of study in this field of research (Martínez-Ferrero & García-Sánchez, 2017; Romero & Fernandez-Feijoo, 2013; Uyar et al., 2021). Hofstede (1980) has characterised national culture in terms of four dimensions that have subsequently been widely employed in academic research: namely, (1) power distance, (2) individualism, (3) masculinity and (4) uncertainty avoidance. The author would later incorporate two further dimensions, although these have been less widely used, namely, (5) long-term orientation (Hofstede, 2001) and (6) indulgence (Hofstede et al., 2010). Here, we formulate the following question in relation to sustainability assurance:

Research Question 4 (RQ4): Do cultural dimensions impact the SMEs' decision to seek assurance for their sustainability reports and, if so, what is the impact of these variables on assurance?

Previous research has shown that the closer the power distance, and the greater the prominence of collective feelings and feminine values in a country, the more likely it is that firms in that country seek assurance for their sustainability reports. In contrast, the weaker the uncertainty avoidance orientation sees more firms more likely to seek assurance. Our expectation here is that the outcomes of these explanatory variables will remain largely the same, albeit that some differences may emerge.

### 3 | METHODOLOGY AND DATA

#### 3.1 | Sample description

Our population of interest here comprises SMEs in the European Union, the United Kingdom and Norway. The sample includes those

firms that appear in the GRI Database and which meet our criteria for a SME—that is:

- number of employees < 250 workers
- turnover of ≤€50 million
- total balance of ≤€43 million

The sample size—after eliminating those firms for which some relevant information was unavailable—was 460 SMEs with a total of 1648 reports (that is, an average of 3.58 reports per entity) for the period 2001–2019. We eventually restricted our analysis to the period 2009–2019 based on the majority of observations. In addition, we used the Amadeus database to collect financial information for each firm and year.

#### 3.2 | Model specification and variables

A pooled logistic regression model for a sample of firms (*i*) and country (*j*) was developed considering different groups of variables (Table 1) as follows:

$$ASS_{ij} = a_0 + DISC_{ij} + IND_{ij} + COUNTRY_{ij} + CONTROL_{ij} + e$$

where:

*DISC<sub>ij</sub>* = disclosure variables

*IND<sub>ij</sub>* = industry variables

*COUNTRY<sub>ij</sub>* = country variables

*CONTROL<sub>ij</sub>* = control variables

The disclosure variables (*DISC<sub>ij</sub>*) correspond to the information available for each entity in the GRI and Amadeus databases. The first variable in this group is GRI—as used by Mahoney et al. (2013)—and indicates whether a report adheres to these guidelines. The second variable, *INTG*—based on Romero et al. (2019)—indicates whether IR is available. We would expect a positive effect of this variable on



assurance. We include as another element of a firm's disclosure 'detailed information', on the understanding that the information provided should be sufficiently detailed for stakeholders to assess the reporting organisation's performance. Finally, in each case, we verified that the corresponding financial information was available (FINF). In this instance, our search was concentrated in Amadeus, with the exception of entities such as NGOs or foundations, where we relied on information reported on their websites.

The industry variables (*IND<sub>ij</sub>*) were originally extracted from the GRI description (IND), but given the high degree of detail, we opted to group them into the following eight main categories (GROUP): agriculture, manufacturing, commerce, services, utilities, construction, non-profit organisations and other industries. Previous studies have shown that operating in social and environmental sectors may be a relevant factor in the voluntary assurance of sustainability information. Perego and Kolk (2012) suggest that operating in one of the following four may be a factor in accounting for assurance: that is, oil and gas (OIL), utilities (UTI), manufacturing (MAN) and finance (FIN). Michelon et al. (2015) opted to aggregate those sectors that may have a greater social and/or environmental impact in one category (ESSI), while Shabana et al. (2016), using the same criteria, but focusing on different industries, turned their attention to members of what they identify as hazardous industries (HZID). Our expectation is that industrial sector has an influence (positive or negative) on assurance and that those industries that have a greater impact on society or the environment will be more likely to have their sustainability reports assured.

The country variables (*CONT<sub>ij</sub>*) seek to capture some of those factors that make a country unique. Here, we specifically consider a country's legal framework (or origin), its responsibility and sustainability concerns and cultural variables. As discussed, a country's legal origin is classified in one of the four groups identified by La Porta et al. (1997) (LEG), while the quality of a country's legal environment is represented by the rule of law (ROL) (*World Justice Project Rule of Law*). We expect both variables to be positively associated with assurance.

Additional variables that have been employed in the literature and which may well be country-specific include the following:

- Responsibility Index: The national corporate responsibility index taken from Amor-Esteban et al. (2019). The higher the index, the more likely an entity is to assure its reports.
- Sustainable Development Report (SDR): An indicator of the progress made towards achieving the Sustainability Development goals, as developed by Sachs et al. (2021). Countries with a greater awareness of these goals are expected to present higher levels of assurance.
- Ratio of Domestic Firms to Total Population (DOM): A ratio deployed by La Porta et al. (1997) indicating the percentage of domestic firms to total population. The impact of this variable is unclear and might be either positive or negative.

SMEs typically interact closely with the immediate environment in which they operate via, that is, their product or service market and workforce. For this reason, we opt to examine the impact cultural

variables can have on assurance by employing Hofstede's dimensions (Hofstede, 1980, 1983, 2001). As discussed, Hofstede found that differences in national cultures tend to vary within six dimensions, which he labelled as individualism/collectivism, power distance, masculinity/femininity, uncertainty avoidance (Hofstede, 1983), long-term/short-term orientation (Hofstede, 2001) and indulgence/restraint (Hofstede et al., 2010).

