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## **European Sustainable Development Goals Reporting: A Qualitative Comparative Analysis on Cultural Impact**

**Abstract.** *The European Green Deal is set to enhance the relevance of Sustainable Development. The Sustainable Development Goals represent a suitable tool to target sustainability objectives. In this perspective, the present research investigates to what extent European organisations include in their reports the United Nations Sustainable Development Goals and what cultural dimensions determine such disclosure. The results of the research demonstrate a fair level of disclosure and outline how the cultural fabric works in different ways to determine organisations to disclose information related to the Sustainable Development Goals. The results contribute to the literature, as it provides an investigation that covers more than one or two countries and in particular adopts a methodology that is rarely used in accounting studies.*

**Keywords:** *Sustainable Development, EU Green Deal, Sustainable Development Goals, Qualitative Comparative Analysis.*

**JEL Classification:** M41, D22, Q01, Q56, O57.

### **1. Introduction**

The EU non-financial reporting directive (NFRD) requires larger organisations with more than 500 employees to publish their financial reporting and non-financial information, letting them choose what national, European, or international frameworks to use. The introduction of the European Green Deal is set to further improve the relevance of non-financial information and to further enhance social expectations, as it “requires companies and financial institutions will need to increase their disclosure on climate and environmental data so that investors are fully informed about the sustainability of their investments” (European Commission, 2019; p. 17). In this perspective, the European Union is further fostering its Sustainable Development (SD) agenda. Consequently, the Sustainable Development Goals (SDGs) can be seen as a guide for nations and organisations to achieve a

sustainable approach to business. Many scholars consider that the achievement of the goals cannot occur without the contribution of the private sector (Hajer et al., 2015). In this perspective, Bebbington and Unerman (2018) remarked that the SDGs can be included in current reporting trends and outlined the need for empirical evidence on how organisations embrace the goals. Following the call for future research of Bebbington and Unerman (2018), several scholars have been delivering empirical research on SDGs application by organisations (Poddar et al., 2019; Rosati and Faria, 2019; Matteredra and Ruiz-Morales, 2020). However, there is still a scarcity of studies that focus on a broader geographical area. In this perspective, the present research has two research purposes: first, it aims to explore the level of SDGs disclosure in the report and which goals are more common among reporters, at a European level, and second what cultural dimension determines the disclosure of the Goals.

The second purpose is to investigate how the cultural dimensions (Hofstede, 1984) drive organisations to have higher disclosure levels. In the case of the second research question, the novelty is represented by the use of fuzzy set Qualitative Comparative Analysis (fsQCA). The research focuses on European listed organisations, as larger organisations are more likely to address non-financial reporting, and that sustainability reporting is more advanced in the institutional context (Van Zanten and Van Tulder, 2018). The sample is focused on the European context, as the spread of non-financial information, in this particular area, has been boosted by the introduction of the European Directive 2014/95/EU which has influenced also organisations outside the European Union (Manes et al., 2018). The year 2019 was chosen as it is the first year of the introduction of the European Green Deal, thus contributing to higher disclosure levels. The paper is composed as follows: the second section presents the literature review and the theoretical framework adopted for the present paper, and it combines it with Hofstede's cultural dimensions. Section three explains the methodological approach and explains how the investigated sample has been collected, which reports were analysed, the scoring approach and the Qualitative Comparative Analysis. Section four presents the results of the research. Finally, section five presents the conclusions, where limitations and lines for future studies are included.

## **2. Literature review and Theoretical Framework**

In view of the increased expectations regarding social and environmental issues (Bebbington and Unerman, 2018), the United Nations (UN) formed from the MDGs the SDGs. The SDGs are considered a set of solutions to the world's biggest problems including climate challenges around the world, economic development, social concerns, and many other aspects which can be solved by a common strategy applied by governments and organisations (UN, 2019). The SDGs include a set of 17 issues that refers to achieving the economic, social, and environmental dimensions of SD of the region, country, or organisation (UN), the 2030 Agenda is

considered an ambitious programme (Ramos et al, 2018) and a significant framework (Van Zanten and Van Tulder, 2018).

Recently, the United Nations Global Compact (UNGC) in operation with the GRI started an initiative that supports the organisations to incorporate SDG reporting in their processes (UNGC, 2019). GRI supported the participation of the company in measuring their performance through the SDGs from 2017 to 2020 through the “Action Platform for Reporting on the SDGs”.



**Figure 1. UN Sustainable Development Goals**

*Source:* <https://un.org/development/desa/disabilities/about-us>.

