© year of first publication Author(s). This is an open access article licensed under the Creative Commons Attribution-Share Alike 4.0 International License (http://creativecommons.org/licenses/by-sa/4.0/).

Journal of Intercultural Management
Vol. **14** | No. **3** | **2022**
pp. **41–62**
DOI **10.2478/joim-2022-0011**

Lukasz Bryl
Poznan University of Economics and Business, Poland
ORCID ID: 0000-0003-0565-6394
lukasz.bryl@gmail.com

Enrico Supino
University of Bologna, Italy
ORCID ID: 0000-0003-1728-1032
enrico.supino@unibo.it

Sustainability Disclosure in Social Media – Substitutionary or Complementary to Traditional Reporting?

Received: 20–11–2022; Accepted: 29–12–2022; Published: 21–01–2023

ABSTRACT

Objective: This study examines sustainability disclosure by 50 British companies from FTSE 100 and compares reporting via traditional sources and on Twitter by indicating whether the content in two various disclosure channels is of substitutionary or complementary nature.

Methodology: A content analysis on more than 20,000 tweets was performed to examine sustainability disclosure practices which were compared with Bloomberg ESG scores for each studied company.

Findings: On the general level of sustainability division into three pillars (Environment, Social and Governance), it can be observed that social media reporting provides complementary information. Whereas, the disclosure of environmental issues via traditional sources was relatively poor, the reporting of environmental information in social media performed best. However, with the division on ESG sub-pillars, the picture is not that clear. Most of the poorly performed ESG sub-pillars in traditional reporting, were also poorly reported in social media.

Value Added: This article is a response to the call for studies on non-financial disclosure via social media, which is strongly highlighted in the recent literature concerning future research. Additionally, a comparative analysis with the reporting by traditional, well-studied channels was performed.

Recommendations: This study offers an understanding of the British companies' corporate practices that refer to sustainability disclosure by traditional channels and via social media. Hence, it has implications for organizations in the creation and use of communication channels when developing a dialogue with stakeholders on topics regarding sustainability.

Key words: sustainability, ESG, disclosure, social media, Twitter

JEL codes: G34

Introduction

In the contemporary business environment, companies are increasingly performing activities that shift from purely income maximization to ethical and sustainability issues (Nirino et al., 2019). Firms that consider the non-financial aspects of the business reduce market risk and mitigate the information asymmetry faced by lenders and investors in the financial market (Perrini et al., 2011). The rising awareness of stakeholders towards health, food safety, and the environment leads to the development of new strategies that include market competitiveness, sustainability, and ethics (Lazarides & Goula, 2018). This evolving firm's strategy is perceived as an important factor for its long-term success in terms of competitive advantage, risk management, and sustainability. Reporting sustainability has become crucial for companies, as it creates a better image of the processes inside the organizations and thus provides a space for value growth. By providing economic, environmental, and social information, the organization may communicate with various potential parties, including suppliers, creditors, activist groups, the government, the media, customers, and the general public (Saxton et al., 2019). Traditionally, corporate annual reports were considered the primary source for communicating organizational performance to their stakeholders (Hadro et al., 2021). However, traditional reporting via e.g. annual reports has certain shortcomings, such as lack of interactivity and time lag of information disclosed (Fijałkowska et al., 2019). Additionally, the rapid transformation in technologies and forces of mass communication, together with digitization, provide challenges and opportunities for companies concerning information disclosure to key stakeholders. Digitization has fundamentally changed the traditional media landscape and altered how organizations and their actions are publicly evaluated (Vogler, 2020). Consequently, periodic and formalized communication seems to be losing a reason to be (Piber et al., 2019). Especially, in the last decades, social media has disrupted the firms' reporting field by providing a more dynamic and interactive public space (Neu et al., 2020). Social media offers a platform for diffused stakeholders to interact with companies and engage in two-way communication. As argued by Ndou et al. (2018), websites and social media generate massive, variable,

and valuable amounts of data from a variety of sources (Secundo et al., 2017). As a result, new research challenges emerged to investigate the implications of social media platforms for company communications and they refer also to the disclosure of corporate sustainability actions (Bryl et al., 2022a).

Therefore, this study attempts to compare reporting via traditional sources and social media to identify if the information disclosed is similar or different. In this sense, the paper determines if social media disclosure on sustainability is complementary or substitutionary to traditional reporting. The study focuses on large business companies, as they are the forerunners of social media adoption for corporate purposes. To answer the research question a sample of 20,247 messages (in form of tweets) sent throughout 2021 by the 50 Twitter accounts of the largest 50 firms in the FTSE 100 index was examined. Consequently, this study aims to fill two research gaps in the literature: first to identify the main topics referring to sustainability disclosed via social media in the context of a developed economy, and second to compare the disclosed content with traditional reporting. To the best of our knowledge, this topic has not yet been systematically investigated, although several studies have emerged.

The findings may help understand what sustainability topics companies perceive as most important to be communicated to stakeholders by two different reporting channels. The findings may have implications for organizations in the creation and use of communication channels.

The structure of the paper is as follows: first, a literature review concerning social media and sustainability was performed; second, the main theoretical perspectives that provide grounds for the development of research questions and empirical analysis were explained. In the following section, the methodology of research was developed along with the discussion of the results. Finally, conclusions and practical implications, followed by the limitations and future research avenues were presented.