Here, we have opted to include:

- Power distance (PDI)—a measure of the acceptance and expectation that power is distributed unequally. Our expectation is that countries with a large power distance will not present very high levels of assurance.
- Individualism (IDV)—a measure of the feeling of belonging to a group. In countries with a high level of individualism, less importance is likely to be attached to accountability, and therefore, the assurance of information will not be a priority.
- Masculinity (MAS)—a measure of the extent to which masculine values predominate over feminine values, being associated with greater assertiveness and competitiveness. We expect countries presenting stronger masculine traits to be less aware of the need for sustainability information and its assurance.
- Uncertainty avoidance (UAI)—a measure of society's tolerance of the unknown, and of surprising, unusual situations. If we consider that the assurance of sustainability reports is relatively novel, then, the higher the level of uncertainty the less likely SMEs will be to assure their reports.
- Long-term orientation (LTO)—a measure that seeks to distinguish between the values of the East and West.
- Hofstede's aggregate index (HFS)—the sum of each of the previous indices.

Finally, our control variables are represented by:

- Log of size (*LSIZ*): that is, the log of a firm's revenues in each year.
- Capital intensiveness (*LCAP*): that is, the log of a firm's equity.

## 4 | RESULTS

### 4.1 | Descriptive results

The number of SMEs that report sustainability information appears to be highly dependent on the country of origin (Table 2). Here, the highest number of reports was recorded for Spain (243), Austria (194), Germany (208), Sweden (186) and Hungary (145), while the countries with the lowest numbers were Bulgaria, Estonia, Slovak Republic and Slovenia.

In most countries, the number of non-GRI reports exceeds that of GRI reports; only Spain (86%), Sweden (84%) and Italy (84%) present markedly higher percentages of GRI reports.

In general, the analysis points to very low percentage rates of assurance both at the country level and overall (18.75%). Sweden

**TABLE 2** Number of entities and number of reports by country

Country	Entities		Types of report				
	Number	%	GRI	Total	% GRI	ASS	% ASS
Austria	70	15.22	70	194	36.09	43	13.92
Belgium	17	3.7	30	65	46.25	2	0.65
Bulgaria	1	0.22		1	0	0	
Czech Republic	5	1.09		16	0	0	
Denmark	3	0.65	8	20	40	6	1.94
Estonia	1	0.22		6	0	0	
Finland	17	3.7	27	70	38.57	6	1.94
France	23	5	23	72	31.95	5	1.62
Germany	49	10.65	112	208	53.85	33	10.68
Greece	27	5.87	49	84	58.33	19	6.15
Hungary	36	7.83	47	145	32.42	7	2.27
Ireland	4	0.87	5	13	38.47	0	
Italy	33	7.17	56	67	83.59	33	10.68
Latvia	3	0.65	1	6	16.67	1	0.32
Luxembourg	3	0.65	3	4	75	0	
Netherlands	17	3.7	46	76	60.53	3	0.97
Norway	16	3.48	30	47	63.83	6	1.94
Poland	8	1.74	3	12	25	0	
Portugal	3	0.65	11	12	91.67	0	
Romania	5	1.09	3	7	42.85	0	
Slovak Republic	1	0.22		5	0	0	
Slovenia	1	0.22	2	2	100	1	0.32
Spain	47	10.22	209	243	86	45	14.56
Sweden	38	8.26	157	186	84.44	96	31.07
UK	32	6.96	41	87	47.12	3	0.97
Total general	460	100	933	1,648	56.94	309	18.75

(31.07%) and Spain (14.56%) present the highest rates, followed by Austria (13.92%), Germany and Italy (both 10.68%).

The same dispersion observed by country of origin is also apparent by industry (Table 3). The sector analysis shows that non-profit services (222), other activities (191), financial services (105) and real estate (92) present the highest number of reports. In contrast, telecommunications (1), railroads (2), mining (4) and retailers (4) present the lowest.

Most of the sectors show a clear preference for reports that conform to the GRI framework. In some cases, this percentage rate is very high, for example, healthcare services (94.45%), automotive (91%), construction (80.56%) and real estate (72.83%). Among the sectors that exhibit a preference for non-adherence with the GRI framework, we find consumer durables (92%), equipment (90%), healthcare products (75%) and public agencies (73.63%). Overall, 59% of the SMEs present information based on GRI standards as opposed to 40% based on other standards (non-GRI).

Assurance by sector is in line with the results obtained by country. The highest rates are concentrated in four industries: financial

services (12.30%), other sectors (12.30%), tourism and leisure (14.85%) and waste management (10.68%).

The diversity of situations detected in our study indicates that the SMEs act differently depending on their country of origin and the sector in which they operate. Overall, the entities adhere to GRI guidelines in a higher percentage (40% approximately) than actually assure the information (18.75%).

The correlation analysis (Table 4) shows the association between each of these characteristics. Thus, assurance is positively correlated (at the 1% level) with variables associated with disclosure of information: GRI guidelines (.4141), IR (.1368), report details verified and submitted to GRI (.0813) and financial information (.1424), as well as with some of the national characteristics—LEG (.1804) and the ratio of domestic firms to total population (.2479), size (log of assets  $-.1994$  and log of capital  $-.1976$ ), utility industries (.0918) and financial sector (.1135). However, there is no significant relationship with rule of law, responsibility index, size (represented by capital) or the oil and manufacturing sectors.