The GRI launched a new Business Leadership Forum for the companies in order to help them achieve the SDGs. In addition, the IIRC and ICAS (the professional accountancy body), in partnership with the Green Economy Coalition developed a report that aims to help organisations improve their contribution to the SDGs by demonstrating how the <IR> Framework can support the organisations to create value through their contribution to the SDGs. The previous paragraphs demonstrate how international standard settlers are interested in converging the SDGs in existing reports and practices. In a similar perspective, scholars have been exploring the application and methods of contribution to the SDGs on different levels. Through the Institutional Theory lens, Rosati and Faria (2019). Their results demonstrate that organisations located in countries with weaker employment protection laws, lower levels of market coordination, higher spending on tertiary education, and climate vulnerability are more likely to adopt the SDGs in their reports (Rosati and Faria, 2019). In addition, the authors demonstrated that SDGs application occurs in countries with lower levels of power distance, higher levels of indulgence, higher individualism, and short-term orientation. Through the same theoretical lens, Van Zanten and Van Tulder (2018) aimed to investigate how institutional factors

influence multinational companies in terms of sustainability, especially those that emerge from SDGs. Multinational companies are more likely to be involved with internally actionable SDG targets than externally actionable SDG targets. There is a higher possibility that they lean toward the SDG targets that mean avoiding harm than to the targets to “do good”.

Mattera et al. (2021) investigated the resistance of organisations that apply sustainable development practices in their business model during the COVID-19 crisis. To this extent, the authors investigated a sample of Spanish-listed companies. They outlined that long-term sustainability practices result in accomplices of recovery in periods of economic crises, particularly in the case of organisations working in the energy sector. Noteworthy is the relevance of the Triple Bottom Line theory that assisted authors to demonstrate that sustainability practices are the basis for organisations to help them face unforeseen circumstances (Mattera et al., 2021). Izzo et al. (2020) analysed how Italian-listed organisations voluntarily disclose their SDG information through different instruments. The paper focused on content analysis that draws data from the 2018 reports (Annual Report, Sustainability Report, Integrated Report) of 40 companies listed on the Italian Stock Exchange from 10 different industries. Only 5% of the companies disclose the SDGs in their reports and also discussed the KPIs related to the SDGs. The most disclosed SDG is the 8th, related to economic growth and decent work, which is the easiest way for the companies to track their determinations on the issues. However, most companies vaguely cited and listed the SDGs in their reports with very few details. Furthermore, a greater understanding and engagement of the SDG reporting by the companies will generate more sustainable practices offering competitive advantages and attracting investors.

Poddar et al. (2019) analysed 500 companies listed in the Bombay Stock Exchange and the relation of CSR practices with the UN SDGs on the period 2014-2016. The results revealed that “the geographic and sectoral CSR expenditures were linked with SDGs” (Poddar et al., 2019; pp. 1202), and the finance sector was the most representative as it was highly involved in CSR activities, followed by other sectors such as energy, oil, and gas.

Šebestová and Sroka (2020) analysed the methods applied in the Czech Republic and Poland related to waste management and how the indicators can be used in achieving the SDG 8, 9, and 12. The Poland case was based on empirical evidence of the literature review and content analysis. The findings revealed that the Czech entrepreneurs are more interested in the “green” methods and have a higher level of interest in waste management than the Polish entrepreneurs. The SMEs are encouraged by the customers’ needs to achieve their sustainability goals, and SDGs 8, 9, and 12 are supported by the public and are associated with precise regulations. Further research could expand the analysis, while offering more indications on how the SDGs of SMEs could develop in different years. SDGs are being embraced by organisations on a worldwide level. This behaviour demonstrates that organisations are important players in today’s society, as they bring employment, development, and welfare. In societies, there is a series of values and behaviours that organisations

feel and tend to respect commonly recognised as political and social structures in which organisations operate and develop (DiMaggio and Powell; 1983). Lawrence & Shadnam (2008), argue that an institution is located in particular social contexts and determine the action of those operating in the named context. It seeks to understand how the organisations are reacting to adjust the social and institutional tensions and prospects (Higgins and Larrinaga, 2014). In the view of institutional theorists, organisations are influenced by rules, norms, and belief in their operating environment, and it aims to explain social relationships between organisations' behaviour and various elements that can lead organisations to similar behaviours. In this perspective, DiMaggio and Powell (1983) argue that organisations sense a constraining process that pushes organisations working in the same conditions to resemble others, such a phenomenon called isomorphism is further detailed in three categories that are able to explain organisations' behaviour.

1) Mimetic: is related to imitation between organisations, driven by different factors such as uncertainty and ambiguous goals. Such an approach can be seen in cases in which organisations are adopting others' successful practices or elements when uncertain occasion emerges.

2) Normative: derived primarily from professionalization, which represents "the collective struggle of members of an occupation to define the conditions and methods of their work" (DiMaggio & Powell, 1983). It can be seen as a set of standards that emerges from professions and moral standards (Lawrence and Shadnam, 2008).