Literature review and research questions development

Theoretical background of sustainability disclosure

The origins of corporate disclosure practices can be anchored in four theories: stakeholder theory (Freeman, 1984), agency theory, signaling theory, and legitimacy theory (Cho et al., 2015). Freeman (1984) defines a stakeholder as "a person or group that can affect or is affected by the achievement of the organization's objectives, including shareholders, creditors, suppliers, employees, and government as well". The stakeholder theory states that organizations are responsible for their activities due to interest-based, rights-based, and duty-based accountabilities (Scaltrito, 2016). An interest-based approach stresses the effects of organizational activities, the rights-based analysis calls for fair distribution of resources and opportunities, while the duty-based approach looks at organizational responsibilities to stakeholders. Ultimately, the stakeholder theory underlines that companies should attempt to fulfill stakeholders' demands, which, at least in the long term, leads to higher economic profits (Freeman, 1999). Jones (1995) argues that trusting and cooperative relationships with stakeholders help firms to achieve a competitive advantage over companies with a low level of stakeholder focus. However, Bauer and Hann (2010) state that environmental externalities may lead to various corporate concerns. Consequently, companies involved in environmental issues can be the subject of costly penalties leading to negative reactions from stakeholders which ultimately affects their default risk. Therefore, the stakeholder theory may imply that the greater extent of corporate responsibility activities the lower cost of capital (Bryl & Fijałkowska, 2020).

The agency theory investigates the problems of moral hazard and adverse selection deriving from the different interests between agent and principal which leads to information asymmetry (Firth, 1980; Chow & Wong-Boren, 1987). Diamond and Verrecchia (1991) introduced a theoretical model showing that voluntary disclosure decreases the information asymmetry among

investors. Corporate reporting contributes to the increase of liquidity of the market, which leads to capital cost reduction since liquidity is perceived as a function of information asymmetry (Glosten & Milgrom, 1985). While firms disclose more about their activity, additional reporting on chosen corporate issues may contribute to limiting the information gap between the two parties, which ultimately reduces the shareholders' uncertainty and reduction of cost of capital (Watson et al., 2002).

The signaling theory states that firms are enhanced to disclose more information as it not only leads to the information asymmetry reduction but also shows (signals) to outsiders that the firm performs better in comparison to its market competitors (Scaltrito, 2016). Consequently, better performance leads to better perception by the financial markets and thus lower risk. According to the signaling theory, corporate non-financial disclosure expands the spectrum of recipients of information, making the intended audiences for the CSR signals, customers, shareholders, influencers, advocates, media, NGOs, policymakers, governmental organizations, and citizens (Connelly et al., 2011; Du et al., 2010). Similarly, better non-financial reporting allows firms to increase the plurality of stakeholders, ranging from customers and employees to suppliers and the government (Raimo et al., 2019; Vitolla et al., 2019). As predicted by the signaling theory, in a capital market context, disclosures are important for reducing information asymmetry, lowering the cost of capital, and limiting the risk of adverse selection (De Villiers & van Staden, 2011).

The legitimacy theory suggests that corporate disclosure legitimizes a firm's behaviour (Rodrigue et al., 2015; Diouf & Boiral, 2017), as there is some form "social contract" created between the company and society. Consequently, an obligation emerges for the the firm to act in accordance with a set of accepted values, principles, and standards (Deegan, 2006), so that the company does not lose its legitimacy.

In this study, the Author also identifies the theory of media richness (Daft & Lengel, 1986) that may serve as an explanation for social media disclosure. The main assumption of that theory lies in the fact that media are different in the "richness" of their "ability of information to change understanding within a time interval" (Daft & Lengel, 1986, p. 560). Thus companies could boost

performance by linking media channels with the current disclosure needs. It should be noted that media richness foundations have also been applied in research on corporate social and environmental reporting (Cho et al., 2009).

Social media as a new way of sustainability reporting

The annual report in the "traditional" (paper or pdf) form has long outlived themselves as the best source of corporate disclosure (Cuozzo et al., 2017). It is both backward-looking and a form of one-way communication; therefore, it features two significant failures in today's forward-focused and interactive discourse mediums (Dumay, 2016). Moreover, the information published in "traditional" annual reports is often delivered to stakeholders with a significant time lag. Therefore, it is argued that research on sustainability reporting should adopt a more innovative perspective by investigating modern tools for disclosure, such as e.g. social media platforms. Social media is a useful, informative, and rich channel of communication between organizations and stakeholders. Social media has become an important element of companies' internal and external communication strategies (Zhang et al., 2020). Communication between a company and its stakeholders becomes more dialogic on social media, as it allows citizens to praise, engage, ask, and criticize. Social media is a highly interactive and publicly visible forum (Colleoni, 2013). With the emergence of social media, stakeholders can articulate their opinions about organizations without passing through news media gatekeepers (Etter et al., 2019). Social media has the potential to "change the dynamics of corporate–society relations" (Whelan et al., 2013, p. 778) and offers a way to preserve and foster relationships with stakeholders (Castello et al., 2016). Therefore, companies use social media to demonstrate that they are responsive (Fukukawa, 2019) to their stakeholders. In this way, they legitimize their actions and strive to be transparent and accountable.