Industry	Entities		Types of report				
	Number	%	Number	GRI	% GRI	ASS	% ASS
Agriculture	7	1.52	24	10	41.67		
Automotive	4	0.86	11	10	91	2	0.65
Aviation	1	0.21	12	8	66.67		
Chemicals	6	1.30	25	15	60		
Commercial services	18	3.91	67	35	52.23	10	3.24
Computers	12	2.60	32	12	37.5	1	0.32
Conglomerates	2	0.43	5	0			
Construction	11	2.39	36	29	80.56	6	1.94
Construction materials	8	1.73	37	20	54.06	10	3.24
Consumer durables	5	1.08	25	2	8		
Energy	25	5.43	74	48	64.87	21	6.80
Equipment	4	0.86	11	1	9.1		
Financial services	27	5.86	105	79	75.24	38	12.30
Food and beverage products	25	5.43	94	43	45.74	18	5.83
Forest & paper products	8	1.73	43	25	58.14	15	4.85
Healthcare products	17	3.69	49	12	24.49	2	0.65
Healthcare services	7	1.52	36	34	94.45	11	3.56
Household & personal products	6	1.30	17	9	52.95	1	0.32
Logistics	8	1.73	34	25	73.53	4	1.29
Media	11	2.39	43	25	58.14	10	3.24
Metal products	5	1.08	22	16	72.72	5	1.62
Mining	2	0.43	4	4	100		
Non-profit/services	68	0.14	222	121	54.50	14	4.53
Other	66	14.34	191	119	62.31	38	12.30
Public agency	20	4.34	91	67	73.63	14	4.53
Railroad	2	0.43	2	2	100	1	0.32
Real estate	23	5	92	67	72.83	33	10.68
Retailers	2	0.43	4	0	0		
Technology hardware	4	0.86	10	4	40		
Telecommunications	1	0.21	1	1	100	1	0.32
Textiles and apparel	10	2.17	38	20	52.64		
Tourism/leisure	18	3.91	51	20	39.22	15	4.85
Universities	7	1.52	26	10	38.47	1	0.32
Waste management	16	3.47	94	70	74.47	33	10.68
Water utilities	4	0.86	20	12	60	5	1.62
Total general	460	100%	1648	976	59.23	309	18.75

**TABLE 3** Number of entities and the number of reports by industry

## 4.2 | Descriptive analysis for the assured group

Assurance is a minority practice, as can be seen in Table 5; the percentage of assured reports is very low, only 18.75%. The percentages reveal the pre-eminence of accounting firms, representing 44.33% of the total. In second place, *other entities* represent 40.14% of the total: These are a miscellaneous group of entities not included in the previous categories (including, universities, centres of research and NGOs).

*The Big Four* account for more than 40% of the total number of assured reports, while engineering and small consultancy firms account for just 15%, a clear indication of the concentration of the market in a few firms. It is also surprising that 40% of the activity is undertaken by other institutions.

Table 6 shows our main results according to the level of assurance provided. As is evident, 72.67% of reports can be classified as presenting a limited/moderate level of assurance while 20.76% present a reasonable/high level. This means that, overall, the level is very

TABLE 4 Correlation analysis among the variables

	GRI	INTG	DET	ASS	FINF	ROL	DOM	RES	LSIZ
GRI	1								
INTG	.2061**	1							
DET	.3434**	.0511*	1						
ASS	.4141**	.1368**	.0813**	1					
FINF	.1281**	.0540**	.1149**	.1424**	1				
ROL	-.0917*	.0279	-.0318	-.0547	-.1624**	1			
DOM	.0710	-.0225	-.0399	.2479**	.0261	-.5448**	1		
RES	-.0167	.0207	.0813	.0471	.0781	.3779**	.0975	1	
LSIZ	-.1653**	-.0455	-.2428**	-.1994**	-.4218**	.2882**	-.0862	-.0510	1
LCAP	-.1864**	-.0391	-.2127**	-.1976**	-.3486**	.1909**	-.1225	-.0732	.9508**
OIL	.0117	.0323	.0181	-.0412	.0234	.0937*			-.0507
UTI	.0282	.0772**	.0183	.0918**	.1177**	.0292	.3050**	.2501**	-.0238
MAN	-.0820**	-.0667**	-.0218	-.0547*	.2453**	-.0581	-.0603	-.1393*	-.0643
FIN	.0962**	.0895**	.0063	.1135**	-.1847**	.0210			-.0671
ESSI	.0566*	.0295	.0534*	.0150	.1256**	.0668	-.0242	.2110**	.1124*
HZIND	.0358	.0410	.0412	.0159	.1008**	.1357**	-.0180	.2591**	.1054*
LEG	-.0107	-.0009	-.0034	.1804**	.0168	.4859**	.0026	.6458**	-.2764**

\*Significant at .05.

\*\*Significant at .01.

TABLE 4 (Continued)

	LCAP	OIL	UTI	MAN	FIN	ESSI	HZIND	LEG
GRI								
INTG								
DET								
ASS								
FINF								
ROL								
DOM								
RES								
LSIZ								
LCAP	1							
OIL	-.0472	1						
UTI	-.0118	-.0234	1					

TABLE 4 (Continued)

	LCAP	OIL	UTI	MAN	FIN	ESSI	HZIND	LEG
MAN	-.1221**	-.0515*	-.0926**	1				
FIN	-.0175	-.0292	-.0516*	-.1176**	1			
ESSI	.1149*	.3999**	.6602**	.0694**	-.0744**	1.0000		
HZIND	.0946	.4542**	.7509**	-.0442	-.0654**	.8824**	1.0000	
LEG	-.4563**	.1529**	.0893**	.0639**	.0627*	.1155**	.1791**	1

\*Significant at .05.

\*\*Significant at .01.

TABLE 5 Number and percentage of assured reports and assurance firms

	Number	Percentage
Assured reports	309	18.75
Assurance firm:		
Audit firms		
Deloitte	32	10.35
Ernst and Young	33	10.68
KPMG	33	10.68
PWC	36	11.65
BDO	3	0.97
Total	137	44.33
Engineer		
Bureau Veritas	6	1.94
DNV	9	2.91
Engineering	12	3.88
Total	27	8.73
Small consultancy		
AENOR	14	4.53
LLOYDS	6	1.94
URS	1	0.33
Total	21	6.80
Other <sup>a</sup>	124	40.14
Total	261	100

<sup>a</sup>Universities, centres of research, government agencies, non-government organisations and so on.

