Paradigm

Cultural Drivers of Sustainability Reporting in the European Energy Sector: A Comparative Case Study of Romanian and Italian Companies

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Abstract. *Sustainability reporting is now a key tool for European energy companies, pushed forward by new regulations and rising pressure from stakeholders. Beyond compliance, sustainability disclosure reflects organisational priorities, strategic orientation, and national contexts. This paper examines how national culture influences sustainability reporting practices within the European energy sector, focusing on companies operating under the same European legislative framework.*

The study employs a qualitative comparative case study approach, analysing sustainability reports published by ENGIE Romania, ENGIE Italy, and IREN Italy. The analysis combines qualitative content analysis with Hofstede's cultural dimensions to identify differences in reporting structure, transparency, narrative style, and strategic focus. We examined the data in three ways: we compared branches of the same company, different companies in the same market, and finally, the differences between Romania and Italy.

The results show that, although all analysed companies follow European sustainability reporting requirements, notable differences exist in the way sustainability information is communicated. Italian companies usually take a more conversational approach that focuses on their stakeholders, while sustainability reporting in Romania is more formal, centrally structured, and compliance oriented. These differences suggest that national cultural characteristics influence sustainability reporting practices, even within a common regulatory framework.

The paper contributes to the existing literature by highlighting the role of cultural and institutional factors in sustainability reporting. These findings can help managers and policymakers make sustainability reports clearer and easier to compare across different countries.

Keywords: sustainability reporting, ESG disclosure, national culture, energy sector, comparative case study.

Introduction

Sustainability and the circular economy are the fundamental concepts that guide companies towards an environmental-oriented business model so that waste is reduced to a minimum and

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limited resource are being used efficiently. Across the European Union, sustainability is now a top priority of economic and environmental policy, particularly in strategic sectors such as energy.

In an increasingly competitive global market, some companies see strict sustainability mandates as a financial burden that holds them back, particularly when compared to actors outside the European Union who face fewer regulatory constraints. Firms based in regions with less stringent environmental regulations often benefit from lower production costs, which allows them to compete aggressively on the European market. Against this backdrop, recent geopolitical shift and changing climate policies have sparked new debates over the European Union's decision to impose strict sustainability and decarbonisation requirements on companies.

Environmental, Social and Governance (ESG) criteria are the main framework through which companies are evaluated from a sustainability and ethical point of view. ESG gives people like employees, investors, and officials a straightforward way to see how a company is doing beyond just its profits. By promoting responsible practices, finding risks, and enhancing corporate transparency, ESG reporting has become an important mechanism for improving corporate reputation and easing access to sustainable financing.

While existing studies on sustainability reporting primarily focus on regulatory frameworks, efforts to standardise, and disclosure quality, limited attention has been paid to the role of national culture in shaping reporting practices within the same industry and under a common European regulatory framework. We see this gap most clearly in studies that try to figure out how culture and institutions shape the presentation and communication of sustainability information.

Romania and Italy were selected as case studies because they represent two European energy markets operating under identical European regulatory requirements, yet characterised by different levels of market maturity and distinct national cultural contexts (European Commission, 2023; Eurostat, 2024). This setup allows us to see how companies go beyond the basic rules when they report on sustainability.

Looking at their energy systems, Italy and Romania are quite different, yet they share enough similarities to make a good comparison. In 2024, Italy had 91.2 GW of installed power, with renewable sources accounting for approximately 82% of installed capacity. Photovoltaic energy represents the dominant renewable source (37 GW), followed by hydropower (19.6 GW) and wind energy (13 GW). Fossil fuels represent a limited share of installed capacity (18%), with natural gas playing a key role in balancing the transmission system and compensating for the variability of renewable generation (Eurostat, 2024).

Given that 82% of all installed power is from renewable sources and only 18% is made up of natural gas plants, the expectation would be that total renewable energy production would be predominant over conventional or imported energy. However, only 40.8% of the total energy produced was generated by renewables, the average being over the last about 5 years. It is worth noting that the trend is upward, the average for 2024 being 49%. This gap is explained by the intermittent nature and low-capacity factors of wind and solar energy, as well as by limited energy storage capacity, which continues to require reliance on natural gas to ensure system stability (Ember, 2024; Eurostat, 2024).

