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Do Social Interaction Mechanisms Affect University Reputation? Evidence from the UK Higher Education Sector

We investigate the influence of skilful utilization of social interaction dynamics on creating reputations for UK Higher Education Institutions (HEIs) during public funding cuts and scrutiny. The paper employs a content analysis method and follows an empirical design with a unique sample of 148 UK HEIs. To gauge reputation, we rely on participatory data from the *Guardian* newspaper's 2014–15 environmental and ethical performance ratings for the People & Planet University League. Multiple regression analysis is applied to address the research hypotheses. The results indicate that open, accountable, and transparent sensemaking in sustainable development (SD) practices over the years is the predominant dynamic for enhancing HEIs' reputation. This paper underscores the need to consider the institutional logics perspective as a theoretical foundation for a comprehensive understanding of the link between sustainability disclosure and an institution's reputation, image, and public goodwill within the higher education (HE) context. HEIs' leadership should invest in SD and its associated disclosure practices. Policy-makers and accounting regulators should establish consistent and comparable reporting requirements for sustainable performance within the HE sector. This paper is the first to empirically examine the direct impacts of HEIs' compliance with sustainability duties on organizational performance.

Key words: Annual reports; University; Institutional logics; Legitimacy; Reputation; Sustainability disclosures.

Since 2012, the UK higher education (HE) sector has seen changes in market- and community-based cultures within the HE environment (Ntim *et al.*, 2017). On the

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one hand, the promotion of a market-based culture implies that higher education institutions (HEIs) not only face increased competition among providers but also 'compete' for students (National Audit Office (NAO), 2017).[1] In this more competitive environment, HEI rankings have gained greater importance (Schantz *et al*., 2021), reinforcing the perception of institutions as 'best in class' (Lourenço *et al*., 2014) and as a means to recognize and reward teaching excellence and/or research productivity (Brink, 2018). On the other hand, HEIs' reliance on competitive strategies is in conflict with the shift in their community-based culture, which has placed a new emphasis on 'operational transformation' towards sustainable development (SD) (Leal Filho *et al*., 2018). This transformation has drawn attention to the accountability of HEIs' sustainability performance (Clifford and Petrescu, 2012).

Previous research has used a descriptive approach and methods like case studies, field research, archival research, questionnaires, and surveys to look at SD within the HE sector (e.g., Lozano *et al*., 2015; Williams *et al*., 2017). Some studies have also proposed tools for assessing and monitoring the SD performance of HEIs (for an overview, see Amaral *et al*., 2023). However, there is little theoretically informed empirical literature on how the achievements of HEIs in delivering SD contributions gain external legitimacy and recognition (Schmidt and Gunther, 2016).

Considering this context, this paper characterizes the changes in HE as shifts in institutional logics (Ezzamel *et al*., 2007).[2] Credible 'signalling' through 'objective and professional benchmarks assessed by neutral parties' (Robinson *et al*., 2011, p. 495) has become vital for HEIs both in the market and sustainability domains. In this context, HEIs require a set of social interactions, with sensemaking at the forefront, aimed at legitimizing new institutional logics and differentiating themselves from other institutions (e.g., Locke *et al*., 2008) while striving to achieve the Sustainable Development Goals (SDGs) (Godemann *et al*., 2014).

We investigate this interaction between adopting new institutional logics and stakeholder engagement for SD within UK HEIs. Specifically, we investigate whether stakeholders appreciate the social interactions related to SD in HEIs, including decision-making, sensemaking, and collective mobilization, and the effects of 'involving stakeholders in a two-way communication process, defined as

[1] In this paper, higher education institution (HEI) refers to any HE provider that receives direct public funding. HE funding councils may choose to fund HEIs for teaching and research if they meet the conditions of the grant. HEIs are also required to subscribe to the Office of the Independent Adjudicator. A HE provider refers to any organization that delivers HE (HEFCE, 2014). The UK funding councils are the HEFCE, which has been replaced by the Office for Students (OfS) in 2018, the Scottish Funding Council (SFC), the Higher Education Funding Council for Wales (HEFCW), and the Higher Education division of the Department for the Economy (DfE) in Northern Ireland.