TABLE 6 Level of assurance and standard applied

Level of assurance	Number	Percentage
1. Limited/moderate:		
Limited	73	39.89
Limited/moderate	38	20.76
Moderate	22	12.02
Total	133	72.67
2. Reasonable/high:		
Reasonable	30	16.39
Reasonable/high	8	4.37
Total	38	20.76
3. Combination	3	1.63
4. Not specified	6	3.27
Entire	3	1.63
Total	183	100
Assurance standard		
AA1000	14	10.37
AA1000 and ISAE 3000	2	1.48
ISAE 3000 and national	3	2.22
ISAE 3000	58	42.96
National	58	42.96
Total	135	100

low and that assurers are only expressing an opinion in relation to the main points contained in the sustainability information. This result is closely associated with the specific standards being employed by assurers. Our study shows that national frameworks and ISAE 3000 are the most frequently used standards (42.96%), a finding in concordance with the levels of assurance provided, while AA1000 standards are employed in just 10% of cases. These results serve to reinforce the belief that the assurance of sustainability information runs parallel to financial auditing practices.

Given the relative sparsity of assured entities and reports, we sought to determine whether any additional features might have a relevant role to play in the decision of SMEs to assure their reports:

- *State ownership (state)*: that is, if ownership of the entity is controlled by, or presents a meaningful participation of, a national government or other public administration, then *state* takes a value of 1 and 0 otherwise.
- *Group (group)*: that is, if the entity belongs to a group, then *group* takes a value of 1 and 0 otherwise.
- *Parent company (parent)*: that is, if the entity is the parent company of a group, then *parent* takes a value of 1 and 0 otherwise.

In the case of ownership, we expect firms under the influence of public administration to be more likely to assure the information (reflecting the accountability of the public sector). In our sample, 50% of the assured reports are directly or indirectly controlled by national governments (Table 7).

Membership of a group is not a typical characteristic of the firms in our sample and where it is the firms are either the parent or subsidiary entity (Table 7).

**TABLE 7** Additional variables in assurance subsample

	Yes		Not	
	Number	%	Number	%
State owned	105	48.39	112	51.61
Group of entities	73	34.27	140	65.73
Parent company	33	45.21	40	54.79

**TABLE 8** Correlation table for assured reports

	Auditors	Level	Legal origin	Size	Capital	Debt to total assets	ROA	State ownership	Group membership
Auditors	1								
Level	-.2976**	1							
Legal origin	.4538**	-.1212	1						
Size	-.2672*	-.0043	-.2648*	1					
Capital	-.0233	.0581	-.3208**	.8891**	1				
State owned	.1495	-.1112	.4756**	-.0919	.0092	.2268**	-.1627*	1	
Group membership	-.1112	.0932	-.2226**	.15551	.0620	.0309	.2252**	-.7120**	1

The results of the correlation analysis confirm a number of the findings reported elsewhere (Table 8). In general, the probability of the assurance being performed by auditors and a country's legal origin present a positive association. Other significant correlations concern certain characteristics of the SMEs in our sample. For example, the level of assurance is negatively associated with accountants as assurers of the information (-.2976), legal origin presents a positive relationship with the auditors as assurers (.4538) (legal origins 3 and 4—that is, German and Scandinavian—being more likely to use an audit service to assure sustainability reports), and surprisingly, the size of the entity shows a negative correlation with auditors (-.2672); thus, the smaller the entity, the more likely it is that auditors have been employed to provide the assurance.

Thus, overall, assurance in our sample is essentially moderate (low), conducted in adherence with accounting standards (ISAE 3000) and executed by auditors (with a prominent role played by the Big Four companies); moreover, assurance is highly dependent on the country of origin.

## 5 | LOGISTIC RESULTS

We tested different logistic regressions in an effort to ascertain the explanatory variables of assurance in SMEs. First, we present a model based on the disclosure variables drawn from the GRI database where entities are identified by country of origin and industrial sector. We only present models significant at the 1% level. Moreover, so as to select the years with the most observations, we limited our panel data to the period 2009–2019 (Table 9).

Model 1 shows that IR (3.097864) and financial information (3.49711) are both significant positive variables. However, detailed information verified and submitted to GRI does not seem to have any effect on the probability of assurance.

Sweden is the country with the highest number of assured reports and is selected here as the reference for the country categorical variable. As can be seen, most of the European countries present negative values, pointing to a significantly lower probability of assuring their sustainability information. Specifically, in regression 2, Belgium (-13.43078), Finland (-12.55334), France (-9.514039),