Romania on the other hand, has a more balanced energy mix. Total installed renewable capacity amounts to 12.75 GW, dominated by hydropower (6.69 GW), followed by wind (3.09 GW) and solar (2.83 GW). Renewables account for approximately 65% of installed capacity, while fossil fuels and nuclear energy represent 28% and 7%, respectively. Romania's diversified energy mix, particularly the significant role of hydropower and baseload nuclear generation, contributes to a higher and more stable share of renewable electricity production, averaging 48.86% over the past five years and reaching 50% in 2024 (Ember, 2024; Eurostat, 2024).

Both countries performed above the European Union average of 47% renewable electricity generation in 2024, underlining their alignment with EU climate and decarbonisation goals and reinforcing their relevance as case studies for comparative analysis (Ember, 2024).

The energy sector was selected for analysis due to its strategic importance at national and European level. The energy sector is the backbone of national economies – it creates jobs, builds infrastructure, and drives economic growth. Moreover, it is one of the sectors most directly affected by climate policies, decarbonisation targets, and sustainability regulations, placing energy companies under significant regulatory pressure and stakeholder scrutiny.

As a result, sustainability reporting in the energy sector is strictly regulated and highly visible, making it a particularly relevant context for examining how ESG principles are integrated and communicated by companies operating under the same European legislative framework, but in different national and cultural environments (European Commission, 2020; World Economic Forum, 2022).

The selection of ENGIE Romania, ENGIE Italy, and IREN Italy was guided by their strategic significance within the energy markets analysed. ENGIE Romania and ENGIE Italy were selected to enable an intra-company comparison within the same multinational group operating under different national and cultural contexts. As part of a major European energy group, ENGIE plays a significant role in electricity generation, gas supply, renewable energy development, and decarbonisation initiatives in both countries.

IREN Italy was included as a benchmark competitor running in the Italian market. As a large multi-utility company with a strong regional presence, IREN is actively involved in electricity generation, district heating, waste management, and circular economy projects, holding a strategic position in Northern Italy. By looking at these three companies, we can get a full picture of how reporting changes across different countries within the same corporate group, and between competing firms operating under identical regulatory conditions, thus strengthening the analytical robustness of the study (ENGIE Romania, 2023; ENGIE Italia, 2023; IREN S.p.A., 2023).

In this paper, we look at the sustainability reports published by companies working in the energy sector in Romania and Italy and whether cultural differences impact reporting models.

Therefore, the study addresses three research questions: How does sustainability reporting differ between Romania and Italy? How does reporting differ within the same company (ENGIE) between subsidiaries operating in two different countries? How does ENGIE Italy compare with a direct competitor working in the same national market (IREN Italy)?

To address these questions, Hofstede's cultural dimensions are applied as an analytical framework to assess how national culture influences sustainability reporting practices. In parallel, the analysis considers the European legislative framework and its transposition into national legislation in both countries to show differences in reporting approaches.

By adopting a comparative case study approach, this paper contributes to the literature by proving that sustainability reporting is shaped not only by regulatory requirements, but also by cultural and institutional factors that affect the structure, transparency, and strategic orientation of ESG disclosures.

Literature review

In order to remain competitive on a global level, but also within the European Union market, companies are increasingly taking responsibility for the environment by reducing CO2 emissions through investments in renewable energy, improvements in energy efficiency and replacing outdated technologies with more advanced and energy efficient solutions.

ESG criteria look at a company's environmental performance including how it reduces CO2 emissions, uses natural resources and other aspects of its environmental footprint. Socially, ESG considers the Company's relationships with employees, suppliers, customers and local communities on issues such as human rights, working conditions and diversity. Governance includes corporate leadership and management, transparency and business ethics, executive pay and shareholder rights (KPMG, 2022; PwC, 2023).

ESG reporting is mainly adopted as it is a common requirement for large firms operating within the European Union. However, ESG reporting, in addition to regulatory compliance, has further strategic benefits, such as improving corporate reputation, attracting investors that base their long-term investment decisions on ESG criteria, and supporting the identification of sustainability-related risks and opportunities (European Commission, 2020).