Research show that firms use social media to create discrete visual and textual "micro-reports" on their CSR-related activities. As, one of the greatest

advantage of social media is the potential of two-way communication with, several studies have focused on sustainability, including environmental and corporate social responsibility disclosure. As a result, some firms for over a decade have experimented with social media platforms to increase stakeholders' engagement in dialogues about these topics (Colleoni, 2013; Lee et al., 2013; Okazaki et al., 2019, Castelló et al., 2016; Orazi et al., 2017, Saxton et al., 2019; Yang et al., 2020). However, still a relatively small number of companies use social media to engage stakeholders in CSR activism (Lodhia et al., 2020; Manetti & Bellucci, 2016). Stakeholders perceive disclosure in social media as a marketing practice (Colleoni, 2013), and the interactivity of messages is low (Suárez-Rico et al., 2019). Existing studies concentrate on the analysis of sustainability disclosure either in social media only or in other channels only. There is a lack of a holistic approach encompassing all potential sources of sustainability reporting that would include comparative analysis, as it has been performed with reference to the studies on financial disclosure. For example, Prokofieva (2015), on the sample of Australian Stock Exchange companies, showed that firms publish corporate information on Twitter when it is already disclosed in other channels (e.g., corporate websites). Blankespoor et al. (2014) found that high tech companies provide links of earnings press releases on Twitter. Jung et al. (2018) stated that S&P companies are less likely to employ Twitter for disseminating information on earnings when the news is bad. Similarly, Crowley et al. (2018) argued that companies use Twitter more if they anticipate that the information already disclosed elsewhere (e.g., SEC filings, press release, or conference calls) has a significant positive or negative impact, but tweet less if the information provides a neutral effect. This goes partially in line with the findings of Cade (2018) who determined that firms can use Twitter to mitigate the impact of negative public reactions to potential earnings management by pointing out more positive aspects of their financial performance. To summarize, existing studies focus on trying to find the link between the corporate disclosure practices in social media and other channels with relation to financial disclosure. As a result, to the best of the Author's knowledge, there is no study performing a comparative analysis of the content of sustainability reporting via

social media and other channels, and that creates a research gap that this study attempts to address.

Considering a theoretical framework and existing empirical studies the following research question was formulated:

RQ: Does social media sustainability reporting play a substitutionary or complementary role to traditional disclosure sources?