TABLE 9 Results of the significant logistic model

	Model 1		Model 2 (oil, manufacturing, utilities and financial sector)		Model 3 (with legal origin in 4 groups)		Model 4 (with legal origin in 4 groups and rule of law)	
	Coefficient	p value	Coefficient	p value	Coefficient	p value	Coefficient	p value
Constant	2.477094	.043*	-2.079701	.000**	-6.862796	.000**	1.482815	.311
GRI			0.8689388	.000**			1.291231	.000**
INTG	3.097864	.014*	0.4237782	.016*	1.973871	.001**	0.7709224	.001**
DET	0.2782173	.720	0.831783	.000**	0.6809513	.066	0.0989629	.677
FINF	3.49711	.000**			1.114839	.001**		
Country								
Belgium	-13.43078	.000**						
Denmark	-3.565382	.620						
Finland	-12.55334	.000**						
France	-9.514039	.000**						
Germany	-7.267526	.000**						
Greece	-6.436771	.000**						
Hungary	-16.08548	.000**						
Italy	-0.2607921	.848						
Latvia	-8.595622	.005**						
Netherlands	-11.15684	.000**						
Slovenia	3.744963	.835						
Spain	-9.96624	.000**						
United Kingdom	-13.85561	.000**						
Austria	-7.4682	.000**						
Industry								
Automotive	-5.008972	.053						
Commercial services	-3.366147	.049*						
Computers	-5.928462	.164						
Construction	-7.661752	.000**						
Construction materials	1.789089	.383						
Energy	-2.519947	.107						
Food and beverage products	-2.951328	.051						
Forest and paper products	0.2335136	.903						
Healthcare products	-12.07972	.000**						
Healthcare services	1.829826	.347						
Household and personal products	-10.18313	.010**						
Logistics	-8.421819	.000**						
Media	0.2488264	.892						
Metal products	0.4802582	.849						
Mining	-6.024528	.000**						
Non-profit/services	-3.391596	.021*						
Other	-0.0740345	.964						
Public agency	-1.130193	.814						
Railroad	-1.987768	.149						
Textiles and apparel	-1.560911	.287						
Tourism and leisure	-6.061299	.096						
Universities	1.053567	.523						
Water utilities	6.146436	.021**						

TABLE 9 (Continued)

	Model 1		Model 2 (oil, manufacturing, utilities and financial sector)		Model 3 (with legal origin in 4 groups)		Model 4 (with legal origin in 4 groups and rule of law)	
	Coefficient	p value	Coefficient	p value	Coefficient	p value	Coefficient	p value
Industries								
OIL								
UTI			0.4730203	.108				
MAN			-0.4456312	.028*				
FIN			1.161229	.000**				
LEGAL ORIGIN (LEG)								
2					2.580575	.018*	0.2613429	.740
3					2.78853	.012*	0.2654788	.738
4					4.903053	.000**	2.155697	.006**
ROL							-5.606919	.000**
Wald chi-square	119.32	.000**	82.65	.0000**	24.85	.0004**	38.10	.0000**
N	1354		1354		1577		380	

\*Significant at .05.

\*\*Significant at .05.

Germany (-7.267526), Greece (-6.436771), Hungary (-16.08548), Latvia (-8,595,622), the Netherlands (-11.15684), Spain (-9.96624), the United Kingdom (-13.85561) and Austria (-7.4682) present significant differences. Indeed, all of them exhibit negative and significant probabilities of assurance compared to the Swedish case.

Differences are also detected between the respective industrial sectors. Here, the financial sector presents the highest rates of assurance reports and, as such, constitutes our reference group. Significant differences are presented by commercial services (-3.366147), construction (-7.661752), healthcare products (-12.07972), household and personal products (-10.18313), logistics (-8.421819), mining (-6.024528), non-profit services (-3.391596) and water utilities (6.146436).

The Wald chi-square value is significant in both cases (regression 1: 210.07, regression 2: 119.32).

Given the level of detail provided by GRI for the industrial sectors, the following model (number 2) changes the variable and uses only the following four categories: oil, manufacturing, financial entities and utilities. In line with Perego and Kolk (2012), these dichotomous variables reflect SME membership in one of these sectors. In this case, the manufacturing sector presents a significant negative value (-0.4456312 at the 5% level) and the financial sector (1.161229) presents a positive value (reflecting the fact that the sector records the highest number of assured reports).

## 5.1 | The role of legal origin

The inclusion of institutional variables captures the way in which the legal environment impacts on models 3 and 4. Here, the categorical variable of the country is replaced by three different variables.

TABLE 10 Descriptive comparison of Sweden and Spain

	Sweden	Spain
Assurance	51.61%	16%
Accounting assurers	100%	24.24%
Following GRI guidelines	84.41%	86.01%

Model 3: LEG reflects the legal origin of the country (see La Porta et al., 1997), with the common law countries constituting the reference for this variable. As is evident, the three groups of codified law exhibit positive parameters and are significantly different from the reference group—legal origin = 2 (French civil law): 2.580575; legal origin = 3 (German civil law): 2.78853; legal origin = 4 (Scandinavian civil law): 4.903053. The Scandinavian group, with the highest value, is of particular relevance here.

Model 4: Includes the rule of law (ROL). The significant regression value shows that the stronger the rule of law, the less likely the probability of assurance (-5.606919).

The other variables here were not significant. Thus, the inclusion of RES (responsibility index) failed to improve the models' outcomes. The same was true of the structure of the country's industry (DOM).

## 5.2 | Comparison of two countries: Sweden and Spain

To investigate the differences between the countries in our sample, we selected the two with the highest percentage of sustainability reports: Sweden and Spain. Significant differences are apparent in the descriptive analysis of the two samples (Table 10). Thus, while 51% of



SMEs in Sweden are assured, this figure falls to 16% in Spain. Moreover, auditors are the main assurers operating in Sweden, whereas in Spain non-auditors predominate. The only feature the two countries have in common is that they both adhere in the main to GRI guidelines (over 80%).

Below, we compare the significant regressions in relation to the two countries to determine the main differences between them (Table 12) and, by so doing, obtain a number of interesting insights.

In the regressions that include the GRI descriptions of the industrial sectors (i.e., model 5 for Sweden and model 7 for Spain), Sweden presents two significant variables: detailed information (−1.320064) and energy (2.146522). However, in the case of Spain, for the same variables, financial information (2.4798), non-profit (−2.999424) and other industries (−2.801245) are significant. This suggests that the variables related to the disclosure of information (i.e., detailed

information and financial information) play a different role depending on the country: In Sweden, the sign of the variable is negative; in Spain, financial information is positive. In the case of industrial sector, in Sweden, the energy industry is more likely to assure sustainable information, whereas in Spain, no one sector presents a positive effect on assurance; on the contrary, the non-profit sector and other industries present negative parameters.