3) Coercive: refers to regulations that force organisations to submit to certain regulations. It may result "from formal or informal pressures exerted on the organisation by the government, other organisations, or the cultural expectations of the environment" (Lawrence and Shadnam, 2008; p. 3).

In the literature, there are many studies on the applicability of the institutional theory in listed organisations providing a valuable theoretical framework that eases the organisations' research through the institutional perspective (Rosati and Faria 2019). Associated with an institutional concept, while performing in a logical way, with certain rules and norms, the structure of the organisations is seen as an intra-organisational institutional field. Leicht and Jenkis (2010) argue that scholars generally have problems explaining social and political changes. Such an issue can result from a limited perspective on societies beliefs and informal rules. In this perspective, Hofstede's cultural dimensions represent habits inherited and developed within families and strengthened by frequenting institutions in a given society. In this view, Hofstede (1984, p. 9) argues that "the collective programming of the mind that distinguishes the members of one group or category of people from another" represents culture. Hence, societies can be considered as a composition of "social norms, consisting of the value systems shared by major groups within a nation" (Gray, 1988; p. 4). Furthermore, value and beliefs make individuals prefer certain affairs over others (Hofstede, 1984). In this perspective, when investigating the cultural influence on SDGs disclosure, it has to be taken into consideration the

relevance of the informal values and beliefs (DiMaggio and Power, 1983) that render certain organisations working in the same environment to have a similar approach on certain matters (i.e., Sustainability disclosure). Therefore, it can be considered that the mix of cultural dimensions proposed by Hofstede (1984) renders the disclosure of the SDGs more important in certain countries based on certain values and beliefs. Hofstede (1984) recognised the existence of five cultural dimensions: Power Distance (PD) which shows how power is distributed and accepted in society; Uncertainty Avoidance (UA) represents the level of how a society is able to face ambiguity, intolerance and how members of the society are able to accept changes; Masculinity versus Femininity (MAS) that outlines the relevance of personal accomplishment rather than the relevance of working in a friendly and secure environment; Individualism (IDV) represents how individual opinions have higher importance than the collective; Long- Term Orientation (LTO), it demonstrates whether a society is oriented toward short-term benefits or perseverance. Additionally, Hofstede et al. (2011) provided a sixth cultural dimension: Indulgence versus Restraint (IVR), which represents the extent to which a society allows human desires and, on the other pole, whether the society is strict. Scholars have been investigating the influences of cultural dimensions on corporate disclosure even before the emergence of the SDGs. Vitolla et al. 2019 explored the relation behind Integrated Reporting disclosure quality and cultural dimensions. The analysis, shows a relation between organisations located in countries with “less power distance, more uncertainty avoidance, more collectivism, femininity, and restrain” (Vitolla et al.,2019; p. 1567). Reverte (2022) investigated the SDGs at an international level by exploring the relationship between innovation, cultural dimensions, governance, and education spending. The results of the study demonstrate that countries with stronger cultures are more likely to have higher SDGs contribution, in combination with higher levels of governance and education spending. Caliskan and Esen (2021) explored the relation behind corporate disclosure, with a focus on climate change information. Their results demonstrate that in each country has a different cultural landscape, rendering therefore each result different based on the values of the country. It is worth mentioning that there is a wide difference among the results about the fabric of the cultural dimension that determines disclosure. In this perspective, it may be argued that the sample was different. Although, all of the contributions focused on an international sample composed by Integrated Reporting adopters, GRI companies, or Forbes companies. These all offer a wide international representation. The only common line among the above-mentioned studies is the methodological approach: multivariate regression analysis. The cultural layers that compose a society work in combination and in antagonism among them, creating a fine line among the correct or wrong in a determined society. In this perspective, Zanellato & Tiron (2022) investigated the disclosure State-Owned Enterprises through the application of the QCA. In their results, a wide variety of cultural combinations allowed for the existence of a high Integrated Reporting alignment. In this

perspective, the multitude of results existing in the literature can be covered by the application of another methodology that allows the explanation of multiple results, which can sometimes be in contrast among them. In this perspective, given the complexity of a social construct, the present paper proposes the following statements:

Proposition 1: Is any cultural dimension enough strong to determine organisations to disclose a high or low SDGs?

Proposition 2: How are cultural dimensions exerting their power leading organisations to disclose SDGs in their reports?

### 3. Methodology

The companies from Europe were included in the study to see if there are any differences in the results of the EU companies (influenced by the EU NFRD) and the non-EU companies situated in Europe. As the data from the Forbes website was also used by Manes et al. (2018) in their study, by analysing the Forbes website, the first 5 ranked organisations per market capitalisation available in the Forbes 2000 ranking were selected. For each European country, the first 5 were selected. Accordingly, the total organisation included in the present studies are 104, as the ranking provided by Forbes lists organisations from 24 countries. Due to their size, such organisations are more likely to present SDGs disclosure in their reports (Rosati and Faria, 2019). For each country, a number of five organisations was selected from FORBES 2000. Although, for Cyprus, Czech Republic, and Portugal the number of organisations analysed was respectively: 1, 1 and 4.