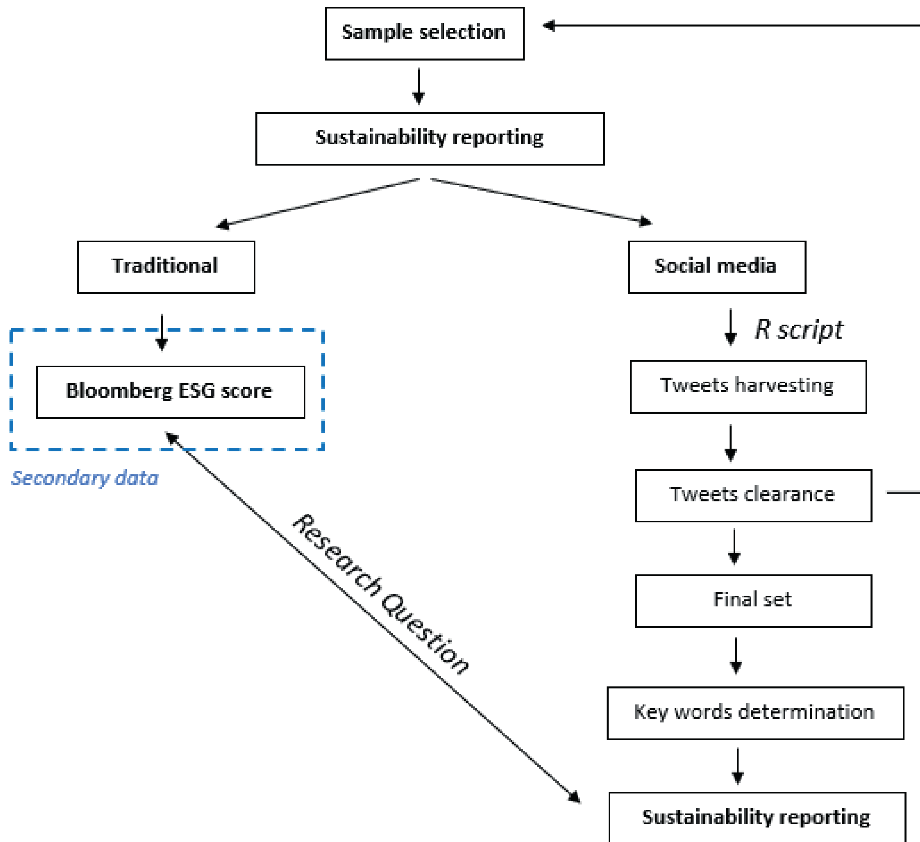
Methodology

Sample and data

To analyze the main elements of sustainability that companies disclose on social media the research was concentrated on the top 50 companies from the FTSE 100 index for the year 2021. The investigation involved the largest British business corporations based on their market capitalization in descending order without focusing on any specific industry. Twitter was employed as a social media platform to study the corporate disclosure practices on sustainability. Twitter is one of the leading social media platforms used by firms (Tao & Wilson, 2015). Additionally, in 2013 Twitter along with Facebook were approved by SEC (Securities and Exchange Commission) as formal corporate disclosure outlets (Lijun et al., 2019). A study by Bryl (2021) indicated that 75% of the 100 global corporations have at least one official corporate account on Twitter. In the proposed study only those companies that had Twitter accounts throughout 2021 were selected. The Twitter accounts of each company were identified and manually the data was checked to eliminate false corporate profiles. This study encompassed only official English-language profiles based on the firm's name and excluded sub-brands. In the case of numerous official profiles, the one with the greatest number of tweets was always chosen. Additionally, as the study progressed, companies having a low level of Twitter activity were excluded (less than 50 tweets in 2021).

To perform a comparative study of sustainability disclosure, a conceptual framework was developed (Figure 1).

Figure 1. Research design framework



Source: own work.

First, the traditional reporting outcomes were obtained. The Bloomberg ESG score was employed as a tool to gather data and analysis of sustainability corporate actions for the given company. The Bloomberg ESG score is a valid source of information on sustainability. The ESG data are captured only from direct (primary) sources in order to ensure accuracy and consistency with original corporate information. These sources include

sustainability reports, annual filings, proxy statements, corporate governance reports, supplemental releases, and company websites (Bloomberg, 2020). They are published for every year and provide information on three sustainability pillars: Environment (E), Social (S), and Governance (G) with the latter divided into sub-pillars and sub-indices (for details see the attachment). It was assumed that the reporting of sustainability by Bloomberg is considered as the traditional one, as it does not take into account information disclosed on social media. This nomenclature may, however, confuse, as under the Bloomberg disclosure there is also information gathered from corporate websites which are not necessarily considered as a traditional way of reporting. Nevertheless, for the needs of this study, Bloomberg scores are considered traditional ones.

To pursue the study on social media disclosure, first, a database of tweets was created. To collect data, a dedicated R script (Rtweet) was used that employed the official Twitter API to download tweets from corporate English profiles for the entire year 2021 (20,247) (Table 1). To determine the sustainability of content in tweets, a content analysis based on the keyword counts method was employed, followed by the study by Bryl et. al (2022b). A single tweet containing only text was defined as a unit of analysis, based on Kripendorff's (2004) rules for content analysis. Tweets were cleaned from pictures, videos, and/or external links to focus only on the textual content posted by companies. The keywords/keyphrases approach was used to determine the disclosure of sustainability. Keywords/keyphrases were defined as either a separate word (carbon), an abbreviation (GHG), or a phrase (climate change) multiplied by various lingual expression forms. To identify the sustainability keywords and to enable the comparability with the Bloomberg score, an original set of keywords was created based on the topics identified by Bloomberg. The total number of keywords was 205. An Excel spreadsheet was developed containing a set of tweets for each company. Excel formulas automated the process of investigating tweets for keywords, which was supported by a random manual double-check. Later, industry analysis was performed to look for differences in the type and content of sustainability disclosure. Table I shows descriptive statistics of the studied sample.

Table 1. Descriptive statistics of the studied sample

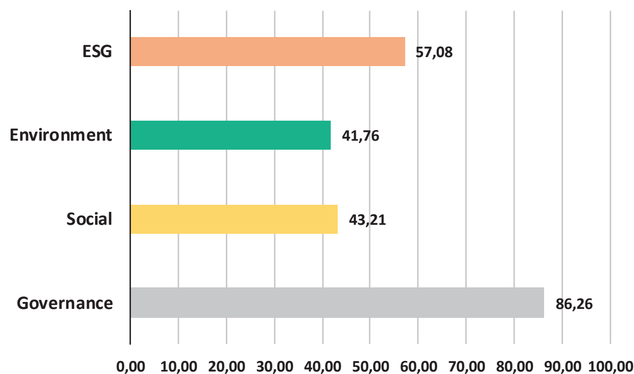
No. of companies	50
National context	British
Tweets	20,247
Mean	532.8
Median	430.5
Min	58
Max	1,686

Source: own elaboration.

Results and discussion

In terms of traditional disclosure, it was found that in general the extent and quality of ESG disclosure are moderate, as the average score in the studied sample of firms amounted to 57,1 (out of 100). However, the pillar referring to Governance performed exceptionally, since its overall score was 86,3 (out of 100) which suggests a remarkable effort of the British companies in the field of Governance reporting. The general breakdown of the ESG pillars disclosure depicts the figure below.