[2] Most recent work has examined various forms of developmental change in institutional logics within the US, UK, and German HE, including logics of liberal academic, critical practice, government, corporate, and market (e.g., Townley, 1997; Murray, 2010; Swan *et al*., 2010; Conrath-Hargreaves and Wüstemann, 2019a, 2019b; Graham and Donaldson, 2020).

an ongoing iterative process of sensegiving and sensemaking' (Morsing and Schultz, 2006, p. 331).

We focus on a period during which UK HEIs have broadened the involvement of stakeholders in SD communication processes. In particular, we use HEIs' positions in the *Guardian* newspaper's environmental and ethical performance ratings for the People & Planet University League (PPUL) (Bawden, 2015) as a measure of environmental and ethical reputation. The PPUL is the sole student-led, comprehensive, and independent ranking of public UK HE providers based on their environmental and social responsibility. An increasing number of UK policy institutes (e.g., Higher Education Policy Institute (HEPI) (Turnbull, 2018), experts (e.g., Carbon Trust (CT), EcoCampus) (CT, 2014), and business partners (e.g., NfPSynergy, the Co-operative) have referenced the PPUL as an indicator of 'good reputation' for HEIs' SD performance.

During the initial phase of PPUL for 2014 and 2015, HEIs were invited to update and complete individual online surveys covering SD topics. Subsequently, PPUL sent Official Freedom of Information (OFI) requests to the HEIs and emailed the provisional scorecard to them after the survey completion deadline. PPUL also allowed a two-week appeal process for the assessed HEIs to review their provisional scores. However, since 2016, PPUL has compiled rankings from up-to-date information publicly available on university websites, data from HESA's Estates Management Record (EMR), and input from other independent external verification agencies. The participatory data collection approach used by PPUL for the years 2014 and 2015 (Bawden, 2015) is in contrast to the observatory data collection approach adopted in later years (PPUL, 2023). The earlier approach provides an excellent opportunity to assess the effects of a 'stakeholder involvement' communication strategy for SD (Morsing and Schultz, 2006), hence we use PPUL data for 2014 and 2015.

Utilising a unique dataset encompassing 148 public UK HEIs, we conduct rank-ordered probit-style regressions to investigate to what extent HEIs' reputation around SD is driven by research, education, the management of their operations, and the disclosure of their activities. Our findings align with the institutional logics metatheory. The results indicate that decision-making concerning SD should amalgamate intellectual activism with educational approaches, leading to an enhanced reputation. We assert that HEIs' social responsibility encompasses the effective management and reporting of their own 'operational' activities, performance, and societal, economic, and environmental impacts. This underscores the importance of developing a 'stakeholder-oriented' 'sensemaking model' (PricewaterhouseCoopers (PwC), 2018). In particular, our findings suggest that a more extensive and profound sensemaking process by HEIs for SD exerts a significantly positive influence on the scrutiny, interpretation, and evaluation of UK HEIs' sustainable actions. This, in turn, amplifies the reputation of HEIs beyond the impact of any alternative social mechanisms.

Our main contribution to the literature is to provide first empirical evidence on the relationship between HEIs' responsiveness to SD and critical organizational outcomes. We introduce a theoretical foundation that explores the potential

relationship between disclosure and reputational benefits within the HE context. We build upon the theory of institutional logics, a framework extensively employed in research on the drivers of change in accountability discourses within the accounting literature (Ezzamel *et al.*, 2007).

Interestingly, while there have been numerous national and international initiatives and declarations for HEIs to lead the cultural shift required to address all SDGs (for an overview, see Lozano *et al.*, 2013), 'these declarations often lack requirements for reporting or other accountability mechanisms' (Godemann *et al.*, 2014, p. 224). This study is the first to define and introduce a comprehensive set of keywords as manifest indicators with significant relevance for SD and SDGs, not only within the HE context but also in the non-profit sector. Our in-depth analysis of the extent and nature of sustainability information disclosed in universities' annual reports over time adds to the existing literature on SD in HEIs. It furnishes contemporary evidence concerning the voluntary reporting of sustainability in the HE setting (e.g., Lozano *et al.*, 2015), with a particular focus on the UK. Additionally, we offer insights into enhancing HEIs' annual reporting through various coexisting methods. These insights underscore the importance of transparency in the external reporting of HEIs, which is seen as a fundamental requirement for the effectiveness of the HE (Schmidt and Gunther, 2016). Similarly, we contribute to the existing literature on reputation-building within the HE by enhancing our comprehension of the 'evaluative logics' and signals stakeholders use to bestow reputation (Philippe and Durand, 2011). Furthermore, we add to the ongoing discussion regarding the validity and consequences of rankings in the HE (Hosier and Hoolash, 2019).