To respond to the 1st research question each organisation's website was searched for their 2019 Annual Reports (AR) and their non-financial reports or other available reports that included sustainability information, as well as their website pages. Each report was scrutinised in order to explore the keywords "SDGs" and "Sustainable Development Goals" and analysed which Goals were mentioned from "SDG1" to "SDG17". In order to analyse and categorise the information, available in the reports, the Content Analysis methodology was adopted, which is "a research technique for making replicable and valid inferences from texts (or other meaningful matter) to the contexts of their use" (Krippendorff, 1989; p. 18). Such a methodology is widely used in disclosure studies (Zanellato & Tiron, 2022). Therefore, each report was analysed to outline the disclosure of the SDGs. Few reports were analysed by the author of the report to determine whether the analysis can be conducted with reliability (Krippendorff, 1989). The main challenge from such analysis can arise from subjectivity, although the assessment of the presence or absence of a given element can be objectively observed. Moreover, the documents were analysed individually and scores were given based on presence (1) or absence (0). In addition, the same coding system was assigned to every 17 Goals to quantify the presence/absence of each Goal for each company. The adopted checklist is composed of the seventeen SDGs. The score is named "SDGs Disclosure Index" (SDGsDI) and has been structured as follows:

$$\text{SDGsDI} = \frac{\sum_{i=1}^m d}{m}$$

Where  $\frac{\sum_{i=1}^m d}{m}$  is the sum of the number of the goals disclosed by the organisation and “m” is the maximum number of goals. For each country, the cultural dimensions have been collected (Hofstede, 2011), and the values of the cultural dimension have been retrieved from the Hofstede-insights.com website. Furthermore, the results are analysed through the fsQCA (Ragin, 2009); this methodology is able to explain whether one variable (condition) is necessary for the outcome to occur and if one variable is sufficient for the outcome to occur (Scheider & Wagemann, 2012). QCA is based on set-theoretic methods and it provides multiple combinations of variables that are able to explain the results of the analysis. QCA provides patterns of sufficient and necessary conditions. Consequently, QCA is particularly useful when analysing complex causation, which is a situation in which an outcome may follow from several different combinations of causal conditions, that is, from different causal “recipes” (Ragin, 2009). Accordingly, two types of analysis can be conducted. Crispy set QCA (csQCA) or fuzzy set QCA (fsQCA). In the case of this particular investigation, the use of fsQCA is particularly useful, as it allows one to present different degrees of cultural values rather than defining a given dimension strong or weak as it would be considered through csQCA, which would determine the strength of a given cultural dimension in terms of (0) weak or (1) strong. In this manner, different shades of cultural dimensions can be empirically captured (Schneider & Wagemann, 2012). The use of fuzzy-set QCA is motivated by the better representation this variant can offer through scores of memberships in a given category. To capture the diverse shades of the conditions, in this case, the cultural dimensions, calibration of the conditions is required (Ragin, 2009). The conditions, cultural dimensions, and the SDGs score have been calibrated by using the same approach of Zanellato & Tiron (2022), as in the case of the current report adopting a calibration scale that includes all the levels of Hofstede cultural dimension would have decrease the consistency of the conditions, and consequently, of the results. Therefore, per each condition and the outcome, the minimum, average, and maximum values have been calculated. The analysis has been conducted through the use of the fsQCA software, which is a software widely used by scholars when using the QCA methodology.

**Table 1. Calibration approach**

	SDGs	Power Distance	Individualism	Masculinity	Uncertainty Avoidance	Long Term Orientation	Indulgence
MIN	0.00	11.00	27.00	5.00	23.00	24.00	20.00
AVERAGE	0.45	46.14	62.51	46.59	68.03	54.29	78.00
MAX	1.00	93.00	89.00	88.00	100.00	83.00	51.89

*Source:* Authors' own elaboration.



Noteworthy to mention is the absence of a given condition (e.g., PD) does not show a country with NO PD but rather a country with low PD.