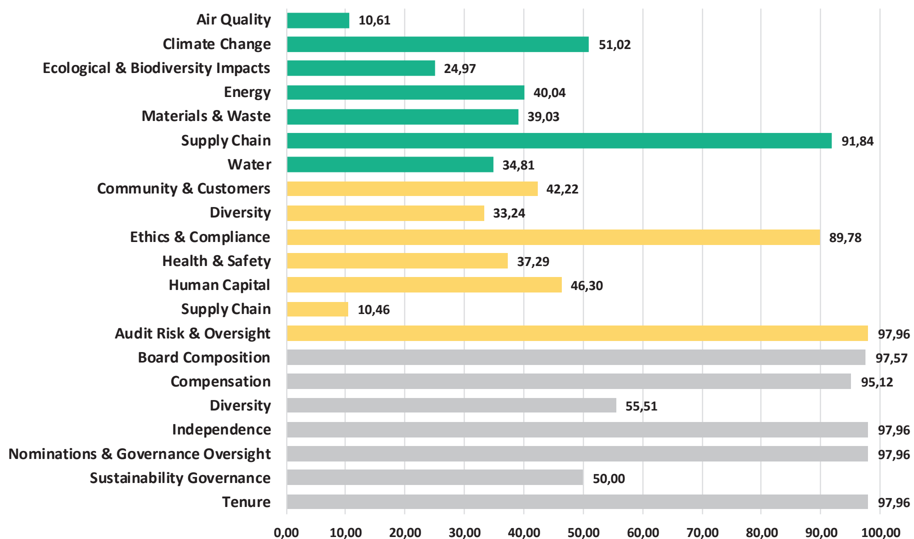
Figure 2. Disclosure of ESG pillars breakdown via traditional sources



Source: own work.

The Environment and Social pillars performed similarly below average with a slightly better score for the Social pillar (43,2 vs. 41,8). Nevertheless reporting in these fields should be perceived as insufficient. A closer look at ESG sub-categories provides a broader picture (Figure 3).

Figure 3. ESG sub-categories breakdown



Source: own work.

As the information referring to the Governance pillar was found to be the best out of all three, the Governance sub-categories also provided a satisfactory score. Only Diversity and Sustainability Governance underperformed in relation to the others. However, British companies reported much worse in the other sub-categories. The most neglected sub-categories in the corporate disclosure practices were: Air quality, Supply Chain (under the Social pillar), and Ecological & Biodiversity Impacts. Surprisingly, disclosure on Supply Chain under the Social pillar was much worse than reporting on Supply Chain under the Environment pillar. This phenomenon can be easily explained, since, although the ESG sub-category is the same, it does not mean its information content is similar. In fact, the suggested scope of information differs

significantly, however, the sub-category name may be misleading (see Bloomberg ESG score in Appendix).

In terms of frequency in the studied group, very rare cases were found where companies did not disclose any information concerning a given ESG subcategory. The only exception was the sub-category referring to Air quality and Ecological & Biodiversity Impacts, which surprisingly were not reported at all by 76 and 30 percent of the companies, respectively. In the case of the other ESG sub-pillars, the reporting frequency can be assessed as satisfactory (Table 2).

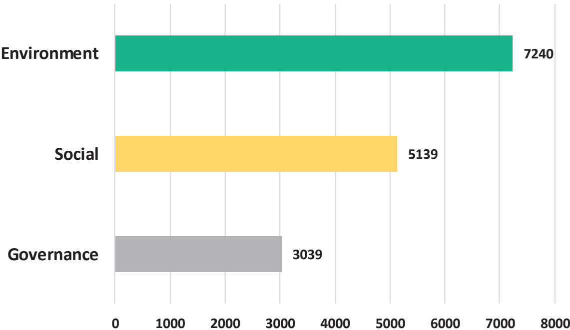
Table 2. Frequency of ESG sub-category disclosure via traditional sources

ESG sub-category	No./Percent of companies with no disclosure
Air Quality	38 (76%)
Climate Change	1 (2%)
Ecological & Biodiversity Impacts	15 (30%
Energy	1 (2%)
Materials & Waste	2 (4%)
Supply Chain	4 (8%)
Water	4 (8%)
Community & Customers	1 (2%)
Diversity	1 (2%)
Ethics & Compliance	1 (2%)
Health & Safety	1 (2%)
Human Capital	1 (2%)
Supply Chain	1 (2%)
Audit Risk & Oversight	1 (2%)
Board Composition	1 (2%)
Compensation	1 (2%)
Diversity	1 (2%)
Independence	1 (2%)
Nominations & Governance Oversight	1 (2%)
Sustainability Governance	8 (16%)
Tenure	1 (2%)

Source: own elaboration.

Concerning social media reporting, an adverse phenomenon was identified. Companies reported mostly on issues regarding the Environment, whereas the Governance information was disclosed the least often (differently to reporting via traditional sources).

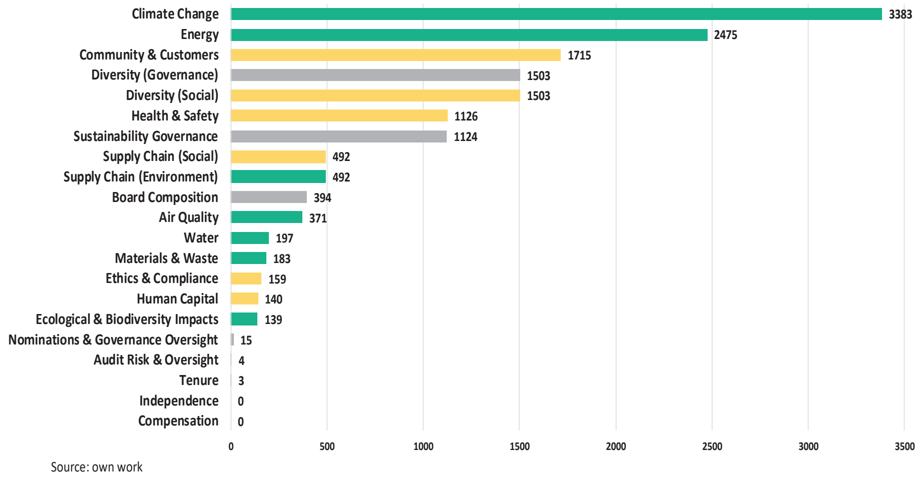
Figure 4. Disclosure of ESG pillars breakdown via Twitter



Source: own work.