Research indicates that national culture is a significant factor in the formation of ESG reports by companies from different countries, especially in terms of transparency. Cultural traits also affect the style of sustainability reporting, as some countries tend to publish reports with a more narrative and descriptive approach, while other countries prefer a more technical and data-driven format. Moreover, sustainability reports may differ in terms of orientation being either strongly stakeholder oriented or being predominantly compliance oriented (Garcia-Sanchez et al., 2016; Gray, 1988; Hope, 2003).

Hofstede's cultural framework and its six dimensions is an analytical lens that is often used to look at the differences in national cultures. These dimensions allow the cultural characterization of countries and help in identifying relationships between cultural factors and corporate practices. In this context, national culture may be viewed as a potential explanatory variable for differences in ESG reporting practices between countries, even though companies are subject to a single European regulatory framework and follow the same legal requirements (Frias-Aceituno et al., 2013; Gray, 1988; Hofstede et al., 2010).

However, the academic literature is still limited in this area, though cultural factors are important for understanding sustainability reporting practices. Empirical studies dealing with the influence of the national culture on ESG reporting are few and fragmented. Moreover, there are few studies specifically investigating the role of Hofstede's cultural dimensions in explaining differences in sustainability reporting practices across countries, especially within the same industry and regulatory environment (Garcia-Sanchez et al., 2016; Hahn & Kuhnen, 2013).

Methodology

This study was carried out in eight clear steps:

Step 1. Definition of the research scope and objectives - the research scope was defined by focusing on ESG reporting practices within the energy sector, under the common regulatory framework established by European sustainability reporting legislation. The main objective was to identify similarities and differences in ESG disclosure practices across companies operating in different national and cultural contexts.

Step 2: Selection of the research design - a qualitative comparative case study design was adopted, as it enables a thorough examination of sustainability reporting practices while allowing cross-company and cross-country comparison under similar regulatory and sectoral conditions.

Step 3: Case selection and sampling criteria - three companies were selected based on the following criteria: they belong to the energy sector; they are subject to the same European ESG reporting regulations; their sustainability reports for the fiscal year 2023 are publicly available; and they are in different national contexts (Romania and Italy). The final decision was to concentrate on three companies: ENGIE Romania, ENGIE Italy and IREN Italy.

Step 4: Data source identification and collection - data was sourced exclusively from official documents to ensure consistency and facilitate peer verification. These sources included European-level sustainability and ESG reporting legislation, national frameworks in Romania and Italy, and sustainability reports published by the selected companies for 2023.

Step 5: Development of the analytical framework - an analytical framework was constructed by combining ESG reporting dimensions (environmental, social, and governance) with qualitative reporting characteristics, such as disclosure structure, narrative depth, stakeholder orientation, and level of formalization. Hofstede's cultural dimensions were incorporated as an interpretative lens to contextualize national differences.

Step 6: Qualitative content analysis - we performed a systematic qualitative content analysis. The sustainability reports were analysed first in order to find the general structure and the reporting logic. Next, the ESG-related sections were analysed in detail with respect to disclosure, strategic focus and the weight of quantitative indicators versus narrative explanations.

Step 7: Comparative analysis - the analysis was performed at three levels: intra-company comparison (ENGIE Romania vs. ENGIE Italy); inter-company comparison (ENGIE Italy vs. IREN Italy); and cross-country comparison (Romania vs. Italy). This multi-level comparison allowed the identification of recurring patterns and context-specific differences.

Step 8: Summary and interpretation of results - the results were outlined using comparative tables and thematic summaries. Identified patterns in ESG reporting practices were interpreted through Hofstede's cultural dimensions, supporting a contextual understanding of how national culture may influence sustainability reporting approaches.

Results and discussions

The cross-country comparison between Romania and Italy highlights significant differences in sustainability reporting practices, despite both countries operating under the same European regulatory framework. These differences can be explained by national cultural characteristics, as captured by Hofstede's cultural dimensions (Hofstede Insights, 2024), which impact organisational behaviour and disclosure practices, as presented in Table 1.