#### 4. Results and Discussions

Moving toward the central aim of the research, the results demonstrate an average adoption of the Goals in almost all countries by all companies analysed. This outlines that the contribution toward the Goals is a practice that already has its roots inside organisations in most of the European countries. While from a national perspective, a wide distribution of the SDGs application provides evidence of the consolidated non-financial reporting practices, when looking at the same sample from an industrial perspective, the insights radically change and provides further questions that need to be answered. Furthermore, the analysis outlines the average disclosure of the SDGs in the reports. The average disclosure of goals is 0.45 that outlines a contribution of almost half of the Goals. Whilst, the minimum disclosure is 0 due to the lack of contribution of multiple organisations. From an industry perspective, the sectors that appear the most are: Banking (26), Oil & Gas (12), Insurance (10), and Utilities (7). While the sectors with lowest appearances are: Conglomerates (1), IT Software & Services (1), Transportation (1), and Health Care (1).

The highest disclosure levels were observed in Czech Republic, France, Turkey, United Kingdom, Germany, and Italy. Countries such as Spain, with existing studies (Mattera et al. 2021) obtained a 0.46 level of disclosure, which is in line with the average of the investigated sample, but does not support the level of previous disclosure (Mattera et al. 2021).

**Table 2. Results per Country**

Country	SDGs Score
Austria	0,47
Belgium	0,40
Cyprus	0,41
Czech Republic	0,82
Denmark	0,33
Finland	0,40
France	0,65
Germany	0,55
Greece	0,48
Hungary	0,33
Ireland	0,53
Italy	0,55
Luxembourg	0,45
Monaco	0,00

Country	SDGs Score
Netherlands	0,42
Norway	0,44
Poland	0,20
Portugal	0,35
Russia	0,35
Spain	0,46
Sweden	0,42
Switzerland	0,40
Turkey	0,60
United Kingdom	0,59
<b>Average</b>	<b>0,45</b>

*Source:* Authors' own elaboration.

Accordingly, the results of the analysis demonstrate that previous studies focused on a single country provide a good perspective on SDGs adoption, while if the sample comprehends more countries and aleatory organisations drawn from an international ranking that is not related to sustainability issues the results change exponentially. Similarly, the results per sector provide different evidence in comparison with the existing literature. According to the present investigation, the sector that obtained the highest scores are the following: “Construction” and “Capital Goods”.

**Table 3a. SDGs Disclosure per Industry**

Industry	SD G1	SD G2	SD G3	SD G4	SD G5	SD G6	SD G7	SD G8	SD G9
Banking	0,21	0,11	0,25	0,46	0,54	0,29	0,64	0,79	0,68
Capital Goods	0,00	0,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
Chemicals	0,00	0,00	0,50	0,00	0,50	0,00	0,50	1,00	0,00
Conglomerates	1,00	0,00	0,00	0,00	0,00	0,00	1,00	1,00	0,00
Construction	0,50	0,50	1,00	1,00	1,00	1,00	1,00	1,00	1,00
Consumer Durables	0,33	0,33	0,67	0,33	0,67	0,33	0,67	0,67	1,00
Diversified Financials	0,25	0,25	0,50	0,75	0,50	0,25	0,50	0,75	0,50
Drugs & Biotechnology	0,20	0,20	1,00	0,40	0,40	0,60	0,40	0,80	0,40
Food Markets	0,00	0,00	0,00	0,00	0,50	0,00	0,50	1,00	0,50
Food, Drink & Tobacco	0,20	0,20	0,80	0,40	0,60	0,40	0,40	1,00	0,40
Health Care Equipment & Services	0,00	0,00	1,00	0,00	1,00	0,00	0,00	1,00	1,00
Household & Personal Products	0,00	0,50	0,50	0,50	0,50	0,50	1,00	1,00	0,50
Insurance	0,18	0,00	0,55	0,55	0,55	0,36	0,73	0,82	0,55

<b>Industry</b>	<b>SD G1</b>	<b>SD G2</b>	<b>SD G3</b>	<b>SD G4</b>	<b>SD G5</b>	<b>SD G6</b>	<b>SD G7</b>	<b>SD G8</b>	<b>SD G9</b>
IT Software & Services	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,50
Materials	0,00	0,00	1,00	0,75	0,75	0,50	0,75	0,75	0,75
Media	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Oil & Gas Operations	0,27	0,07	0,53	0,47	0,47	0,27	0,53	0,60	0,27
Retailing	0,50	0,00	0,00	0,50	0,50	0,50	1,00	0,50	1,00
Technology Hardware & Equipment	0,00	0,00	0,00	0,00	0,00	0,00	0,00	1,00	1,00
Telecommunications Services	0,00	0,00	0,67	0,67	0,67	0,00	0,67	1,00	0,33
Transportation	0,00	0,00	1,00	0,00	1,00	0,00	1,00	1,00	0,00
Utilities	0,50	0,13	0,50	0,75	0,63	0,50	0,88	0,38	0,63
<b>Total Average</b>	<b>0,22</b>	<b>0,11</b>	<b>0,49</b>	<b>0,48</b>	<b>0,54</b>	<b>0,33</b>	<b>0,63</b>	<b>0,74</b>	<b>0,55</b>

Source: Authors' own elaboration.