With regard to ESG sub-categories, Twitter content is mainly concentrated on the topics of climate change and energy. These two topics accounted for 38 percent of all ESG mentions via tweets. What is interesting is that the studied British companies did not disclose any information regarding two Governance pillars, which are Independence and Compensation (Figure 5).

Figure 5. ESG sub-categories breakdown



Source: own work.

In general, reporting on ESG on Twitter was less frequent than via traditional sources. This is partly explained by the nature of communication through tweets, which are short messages and thus usually do not contain much information. Therefore, the frequency in the case of certain ESG sub-categories was dramatically low, and even the previously mentioned Independence and Compensation sub-categories were not disclosed by any single studied company. Additionally, only two companies were disclosing on the Tenure ESG sub-category.

Table 3. Frequency of ESG sub-category disclosure via Twitter

ESG sub-category	No./Percent of companies with no disclosure
Air Quality	18 (36%)
Climate Change	14 (28%)
Ecological & Biodiversity Impacts	24 (48%)
Energy	16 (32%)
Materials & Waste	25 (50%)
Supply Chain	20 (40%)
Water	17 (34%)
Community & Customers	14 (28%)

ESG sub-category	No./Percent of companies with no disclosure
Diversity	16 (32%)
Ethics & Compliance	38 (76%)
Health & Safety	15 (30%)
Human Capital	26 (52%)
Supply Chain	23 (46%)
Audit Risk & Oversight	47 (94%)
Board Composition	15 (30%)
Compensation	50 (100%)
Diversity	19 (38%)
Independence	50 (100%)
Nominations & Governance Oversight	46 (92%)
Sustainability Governance	15 (30%)
Tenure	48 (96%)

Source: own elaboration.

The analysis revealed that the answer to the research question is ambiguous. On one hand, social media omitted the reporting in the Governance field which can be explained by the fact that these pillars and related sub-pillars were relatively well disclosed by traditional sources. Additionally, the best-reported sub-pillars via Twitter (Climate Change and Energy) performed on average in traditional reporting channels, which may justify, to some extent, the complementary role of social media in the process of sustainability disclosure. However, on the other hand, the least disclosed sub-pillars, which were Supply Chain (Social), Air quality and Ecological & Biodiversity Impacts, were also poorly reported via Twitter. In this sense, complementarity did not take place.

Conclusions

This paper analyzed the sustainability disclosure practices performed via traditional sources and social media (Twitter) by British publicly-listed companies. Additionally,

the aim was to compare the quality and extent of reporting in each source to determine if the corporate disclosure on sustainability differs with regard to the source. As a result, valuable insights into the studied field can be introduced, although the final result is not unambiguous. First, on the general level of sustainability divided into three pillars (Environment, Social and Governance), it can be observed that social media reporting provides complementary information. Whereas, the disclosure of environmental issues via traditional sources was relatively poor, the reporting of environmental information in social media performed best. However, with the division into ESG sub-pillars, the picture is not that clear. Most of the poorly performed ESG sub-pillars in traditional reporting were also poorly reported in social media.

The proposed paper has several practical implications. First, it fosters further development of strategic thinking about the role of social media reporting in sustainability. Second, the paper provides a brief outlook on how companies manage the flow of information to stakeholders. Third, conclusions based on quantitative analysis (such as e.g., frequency of disclosure) may serve as practical guidelines for enterprises considering their communication strategies with stakeholders. The study has several limitations. These are e.g., the sample studied is fairly small, the study covers one year only, and the lack of cross-country comparisons. Future studies should address these shortcomings.

References

Bauer, R., & Hann, D. (2010). *Corporate Environmental Management and Credit Risk*. SSRN working paper.

Blankespoor, E., Miller, G. S., & White, H. D. (2014). *The role of dissemination in market liquidity: Evidence from firms' use of Twitter. The Accounting Review*, *89*(1), 79–112.

Brito, M. (2011). *Smart Business, Social Business: A Playbook for Social Media in Your Organisation.* Pearson Education, Indianapolis, IN.

Bryl, Ł., & Fijałkowska, J. (2020). How does intellectual capital disclosure affect the cost of capital? Conclusions from two decades of research. *Electronic Journal of Knowledge Management*, *18*(1), 29–55.

Bryl, Ł. (2021). Intellectual Capital Disclosure in the Digital Era: Challenges and Opportunities for MNEs. In S. H. Park, M. A. Gonzalez-Perez, & D. E. Floriani (Eds.), *The Palgrave Handbook of Corporate Sustainability in the Digital Era* (pp. 595–612). Cham: Palgrave Macmillan.