Table 1. Cross-country comparison of sustainability reporting practices: Romania vs Italy

Hofstede dimension	Romania	Italy	Implications for sustainability reporting
Power Distance	High	Medium	Centralised decision-making and formal, compliance-oriented reporting vs more decentralised and flexible reporting structures
Individualism vs Collectivism	Lower individualism	Higher individualism	Greater emphasis on collective and social responsibilities vs stronger focus on organisational performance and strategic positioning
Masculinity vs Femininity	More feminine	More masculine	Emphasis on balance, social equity, and quality of life vs competitiveness, performance, and market positioning
Uncertainty Avoidance	Very high	High	Rigid, rule-based, and highly structured reporting vs more adaptable and interpretative reporting practices
Long-Term vs Short-Term Orientation	Medium–low	Medium–low	Similar focus on short- to medium-term objectives, influenced by EU climate and decarbonisation targets
Indulgence vs Restraint	Low (restraint)	Low (restraint)	Sober and pragmatic reporting style with limited use of inspirational or emotionally driven narratives

Source: Authors' own research based on Hofstede et al. (2010) and Hofstede Insights (2024).

Power Distance, Romania scores high, indicating that society accepts hierarchy and centralised decision making. This cultural trait is reflected in their sustainability reporting which is more formal and centrally structured and has more orientation towards regulatory compliance. On the other hand, in Italy, the lower Power Distance corresponds to a less centralised and more flexible reporting style, where companies can adopt a more narrative and stakeholder-oriented approach.

There are also differences within the dimension of Individualism vs. Collectivism. Italy's more individualist orientation is also evident in the ESG reports which focus on organisation performance, strategic positioning and competitive differentiation. By contrast, Romania's relatively collectivist orientation is linked to a higher emphasis on social responsibility, community engagement and collective benefits.

Both countries score highly on the Uncertainty Avoidance dimension but Romania scores higher, meaning that Romania prefers more rigid structures, detailed procedures and formalised reporting practices. Italian companies are more flexible to adapt sustainability narratives and to incorporate qualitative elements in ESG disclosures, while still operating in a regulated context. Figure 1 presents the conceptual framework of the influence of national cultural characteristics on company level sustainability reporting practices.

Figure 1. Conceptual framework linking national culture and ESG reporting practices

Source: Authors' own elaboration.

There are also differences within the dimension of Individualism vs. Collectivism. Italy's more individualist orientation is also evident in the ESG reports which focus on organisation performance, strategic positioning and competitive differentiation. By contrast, Romania's relatively collectivist orientation is linked to a higher emphasis on social responsibility, community engagement and collective benefits.

From both an economic and energy sector perspective, Romania and Italy differ significantly with respect to market size and maturity, creating distinct operating environments for companies active in these markets. These differences are reflected in the sustainability reporting practices of ENGIE Romania and IREN Italy.

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ENGIE Romania adopts a more formal, technical approach, intended primarily for regulatory authorities and reflecting the reporting structure of the ENGIE Group. This compliant style complies with the high Power Distance of Romania, which favours centralisation and formalised decision-making processes.

By comparison, IREN Italy's sustainability reporting is more flexible and stakeholder-oriented. The report contains narrative elements, local illustrations and community-oriented initiatives, in line with the lower Power Distance in Italy, and presents the ESG disclosure as a communication and engagement tool, rather than a mere compliance mechanism..

From a strategic point of view, ENGIE Romania's ESG approach is mainly dictated by the alignment with the global objectives of ENGIE Group, with strong accent on the decarbonisation of the clients. On the other hand, IREN Italy's ESG strategy is consistent with its multi-utility business model, and emphasises the circular economy, digitalisation and large-scale investments in renewable energy (ENGIE Romania, 2023; IREN S.p.A., 2023).

The intra-company comparison assesses whether sustainability reporting practices differ within the same multinational group operating in distinct national and cultural contexts. As subsidiaries of ENGIE Group, both ENGIE Romania and ENGIE Italy follow a common global sustainability strategy, including the goal of achieving Net Zero emissions by 2045 through investments in renewable energy and client decarbonisation.

Numerous similarities are evident, particularly regarding ESG focus areas such as CO_2 emissions reduction, gender diversity and equity, and corporate governance. These common elements reflect ENGIE Group's standardised ESG framework. The main similarities and differences in ESG reporting practices at company level are summarized in Table 2, based on the analysis of sustainability reports published by ENGIE Romania, ENGIE Italy, and IREN Italy (ENGIE Italia, 2023; ENGIE Romania, 2023; IREN S.p.A., 2023).