The variables used by Perego and Kolk (2012) for industries (model 6 for Sweden and model 8 for Spain) do not exhibit significant coefficients, and in any case, the Wald chi-square value is lower than it is in both models 5 and 7 (Table 11).

In short, the same variables for the countries with the highest number of reports present significant differences not only in relation to the most relevant variables but also as regards the effect of these variables on the probability of assurance.

**TABLE 11** Comparison of the models by country

	Sweden				Spain			
	Model 5		Model 6		Model 7		Model 8	
		<i>p</i> value		<i>p</i> value		<i>p</i> value		<i>p</i> value
Constant	−0.5941541	.253	0.0793193	.767	−1.996241	.042*	−2.098774	.000**
INTG	0.977926	.113	0.9645795	.056	0.259129	.751	0.2383697	.645
DET	−1.320064	.007**	−1.020991	.018*	−1.084661	.092	−0.9946685	.050*
FINF	0.8573865	.090	0.70367	.067	2.4798	.005**	1.063635	.018
Industry								
Construction	0.3314687	.669						
Energy	2.146522	.031*						
Forest and paper products	1.87843	.123						
Healthcare services					−0.0435716	.949		
Logistics	0.5878707	.497						
Media					0.5179279	.535		
Metal products					−1.127302	.129		
Non-profit/services	−0.0150938	.986			−2.999424	.008**		
Other	1.020345	.098			−2.801245	.013*		
Public agency					2.246974	.054		
Railroad								
Real estate	1.113226	.104						
Tourism and leisure	0.5400347	.592						
Universities					−1.981364	.094		
Sectors								
UTI			1.461443	.081				
MAN			−1.040644	.070			−0.4615288	.432
FIN			−0.6667366	.200				
Wald chi-square	22.37	.0216*	15.63	.0159*	30.08	.0008**	10.11	.0386*
N	151		165		160		240	

\*Significant at .05.

\*\*Significant at .01.

**TABLE 12** Correlation analysis of Hofstede cultural variables

	PDI	IDV	MAS	UAI	LTO	HFS
LEG	-.4432**	-.1881**	-.3403**	-.3131**	-.0209	-.5786**
GRI	.0416	-.0184	-.2464**	-.0594*	.0743	-.1462**
INTG	.0052	.0422	-.0995**	-.0509*	-.0096	-.0651**
DET	.0573*	.0069	-.1448**	-.0112	.0496	-.0556*
ASS	-.1502**	.0147	-.1557**	-.1546**	.0465	-.2065**
AUD	-.4645**	.5317**	-.2436**	-.5193**	-.1471	-.3852**
FINF	.0768*	-.0217	-.2326**	-.0646**	-.0888*	-.1376**
ROL	-.4756**	.3638**	-.4032**	-.6663**	.0109	-.6733**
LSIZ	-.2783**	.6189**	.1472**	-.4647**	-.7858**	-.0927
LCAP	-.1548**	.6424**	.2513**	-.4260**	-.7586**	.0200
ESSI	-.0607*	.0215	-.1374**	-.1115**	-.1048**	-.1528**
HZIND	-.1125**	.0488*	-.1600**	-.1461**	-.0835*	-.1937**

\*Significant at .05.

\*\*Significant at .01.

### 5.3 | The role of cultural variables

The following section discusses how Hofstede's four (five) cultural dimensions impact assurance and the rest of the variables. We begin by reporting the results of the correlation analysis and continue by performing a logit regression on assurance.

Hofstede's dimensions present more negative than positive associations with our variables of interest (Table 12). When we focus specifically on assurance, we obtain a negative association with power distance (–.1502), masculinity (–.1557), uncertainty avoidance (–.1546) and the composite indicator (–.2065). The same sign appears in the correlation with auditors while individualism presents a non-significant, positive correlation (.5317) for assurance. Long-term orientation does not seem to play a role in either of the two variables.

The variables of disclosure (INTG, DET and GRI) are also negatively associated with masculinity and uncertainty avoidance (but not detailed information) and the aggregate index. In the case of power distance, the association is positive and significant for DET but is found not to be relevant for either INTG or GRI.

Models 9–12 (Table 12) show the effect of each cultural dimension on assurance; indeed, the inclusion of each of these variables in basic model 1 provides some interesting results.

- Model 9: PDI negatively determines assurance (–.0335398), indicating that the greater the power distance in a society, the less likely SMEs will be to assure their sustainability reports. This outcome might be attributed to the attitude of SMEs who consider that something voluntary might, in fact, be imposed by law in countries where the power distance is not considered as being close.
- Model 10: Individualism does not play a role. It is not significant and only has a marginal effect on the regression.
- Model 11: Masculinity reinforces the results found in the correlation analysis. The greater the traits of assertiveness and competitiveness, the lower the probability of assurance (coefficient:

–.0129167). One possible explanation here is that such practices might be seen as contradicting more traditional views of ownership.

- Model 12: Uncertainty avoidance has a negative effect on assurance (–.0178744). This sign confirms that uncertainty avoidance reduces the probability of assurance. It might be that assurance is seen as a possible source of conflict if reality is not in line with disclosure.
- Model 13: Long-term orientation is not a significant determinant of assurance.

Thus, we can conclude that power distance, individualism, masculinity and the aggregate index have a significant and negative impact on assurance; in other words, the greater the power distance characterising a society and the more masculine values it holds, the less likely its firms are to assure their sustainability information (Table 13).