Bryl, Ł., Fijałkowska, J., & Hadro, D. (2022a). Does the level of Intellectual Capital Affect Meeting the Information Needs of Social Media Users in the Field of Sustainability? The case of the World's Largest Energy Industry Companies. In *23rd European Conference on Knowledge Management Vol 1*. Academic Conferences and publishing limited, September.

Bryl, Ł., Fijałkowska, J., & Hadro, D. (2022b). Intellectual capital disclosure on Twitter – empirical evidence from the world's largest companies. *Meditari Accountancy Research*, *30*(4), 964–988. https://doi.org/10.1108/MEDAR-02-2021-1211.

Cade, N. L. (2018). *Corporate social media: How two-way disclosure channels influence investors. Accounting Organizations and Society*, *68–69*(July), 63–79.

Castelló, I., Etter, M., & Årup, N. F. (2016). Strategies of legitimacy through social media: The networked strategy. *Journal of Management Studies*, *53*(3), 402–432.

Cho, C. H., Phillips, J. R., Hageman, A. M., & Patten, D. M. (2009). Media Richness, User Trust and Perceptions of Corporate Social Responsibility: An Experimental Investigation of Visual Web Site Disclosures. *Accounting, Auditing & Accountability Journal*, *22*(6), 953–972.

Cho, C. H., Laine, M., Roberts, R. W., & Rodrigue, M. (2015). Organised hypocrisy, organisational façades, and sustainability reporting. *Accounting, Organisations and Society*, *40*, 78–94.

Chow, C. W., & Wong-Boren, A. (1987). Voluntary financial disclosure by Mexican corporations. *The Accounting Review*, *62*(3), 533–541.

Cuozzo, B., Dumay, J., Palmaccio, M., & Lombardi, R. (2017). Intellectual capital disclosure: a structured literature review. *Journal of Intellectual Capital*, *18*(1), 9–28.

Colleoni, E. (2013). CSR communication strategies for organisational legitimacy in social media. *Corporate Communications: An International Journal*, *18*(2), 228–248.

Crowley, R., Huang, W., & Lu, H. (2018). *Discretionary disclosure on Twitter*. Working PaperUniversity of Toronto.

Daft, R. L., & Lengel, R. H. (1986). Organisational information requirements, media richness and structural design. *Management Science*, *32*(5), 554–571.

Deegan, C. (2006). Legitimacy theory. In Z Hogue (Ed.), *Methodological issues in accounting research: Theories and methods* (pp. 161–182). London: Spiramus Press.

De Villiers, C., & Van Staden, C. J. (2011). Where firms choose to disclose voluntary environmental information. *Journal of Accounting and Public Policy, 30*, 504–525.

Diouf, D., & Boiral, O. (2017). The quality of sustainability reports and impression management: A stakeholder perspective. *Accounting, Auditing & Accountability Journal*, *30*(3), 643–667.

Dumay, J. (2016). A critical reflection on the future of intellectual capital: From reporting to disclosure. *Journal of Intellectual Capital*, *17*(1), 168–184.

Dumay, J., & Guthrie, J. (2017). Involuntary disclosure of intellectual capital: is it relevant? *Journal of Intellectual Capital*, *18*(1), pp. 29–44.

Etter, M., Ravasi, D., & Colleoni, E. (2019). Social media and the formation of organisational reputation. *Academy of Management Review*, *44(*1), 28–52.

Fijałkowska, J., Krasodomska, J., Macuda, M., & Mućko, P. (2019). *Sprawozdawczość niefinansowa: regulacja i standaryzacja raportowania niefinansowego przedsiębiorstw*. Szczecin: Wydawnictwo Naukowe Uniwersytetu Szczecińskiego.

Firth, M. (1980). Raising finance and firms corporate reporting policies. *ABACUS, 16*(2), 100–115.

Fukukawa, K. (2019). Response-ability: Practicing integrity through intimacy in the marketplace. *Journal of Business Ethics*, *160*(1), 251–262.

Freeman, R. E. (1984). *Strategic management: A stakeholder approach.* Boston, MA: Harper Collins.

Glosten, R. and Milgrom, P. (1985). Bid, ask and transaction prices in a specialist market with heterogeneously informed traders. *Journal of Financial Economics*, *14*(1), 71–100.

Hadro, D., Fijałkowska, J., Daszyńska-Żygadło, K., Zumente, I., & Mjakuškina, S. (2021). What do stakeholders in the construction industry look for in non-financial disclosure and what do they get? *Meditari Accountancy Research*, *29*(6), 1–15.

Jung, M. J., Naughton, J. P., Tahoun, A., & Wang, C. (2018). Do firms strategically disseminate? Evidence from corporate use of social media. *The Accounting Review*, *93*(4), 225–252.

Lardo, A., Dumay, J., Trequattrini, R., & Russo, G. (2017). Social media networks as drivers for intellectual capital disclosure: Evidence from professional football clubs. *Journal of Intellectual Capital*, *18*(1), 18(1), 63–80

Lazarides, H. N., & Goula, A. M. (2018). Sustainability and ethics along the food supply chain. In P. P. R. Costa (Ed.), *Food Ethics Education. Integrating Food Science and Engineering Knowledge Into the Food Chain* (pp. 41–61). Cham: Springer.