STUDY CONTEXT AND HYPOTHESES

We empirically investigate the impact of responsible HEI practices on institutional reputation. There is currently little theoretical development on how community can influence key performance indicators within HEIs, particularly reputation. To address this gap, we employ the institutional logics metatheory, which adopts a pluralist-oriented perspective (Van Gestel and Hillebrand, 2011). An institutional field is observed within and across a network of interconnected institutional orders, each characterized by distinct symbols and practices that influence organizational behaviour (Thornton *et al.*, 2012). The rules of conduct within the realm of competition (a limited perspective of the market) as a cultural system (e.g., Frølich *et al.*, 2013) differ from those within the domain of public policy (a limited perspective of regulation) (e.g., Ezzamel *et al.*, 2007) and those of the community (e.g., O'Mahony and Lakhani, 2011). Shifts in logics, therefore, accompany institutional change (Suddaby and Greenwood, 2005).

When considering UK HE, the significant changes implemented in and after 2012 have introduced a competitive aspect (for a discussion, see Ntim *et al.*, 2017), such as increased tuition fees, removing the cap on student numbers (Ntim

et al., 2017), and, more recently, the referendum on EU membership (Brink, 2018). There has also been a significant shift in UK HE public policy on SD (Higher Education Funding Council in England (HEFCE), 2014). This policy shift has implications for capital allocation to HEIs, directly linking it to sustainable capital investment and physical infrastructure plans, as well as plans to verify the reduction and reporting of HEIs' carbon emissions (see HEFCE, 2014). Furthermore, HEIs are expected to lead adopting sustainable practices that can ultimately contribute to the nation's economic and social well-being. This pressure has prompted a change in the community logic of HEIs (e.g., Leal Filho *et al.*, 2018; Schantz *et al.*, 2021).

To measure reputation, we rely on areas HEIs' stakeholders have been using as key performance indicators and as a methodical base for evaluating institutional changes and engaging in decision-making. Specifically, rankings of universities have increasingly become a prominent reflection of aggregate institutional performance (see Hosier and Hoolash, 2019). By focusing on the 'corporatized' HE model, rankings of HEIs present 'indicators of prestige' (Locke *et al.*, 2008, p. 53) that have confirmed the reputation of HEIs and stimulated a growing influence on their prospects. As Schnietz and Epstein (2005, p. 329) suggest, a reputation for sustainability 'may facilitate complex, long-term stakeholder management, which, in turn, should enhance a firm's ability to outperform its competitors, either by increasing revenues or reducing costs'. Consequently, responsible practices within HEIs can not only contribute to the public welfare but also become a source of sustained competitive advantage in terms of reputation (see Davis and Farrell, 2016).

Hence, we contend that HEIs use social interactions to reproduce, alter, and configure identity and practice to create lasting value, differentiate themselves from other institutions (Locke *et al.*, 2008), and deliver the SDGs (Godemann *et al.*, 2014) amidst shifts in institutional logics. The HEIs' social interactions include three interrelated mechanisms: decision-making, sensemaking, and collective mobilization (Thornton *et al.*, 2012). In identifying these mechanisms, we provide accounts of how the UK HEIs' social interactions enlist the (re) organized SD efforts as legitimate, engage stakeholders, and build a reputation.

On one level, Thornton *et al.* (2012, p. 133) identify '[the focus of decision-making] on the processes by which attention is directed to problems, and how problems are matched with solutions in decision situations'. A key mechanism for HEIs in this context is knowledge generation and dissemination. Hence, knowledge for SD (hereafter, KSD) can be regarded as the legitimate province of HEIs (Suchman, 1995). Prior studies focused on examining SD adoption and diffusion into HEIs' research themes (for an overview, see Williams *et al.*, 2017) and curricula (e.g., Lambrechts *et al.*, 2013). HEIs worldwide have sought to implement research for SD (RSD) by having an SD institute or research centre, providing SD research funding, and linking the natural and social sciences (Lozano *et al.*, 2015). HEIs have fostered education for SD (ESD) by integrating SD courses in some programs, schools, and faculties and by offering an optional SD course (Wu *et al.*, 2010).