**Table 3b. SDGs Disclosure per Industry**

<b>Industry</b>	<b>SDG10</b>	<b>SDG11</b>	<b>SDG12</b>	<b>SDG13</b>	<b>SDG14</b>	<b>SDG15</b>	<b>SDG16</b>	<b>SDG17</b>
Banking	0,32	0,43	0,68	0,89	0,18	0,25	0,36	0,54
Capital Goods	1,00	0,00	1,00	1,00	0,00	0,00	1,00	0,00
Chemicals	0,00	0,00	1,00	1,00	0,00	0,00	0,00	0,00
Conglomerates	0,00	0,00	0,00	1,00	0,00	0,00	0,00	0,00
Construction	0,50	1,00	1,00	1,00	1,00	1,00	1,00	1,00
Consumer Durables	0,33	1,00	0,33	1,00	0,33	0,33	0,67	0,33
Diversified Financials	0,50	0,25	0,75	0,75	0,25	0,25	0,00	0,50
Drugs & Biotechnology	0,00	0,20	0,40	0,80	0,00	0,20	0,20	0,80
Food Markets	0,00	0,50	1,00	1,00	0,00	0,50	0,00	0,50
Food, Drink & Tobacco	0,60	0,40	0,60	0,80	0,20	0,40	0,20	0,80
Health Care Equipment & Services	0,00	0,00	1,00	0,00	0,00	0,00	0,00	1,00
Household & Personal Products	0,50	0,50	0,50	1,00	0,50	0,50	0,50	0,50
Insurance	0,36	0,45	0,73	0,82	0,18	0,27	0,36	0,36
IT Software & Services	0,00	0,50	0,50	0,50	0,00	0,00	0,00	0,00
Materials	0,50	0,75	0,75	1,00	0,25	0,50	0,50	0,50
Media	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Oil & Gas Operations	0,33	0,33	0,47	0,67	0,20	0,33	0,13	0,53
Retailing	0,50	1,00	0,50	1,00	0,00	0,00	0,50	0,50
Technology Hardware & Equipment	0,00	1,00	1,00	1,00	0,00	0,00	0,00	1,00

Industry	SDG10	SDG11	SDG12	SDG13	SDG14	SDG15	SDG16	SDG17
Telecommunications Services	0,33	0,33	0,67	1,00	0,33	0,00	0,00	1,00
Transportation	0,00	1,00	0,00	1,00	1,00	1,00	1,00	0,00
Utilities	0,63	0,50	0,50	0,88	0,13	0,50	0,50	0,63
<b>Total Average</b>	<b>0,35</b>	<b>0,44</b>	<b>0,62</b>	<b>0,84</b>	<b>0,19</b>	<b>0,30</b>	<b>0,31</b>	<b>0,53</b>

*Source:* Authors' own elaboration.

According to the literature (Poddar et al., 2019), “Oil & Gas Operations” are expected to disclose more information related to sustainability matters due to their impact on the environment. Although, in the case of the present investigation this particular sector, in addition to “Chemicals” that still impact the environment, obtained among the lowest score of the entire sample. This particular issue raises further questions that the academic literature shall address.

The results of the analysis demonstrate a wide adoption toward the following Goals: 13<sup>th</sup>, 8<sup>th</sup>, 7<sup>th</sup>, 12<sup>th</sup>. According to the existing literature, the obtained results are not in line with the literature (Poddar et al., 2019; Mattera and Ruiz-Morales, 2020). Therefore, the current results could already provide fresh knowledge to the literature and consequently arise further questions that need to be addressed. Furthermore, on a less positive note, the investigated organisations fail to address the following Goals: 2<sup>nd</sup>, 1<sup>st</sup>, 15<sup>th</sup>, 16<sup>th</sup>. While, existing studies mention the contribution toward the same Goals by organisations (Šebestová and Sroka, 2020). These results can be related to the choice of sample, as Forbes organisations are not ranked for sustainability issues but according to market value. The lowest score obtained was in the Goal named Zero Hunger (2<sup>nd</sup>), demonstrating that organisations do not act, or know how to act in order to contribute toward the Goal. Therefore, there is a need for a further understanding of how can organisations can contribute toward the Goals.

Moreover, the highest score was obtained by the Goal “Decent Work and Economic Growth”. This is in line with the previous studies (Izzo et al., 2020). The results provided per industry demonstrate the same results per Goals but outline a wide perspective on how different industries tackle different Goals.