La Torre, M., Botes, V. L., Dumay, J., Rea, M. A., & Odendaal, E. (2018). The fall and rise of intellectual capital accounting: new prospects from the big data revolution. *Meditari Accountancy Research*, *26*(3), 381–399.

Lee, K., Oh, W. Y., & Kim, N. (2013). Social media for socially responsible firms: analysis of fortune 500's twitter profiles and their CSR/CSIR ratings. *Journal of Business Ethics*, *118*(4), 791–806.

Lijun, L., Yutao L., Yan, L. (2019). Production and dissemination of corporate information in social media: A review. *Journal of Accounting Literature*, *42*, 29–43.

Lodhia, S., Kaur, A., & Stone, G. (2020). The use of social media as a legitimation tool for sustainability reporting. *Meditari Accountancy Research*, *28(*4), 613–632.

Mangold, W. G., & Faulds, D. J. (2009). Social Media: The New Hybrid Element of the Promotion Mix*. Business Horizons*, *52*(4), 357–365.

Ndou, V., Secundo, G., Dumay, J., & Gjevori, E. (2018). Understanding intellectual capital disclosure in online media Big Data. *Meditari Accountancy Research*, *26*(3), 499–530.

Neu, D., Saxton, G. D., Everett, J., & Shiraz, A. R. (2020). Speaking truth to power: Twitter reactions to the Panama Papers*. Journal of Business Ethics*, *162*, 473–485.

Nirino, N., Miglietta, N., & Salvi, A. (2019). The impact of corporate social responsibility on firms' financial performance, evidence from the food and beverage industry. *British Food Journal*, *122*(1), 1–13.

Perrini, F., Russo, A., Tancati, A., & Vurro, C. (2011). Deconstructing the relationship between corporate social and financial performance*. Journal of Business Ethics*, *102*(1), 59–76.

Piber, M., Demartini, P., & Biondi, L. (2019). The management of participatory cultural initiatives: learning from the discourse on intellectual capital*. Journal of Management and Governance*, *23*(2), 435–458.

Prokofieva, M. (2015). Twitter-based dissemination of corporate disclosure and the intervening effects of firms' visibility: Evidence from Australian-listed companies. *Journal of Information Systems*, *29*(2), 107–136.

Raimo, N., Zito, M., & Caragnano, A. (2019). Does national culture affect integrated reporting quality? A focus on GLOBE dimensions. In *9th International Symposium on Natural Resources Management* (pp. 382–392). Zajecar, Serbia.

Rodrigue, M., Cho, C. H., & Laine, M. (2015). Volume and tone of environmental disclosure: A comparative analysis of a corporation and its stakeholders. *Social and Environmental Accountability Journal*, *35*(1), 1–16.

Saffer, A. J., Sommerfeldt, E. J., & Taylor, M. (2013). The effects of organisational Twitter interactivity on organisation – public relationships*. Public Relations Review*, *39*(3), 213–215.

Saxton, G. D., Gomez, L. M., Ngoh, Z., Lin, C., & Dietrich, S. (2019). Do CSR messages resonate? Examining public reactions to firms' CSR efforts on social media. *Journal of Business Ethics*, *155*, 359–377.

Saxton, G. D., Ren, C., & Guo, C. (2020). Responding to Diffused Stakeholders on Social Media: Connective Power and Firm Reactions to CSR-Related Twitter Messages. *Journal of Bussines Ethics*, *172*(2), 229–252.

Scaltrito, D. (2016). Voluntary disclosure in Italy: Firm-specific determinants an empirical analysis of Italian listed companies. *EuroMed Journal of Business*, *11*(2), 272–303.

Secundo, G., Del Vecchio, P., Dumay, J., & Passiante, G. (2017). Intellectual capital in the age of big data: establishing a research agenda. *Journal of Intellectual Capital*, *18*(2), 242–261.

Solomon, J. F., Solomon, A., Joseph, N., & Norton, S. D. (2013). Impression management, myth creation and fabrication in private social and environmental reporting: Insights from Erving Goffman. *Accounting, Organizations and Society*, *38*(3), 195–213.

Tao, W., & Wilson, C. (2015). Fortune 1000 communication strategies on Facebook and Twitter. *Journal of Communication Management*, *19*(3), 208–223.

Vitolla, F., Raimo, N., Rubino, M., & Garzoni, A. (2019). Broadening the horizons of intellectual capital disclosure to the sports industry: evidence from top UEFA clubs. *Meditari Accountancy Research*, *30*(1), 142–162.

Vogler, D. (2020). Analysing reputation of Swiss universities on Twitter–The role of stakeholders, content and sources. *Corporate Communications*, *25*(3), 429–445.

Watson, A., Shrives, P., & Marston, C. (2002). Voluntary disclosure of accounting ratios in the UK. *British Accounting Review*, *34*(4), 289–313.

Whelan, G., Moon, J., & Grant, B. (2013). Corporations and citizenship arenas in the age of social media. *Journal of Business Ethics*, *118*, 777–790.

Yang, J., Basile, K., & Letourneau, O. (2020). The impact of social media platform selection on effectively communicating about corporate social responsibility. *Journal of Marketing Communications*, *26*(1), 65–87.