To conclude, we tested the rule of law in each of the above models. However, the results were disappointing as only one of the Hofstede's dimensions showed itself to be meaningful, that is, that of uncertainty avoidance (model 14). The negative sign means that the more rule of law (–16.08381) and with increasing uncertainty avoidance (–0.0892329), the less likely SMEs assure their sustainability reports.

## 6 | DISCUSSION

The main goal of this study has been to determine the factors that induce European SMEs to voluntarily assure their sustainability reports. Our study highlights that assurance is not a widespread practice on the continent, that the level of assurance provided is generally limited and that the assurers are mostly accountants, typically from one of the Big Four firms. The first research question we sought to

TABLE 13 Logistic regression models with Hofstede's variables

	Model 9		Model 10		Model 11		Model 12		Model 13	
	Coefficient	p value	Coefficient	p value	Coefficient	p value	Coefficient	p value	Coefficient	p value
Constant	-0.9095027	.000**	-10.81897	.000***	-1.253597	.000***	-0.7314383	.001**	-1.21876	
INTG	0.8864718	.000**	4.020522	.000***	0.9334782	.000***	0.9594958	.000**	0.7400949	
DET	0.3285317	.098	1.169225	.060	0.326506	.067	0.4165196	.018*	0.3335094	
FINF	0.9164564	.000**	1.856111	.000***	0.5861279	.000***	0.6672274	.000**	0.6674246	
PDI	-0.0333398	.000**								
IDV			0.0180394	.251						
MAS					-0.0129167	.000***				
UAI							-0.0178744	.000**		
LTO										-0.0102294
HFS										
ROL										
Wald chi-Square	79.67	.000**	43.84	.000***	66.09	.000***	97.86	.000**	20.04	
N	1479		1546		1546		1546		536	

\*Significant at .05.

\*\*Significant at .01.

TABLE 13 (Continued)

	Model 13		Model 14		Model 15 (Model 1 with rule of law)		Model 16 (Model 3 with rule of law)	
	p value	Coefficient	p value	Coefficient	p value	Coefficient	p value	Coefficient
Constant	.079	0.8236835	.199	-2.066953	.186	13.62267	.001**	13.62267
INTG	.023*	1.817195	.002**	1.411838	.000**	2.446673	.004**	2.446673
DET	.212	0.7414286	.046*	0.9213844	.000**	1.791176	.001**	1.791176
FINF	.001**	1.091066	.002**	0.60269	.025*	0.456655	.328	0.456655
PDI				-0.0291351	.005**			
IDV								
MAS								
UAI						-0.0892329	.000**	-0.0892329
LTO	.619							
HFS			.000**	-0.0201022	.711			
ROL				0.628469	.000**	-16.08381	.000**	-16.08381
Wald chi-Square	.0005**	16.24	.0027**	38.34	.0000**	21.31	.0007**	21.31
N		1546		595		646		646

\*Significant at .05.

\*\*Significant at .01.

address was whether there was a relation between the disclosure of financial/non-financial information and assurance. Our study confirms that the greater the quantity and quality of information (in the latter case, adhering to GRI guidelines), the more likely an entity is to assure its sustainability information. The answer to our second research question confirms the considerable variation between industries; yet, surprisingly, the sectors with the greater ecological/social footprint do not show themselves to be more likely to assure their sustainability information. Our analysis of the third research questions allows us to confirm that legal origin is a significant determinant of assurance, especially in Scandinavian countries, while the comparison we undertake of Sweden and Spain emphasises the different way assurance is implemented in these two countries. Finally, our study of the sociological factors based on Hofstede's cultural dimensions shows that power distance, masculinity and uncertainty avoidance counter the probability of assurance, while individualism and long-term orientation do not seem to have a significant effect.

In addressing our first research question, we predicted that following GRI guidelines, implementing IR and providing detailed information verified and submitted to GRI would all increase the probability of assurance. We found that adhering to the GRI is, in fact, the most powerful determinant of assurance, accounting for 99.35% of assured reports—a finding in line with Mahoney et al. (2013), Nielsen and Madsen (2009) and Michelon et al. (2015); however, implementing IR and providing financial information were also found to be significant—in this case, in line with Romero et al. (2019). It seems, therefore, that disclosure of information is a good determinant of assurance.

Significant differences were also found by industry. In contrast to the extant literature (Kolk & Perego, 2010; Mancilla & Saavedra, 2015; Segui-Mas et al., 2015; Shabana et al., 2016; Simnett et al., 2009; Perego & Kolk, 2012), the firms with a larger social or ecological footprint do not present positive regression coefficients which contradicts some of the previous findings for bigger companies (Maroun & Prinsloo 2020; Simnett et al., 2009; Vaz-Ogano et al., 2018, among others). The tests we conducted on two variables employed in earlier studies (namely, ESSI and HZIND) failed to provide significant results. The results obtained by Romero et al. (2019) in relation to ESSI, that is, sectors that are likely to have a greater social and/or environmental impact, coincide with the results reported herein, the coefficient being negative but non-significant (not shown in tables). However, the number of entities in these sectors included in the sample extracted from the GRI is likely to be low, which might explain the results obtained. Clearly, these sensitive industries need more capital (and tend to be larger, as well) than typical SMEs, which would contribute to the small number of firms.

Differences in the countries' legal origin and cultural dimensions highlight the pivotal role played by these variables. Our study provides additional support for claims that Scandinavian countries are more likely to report higher levels of assurance, followed by those operating a codified system of French origin. The comparison conducted between the two countries presenting the highest percentages of sustainability reports (i.e., Sweden and Spain) offers some interesting

insights, highlighting that disclosure of information is not always necessarily associated with the transparency provided by an assurance report.