From an Industry point of view, the preferred goal is by different sectors is the SDG13 “Climate Action”, such behaviour can be related to an institutional isomorphism, mimetic, in particular (Di Maggio and Powell, 1989). As a consequence, further investigation shall be focused on determining why such behaviour spread across sectors and countries. The less disclosed elements are the SDG 2 and 14. On the other hand, it is possible to observe a certain degree of preference toward the Goal: 13 and 8. From a theoretical perspective, organisations are committing toward goals that are also enforced by law, such as emission and climate regulation (Goal 13) as similar to the other (Goal 8) as organisations are required to offer certain working conditions toward their employees. In this perspective, it is possible to observe a coercive isomorphism that influences the disclosure of the goals.

From the analysis it is possible to observe the levels of the disclosure in Norway are in general higher than in Russia. This can be related to the similarities of regulation that Norway shares with the European Union in contrast with the Russian federation. A different, although similar coercive aspect can be observed, as regulation that foresees the responsibility of organisations for “zero hunger” and “life below water” is for a niche of organisations rather than for a large pool of organisations. Accordingly, it is possible to state that the coercive isomorphism (DiMaggio & Powell, 1983) shows its effects, in particular in developed countries with higher regulations that shade on the objectives of the Goal. Patterns of regulation influencing the disclosure of given elements which are related to the objectives of the Goals. In this perspective, it is possible to observe also the influence of the European Directive on non-financial information, which requires organisations with more than 500 employees to disclose information (Manes et al., 2018). As in the regulation, the requirements can be achieved through the use of the SDGs. Such regulation has an impact in terms of disclosure, as for European countries results are higher, and for extra European countries results are different based on their own regulation.

The results of the QCA analysis demonstrate that there is no necessary condition for the outcome to occur. According to the literature, the level of consistency for a condition to be necessary is higher than or equal to 0.90 (Schneider & Wagemann, 2012).

**Table 4. Necessary Conditions Results for SDGs**

<b>Cultural Dimension</b>	<b>Consistency</b>	<b>Coverage</b>
pd	0.660317	0.693701
~pd	0.706838	0.646433
indv	0.721476	0.651104
~indv	0.651494	0.695122
masc	0.705033	0.673047
~masc	0.621616	0.622990
ua	0.705835	0.631730
~ua	0.598356	0.644771
lto	0.733507	0.652865
~lto	0.593142	0.643463
indg	0.702025	0.648934
~indg	0.654903	0.679709

*Source:* Authors' own elaboration.

Similarly, the absence of the outcome, i.e., low SDGs disclosure, cannot be reconducted to any of the cultural dimensions. Given these results, it is possible to state that organisations do not having isomorphic behaviour due to one or another cultural dimension.

These results demonstrate how complex societies are in which organisations operate and how the different layers of culture create a pattern for the occurrence of the outcome. In this perspective, it is possible to observe how only one cultural dimension is not strong enough to determine high or low disclosure due to the

multiple factors that lead to non-financial disclosure. Furthermore, the sufficiency analysis provides a completely different landscape. According to the methodology, the truth table requires a threshold for the inclusion of the solutions. According to the literature, the minimum value for inclusion is 0.80 (Ragin, 2009), for the present investigation the consistency threshold adopted has been set to 0.85. This has been done in order to strengthen the results (Ragin, 2009). The analysis aims to outline how the cultural fabric through informal pressures pushes organisations toward greater disclosure in the case of the SDGs. The solutions provided by the sufficiency analysis demonstrate a particular insight. Most of the results outline that organisations from the same nation are grouped in the same solution. In the case of countries with similar cultural levels, the cases are grouped into the same combination of conditions.

**Table 5. Sufficiency Solution for SDGs Disclosure**

No. Crt.	Solutions		Raw Coverage	Unique Coverage	Consistency
1	indg*~lto*~ua*masc*indv*~pd	UK	0.274514	0.076599	0.880952
2	~indg*lto*~ua*masc*indv*~pd	DE	0.288751	0.032484	0.894410
3	indg*lto*ua*masc*~indv*~pd	AU, SE	0.338480	0.031682	0.870552
4	~indg*lto*ua*masc*~indv*pd	CZ	0.342892	0.037898	0.864073
5	~indg*lto*ua*~masc*indv*pd	FR	0.316423	0.030880	0.883044
6	indg*lto*ua*masc*indv*pd	BG	0.295569	0.138360	0.867569
		<i>solution coverage:</i>	0.592139		
		<i>solution consistency:</i>	0.806390		

*Source:* Authors' own elaboration.