Table 2. Company-level comparison of ESG reporting practices

Criterion	ENGIE Romania	ENGIE Italy	IREN Italy
Reporting orientation	Compliance-driven	Strategic & reputational	Strategic & community-oriented
Reporting style	Technical	Narrative	Narrative
Stakeholder engagement	Limited	Strong	Strong
Use of local case studies	Low	High	High
ESG strategic focus	Client decarbonisation	Circular economy, electrification	Circular economy, renewables
Degree of autonomy	Low (group-driven)	Medium	High

Source: Authors' own research based on sustainability reports published by ENGIE Romania (2023), ENGIE Italy (2023), and IREN Italy (2023).

But differences are seen in how ESG strategies are adapted to local contexts. ENGIE Romania is focused on supporting its clients in their decarbonisation process and in keeping the energy system stable by using gas and renewables, whereas ENGIE Italy is more focused on the circular economy, the electrification of transport and the engagement of stakeholders. Both subsidiaries report according to international standards (such as the GRI Standards). ENGIE Romania's reporting is more technical and compliance-oriented, ENGIE Italy's is more narrative and illustrative. In Romania, this means that ESG reporting is seen primarily as a compliance obligation, while in Italy it is also a tool for differentiation and for building reputation (ENGIE Italia, 2023; ENGIE Romania, 2023).

The inter-company comparison focuses on two companies operating within the same national and regulatory context. Despite sharing the Italian energy market, ENGIE Italy and IREN Italy adopt different sustainability strategies and reporting approaches.

ENGIE Italy, as part of a global energy group, follows a more standardised ESG strategy aligned with ENGIE's international objectives. In contrast, IREN Italy benefits from greater strategic autonomy, enabling sustainability initiatives that are closely tailored to national and regional priorities (ENGIE Italia, 2023; IREN S.p.A., 2023).

From a reporting perspective, both companies follow international standards such as GRI and ESRS and comply with European and national sustainability frameworks, including the European Green Deal (European Commission, 2023; European Financial Reporting Advisory Group, 2023). Both stress stakeholder engagement and view the energy transition as a core business model. While ENGIE Italy uses ESG reporting primarily as an instrument to reinforce its internal alignment with group strategy and reputation, IREN Italy considers sustainability reporting as an engine of local development, strongly orientated to community involvement and supported by substantial regional (KPMG, 2022; PwC, 2023).

The results suggest that, in general, structural elements such as regulation, market features and company size, and cultural elements represented by Hofstede's dimensions influence the ESG reporting practices. While in Italy the companies are more comparable due to a common cultural and legislative framework, the differences between Romania and Italy are more noticeable. (Eccles & Krzus, 2018; Eccles & Serafeim, 2013).

Conclusion

ESG has become a strategic imperative for companies in the European energy sector. However, the results of this study show that the application and disclosure of ESG principles are very heterogeneous across countries and are influenced not only by structural variables such as legislation, market size and composition of the companies, but also by national cultural variables, as captured by Hofstede's dimensions.

The comparative analysis of the three case studies, ENGIE Romania, ENGIE Italy and IREN Italy, provides insights that can be translated into practical recommendations for both companies and policy makers. The findings at the company level suggest that stakeholder engagement, transparency and better integration of qualitative elements such as local case studies and examples could improve sustainability reporting.

In this respect, the analysis shows that ENGIE Romania can improve its sustainability reporting by shifting from a mainly formal and compliance approach to a more stakeholder-oriented communication. Also ENGIE Italia could consolidate further its reporting practices by strengthening the interactive and transparent communication with its stakeholders and by proposing innovative practices at group level. Further investments in digitalisation and data transparency would help IREN Italy to strengthen its position as a regional leader in sustainability, for IREN Italy.

From a policy perspective, the findings show the importance of clear, effective supervisory framework for ESG reporting. Strengthening institutional oversight, providing clear reporting guidelines, and supporting companies through training and funding mechanisms could contribute to improved transparency and consistency in sustainability disclosures, particularly in emerging markets.

The study has limitations. It is qualitative and considers only a few particular cases. Future research can extend the analysis by applying quantitative methods, adding more countries or adding additional sectors to further explore the relationship between national culture and sustainability reporting practices.

Overall, the results confirm the existence of different sustainability reporting practices according to the national cultural and economic contexts in spite of a common European legislative framework. These differences provide an opportunity for the exchange of knowledge across borders and, in the end, contribute to the wider European goal of climate neutrality.

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Disclaimer

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