In general, the results obtained here for the institutional variables confirm previous findings in the literature. Legal origin exhibits a positive and significant association in the case of countries operating French, German and Scandinavian systems when compared, that is, to countries with a common law system. The inclusion of the rule of law shows that the stronger this principle of governance is, the less likely a firm is to assure its sustainability information. In this specific case, legal origin is only relevant in the case of the Scandinavian group of countries. This last conclusion contradicts both Simnett et al. (2009) and Solomon (2010) but coincides with Choi and Wong (2007) as regards the assurance of financial reports. This suggests that SMEs take a similar attitude to the assurance of sustainability information as the one they take to financial reporting.

Finally, other control variables, including size, were not found to be significant in any model, again contradicting findings reported by Simnett et al. (2009), Branco et al. (2014), and Herda et al. (2014). The national corporate responsibility index designed by Amor-Esteban et al. (2018) was applied to data for 2014 but was not found to be significant. The same was true for the domestic firms/total population ratio (DOM) considered by La Porta et al. (1997).

These results serve to reinforce the belief that assurance remains low in Europe while accountants (especially firms belonging to the Big Four) dominate the market, the same conclusions drawn by Zaman et al. (2021) for Australia and New Zealand. Moreover, our finding that the overall quality of assurance is poor also coincides with Zaman et al. (2021). The only difference found is that while PwC is the predominant assurer in Europe, Deloitte dominates in the Australian market.

Our results, in line with Carey et al. (2021), indicate that assurance is sensitive to the profile of the service provider and the institutional environment; however, unlike these authors, capital constraints do not appear to be a significant factor when it comes to hiring the service. In our study, all the entities are small or medium-sized; however, they prefer to assure their reports using a firm from the Big Four, a service that tends to be more expensive.

Our analysis of the sustainability reports highlights the limited level of assurance offered and the widespread use of ISAE3000 as standard.

The comparison undertaken between practices in Sweden and Spain highlights just how differently sustainability can be interpreted. Although the two countries contribute the most reports to our database, assurance is widespread in Sweden but not nearly so much in Spain. Likewise, while accountants are the main assurers in Sweden, in Spain, the role of non-auditors is more prominent. Differences also emerge by sector; thus, in Sweden, firms operating in the energy sector are more likely to engage assurance guarantees, whereas, in Spain, NGOs and other industries are notable for the low degree of likelihood of engaging in assurance. Finally, in neither of the two countries is being a state-owned entity or a member of a business group a relevant factor.

Our results confirm that SMEs in countries with the following characteristics present a stronger tendency to assure sustainability information: lower power distance, stronger feminine versus masculine values and lower uncertainty avoidance. In general, these findings are in line with the previous literature (Gallén & Peraita, 2018; Romero & Fernandez-Feijoo, 2013; Uyar et al., 2021); however, uncertainty avoidance was found to be positive by Uyar et al. (2021), while, here, individualism and long-term orientation have been found not to be significant. Thus, it appears that SMEs are less influenced by the collective values of society and that uncertainty is not important in accounting for assurance. One final result of interest is the fact that rule of law as an indicator of enforcement is negatively associated with assurance only when uncertainty appears as significant. However, in general, these two factors do not appear to have the same importance as is attributed to them in larger entities.

The present study is not without its limitations. The disclosure variables used here are significant in explaining the probability of assuring the reports, and our other variables (i.e., sector, country, legal origin and sociological factors) complement them. This could be a potential weakness as another formulation may have produced different results. Other limitations might be attributed to the cultural variables, given that they remain unchanged across the period while the sample is restricted to specific countries (in particular, the larger ones).

Finally, our dependence on the GRI database might be considered a limitation, although its accessibility makes it the main source of information for this field. Indeed, the fact that adherence to the GRI framework is the principal determinant of assurance is closely related to the use it receives. Additionally, the GRI database provides excellent coverage for certain European countries, but others are arguably under-represented.

## 7 | CONCLUSIONS

Drawing on a European sample of SMEs for the period 2009–2019, we examined whether a firm's voluntary purchase of sustainability assurance is associated with disclosure of (financial and non-financial) information, country characteristics (legal origin and sociological factors) and the industrial sector in which it operates. The study contributes to further understanding of assurance among SMEs in Europe. We have reported that such practices are not, in fact, especially widespread, but, when present, accountants tend to be the main assurers, especially firms belonging to the Big Four. Moreover, while the disclosure of information is significantly associated with the credibility that assurance provides, industry and country of origin emerge as the two main factors accounting for it. Our results also indicate that legal origin is a significant determinant of the decision to assure (especially in the countries of Scandinavia). Similarly, those countries in which entities consider the power distance to be relatively close, and where feminine values are more prevalent and there is a greater tolerance of uncertainty, the assurance of sustainability information appears more likely.

The implications of this study are twofold. First, SMEs present a set of specific characteristics that lead them to promote the assurance of information, and second, given that the decision is voluntary, the need for making verified information available is essential for their credibility. The findings of this study stress the fact that SMEs merit special attention. These entities with their relatively scarce resources and smaller number of stakeholders present themselves as an interesting field for future research. Most of the literature to date concerns itself with publicly listed firms, but everyday social responsibility is mostly put into practice by citizens and small firms.

The results of the study presented here can be made more robust by drawing on more information, that is, by increasing the sample in terms of the number of years covered and countries included and by examining in-depth the content of the reports themselves. Additionally, it would be insightful to consider how other aspects, such as performance, might directly influence the decision to purchase sustainability assurance. Yet, all in all, the results reported herein show that not all the explanations applicable to large corporations can be applied to SMEs, and this in itself requires further investigation.

## CONFLICT OF INTEREST

I declare that we are not and shall not be in any situation which could give rise to a conflict of interest in what concerns the publication of this paper.

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