Table 5 outlines the causal combination of conditions that lead to the emergence of the outcome. From this perspective, it is possible to observe a wide variety of solutions that are able to explain the outcome. Accordingly, the solutions also offer contradicting perspectives. As solution no. 1 is almost entirely different from solution no. 5. While solutions 3 and 4 are almost equal, besides the absence of the IND and PD, meaning that there is a weak PD and a culture of restraint (Hofstede, 2011). Deepening the analysis of the results, the solution demonstrates how national dynamics exerts pressures on organisations for achieving the outcome. In this perspective, it can be argued that organisations headquartered in the same nation feel a coercive isomorphism, as according to DiMaggio & Powell (1983) it results from both formal and informal pressure, in this case informal, as it is a pressure exerted by cultural expectations of society in which organisations operate. Not only can the existence of a law or a regulation lead to a given organisational behaviour. But also the need, for organisations, to adhere to the social system to meet their needs, is a form of coercion. The results exposed in the present analysis can both explain and unconfirm existing results in the literature. Although, a similar result has been found

in the literature. As a similar insight has been found by Zanellato & Tiron (2022), which also found that organisations operating into the same cultural environment were included in the same solution. Demonstrating in this perspective, the potential of this methodology when investigating the influence of Cultural dimensions (Hofstede, 2011) as a whole rather than one variable is strong enough to determine organisations to follow a determinate behaviour. The informal regulation that the cultural dimensions exert on societies, outline a coercive isomorphism (DiMaggio & Powell, 1983) that pushes organisations in disclosing a higher quantity of information in their reports. While it may be argued that organisations are coping each other by following a trend (mimetic isomorphism), how can be determined which organisation started to follow the trend. In the case of the current report, the forces exerting pressure on organisations are determined by society's values and beliefs, rendering the solutions a coercive informal regulation on how organisations have to behave in a given society. From another point of view, it is possible to see that the absence of a high disclosure is determined by a combination of cultural dimensions that affect only northern European countries such as Norway, Sweden, and Denmark. The sufficiency analysis demonstrates that only two combinations of cultural dimensions motivate organisations to have low SDGsDI levels. It is possible to consider that the solutions are almost equal as they differ only in the absence of LTO and the presence of INDG. In this perspective, it can be argued that the coercive forces of the societies from northern countries are not forcing organisations to disclose large quantities of information in their reports. These results can be explained by the fact that northern countries have formal laws that enforce the requirements of environmental disclosure, and consequently the cultural fabric is not pushing further organisations to disclose high SDGsDI.

## 5. Conclusions

The aim of the present paper was to investigate to what extent large organisations are embracing the SDGs, and how the cultural dimensions impact the disclosure of the Goals. The present research has demonstrated a wide adoption of SDGs practices by corporations in the case of more developed countries, while countries with smaller organisations denoted a lower involvement toward the Goals. The investigated sample disclose almost a fair level of SDGs, yet it seems to be a little lower in comparison with actual studies. From a sectorial perspective, a particular insight that emerged from the analysis is the low contribution provided by environmentally sensitive organisations. To the same extent, organisations shall be investigated on a national level as results that emerged from the present investigation demonstrate that organisations located in a county with a high contribution toward the goals emerged to be a lower contributor. Due to this reason, organisations shall not be investigated based on their environmental or social excellence but more on a holistic perspective. Furthermore, there is a need to understand how the European Directive on non-financial information influences European Union countries in contributing toward the Goals. Furthermore, the present paper proposes a diverse

approach from the current literature by analysing the sample through the fsQCA. The methodology adopted has presented insights into how cultural dimensions have a coercive power to shape organisational behaviour, even in an informal manner. Accordingly, the analysis has been conducted for only one year, but due to the validity of the results and the particularity of the methodology, the QCA method can be employed to shed further light on SDGs' patterns of disclosure. In this perspective, it is possible to state that each culture exerts its expectations and norms on the organisations that are working in their environment. As each country has its own combination of cultural dimensions that allow the outcome to occur. Nevertheless, cultures with similar values reported the same combination of conditions for the existence of the outcome. The proposed methodology is more suitable for investigating phenomena involving cultural dimensions because it can represent all of the obtained results without excluding outcomes that do not result in other countries. On the contrary, previous studies relied on regression models, but the present contribution demonstrates how cultural dimensions together can cooperate to provide a flourishing environment to disclose information on sustainable development. The present report contributes to the literature in two main ways: first, it investigates a large sample of European organisations, and second, it adopts a methodology that is completely different from the ones adopted in the literature so far. Second, it contributes to the literature on SDGs and cultural dimensions by demonstrating that not only one or two cultural dimensions are enough strong to push organisations to disclose SDGs. In spite of the novelty introduced in this paper, it is not free of limitations. The main limitation refers to the time span of the analysis. Being limited to only one year, the analysis can't capture the impact of the European Green Deal on companies' disclosure trends. Furthermore, the present research adopts a dichotomous approach to explore the disclosure of the goals. Such an approach is not able to capture the quality of the disclosure. Therefore, it is recommended that future studies investigate a larger time span in order to explore the evolution of disclosure. In addition, future studies should investigate the quality to a different scoring approach.

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