The existing research offers critical insights into HEIs' efforts to develop a virtuous circle that links research and teaching to the SDGs (e.g., Cullen, 2020). To our knowledge, there has been no study of HEIs that empirically tests to what extent these efforts affect HEIs' reputation (Williams, 2014). Therefore, we analyze whether the HEIs' decision to embed ethics, reasonability, and sustainability into academic research and educational programs impacts the HEIs' reputation.

On the one hand, RSD and ESD revive the primacy of ethics and morality, advance socially responsible behaviours, and engage stakeholders in the HEI discourse (Roos, 2017). SDGs should be emphasized as a decision-making framework for guiding the HEIs' not-for-profit business model while enhancing institutional competitiveness (Cullen, 2020). The culture of HEIs, thus, should be compatible with creating a shared sustainable value that allows for gaining, extending, and maintaining legitimate cognitive norms and income sources (Cullen, 2020).

On the other hand, the strong business case for leading a sustainable agenda represents the 'instrumental' logic used to define the HEI–society relationship (Hesselbarth and Schaltegger, 2014). Hence, HEIs' overall contributions to KSD might not achieve '[the] interconnectedness and synergies among economic, environmental, social, and cross-cutting themes' (Lozano, 2010, p. 643). Additionally, HEIs' slow adoption of KSD and lagging response to radical SD change can present 'a taken-for-granted' legitimate image to secure funding and generate teaching, research, and knowledge exchange incomes from salient stakeholder(s) who prioritize sustainability knowledge (Wu *et al.*, 2010). In this view, KSD alone is not sufficient to create a sustainable competitive advantage without a 'translation metaphor' that makes and gives meaning to decision-making for SD knowledge (Weber and Glynnr, 2006). Therefore, we hypothesize:

H1: There is no association between the extent of HEIs' knowledge for SD activities and reputation for environmental and ethical responsibility.

Thornton *et al.* (2012, p. 96) define sensemaking as 'ongoing retrospective processes that rationalise organisational behaviour', helping to resolve ambiguity in ways that enable activity to occur. Based on this, as Suddaby and Greenwood (2005, pp. 39–40) explain, '[communication] or the art of persuasion seeks to identify genres or recurrent patterns of interests, goals, and shared assumptions that become embedded in persuasive texts' (see also Cornelissen *et al.*, 2007; Dupin and Wezel, 2023). Skilled use of communication could initiate, facilitate, and direct shifts in forms of institutional logics (Mills *et al.*, 2023). Specifically, communication is central to induced change due to its situational focus on re-conceptualizing change efforts to stakeholders (Plotnikof and Mumby, 2023) and its dynamic relationship with organizational practices (Mills *et al.*, 2023). Thus, 'the use of language … persuades constituencies of the desirability and appropriateness of institutional deviance [and] reshapes dominant ideologies within an organisational field' (Suddaby and Greenwood, 2005, p. 37). In this regard, communication strategies are a sensemaking device that legitimizes

the comprehensibility of a change through connecting alternative and contested logics to broader cultural understandings.

In effect, institutional logics are abstractions in which legitimacy is openly debatable (Thornton *et al.*, 2012). Organizations seek to protect (or enhance) past legitimacy accomplishments they have already acquired by developing 'a defensive stockpile of supportive beliefs, attitudes, and accounts' (Suchman, 1995, p. 595). Indeed, 'organisations that … lack acceptable legitimated accounts of their activities … are more vulnerable to claims that they are negligent, irrational, or unnecessary' (Meyer and Rowan, 1991, p. 50, cited in Suchman, 1995, p. 575). The organizational character is often transmitted through 'channels of communication' to influence stakeholders' perceptions (Hooghiemstra, 2000). Voluntary disclosures are viewed as a central element of legitimacy theory (see Ntim *et al.*, 2017). To be perceived favourably by others, organizations use voluntary CSR reporting to protect or enhance their reputations (Hooghiemstra, 2000).

Given the current global and national changes, it is not surprising to find that an increasing number of HEIs have incorporated sustainability into their operations and reporting as an influential part of their competitive strategies (Lozano, 2011). In the absence of monitoring outputs directly (Modell and Wiesel, 2008), organizational audiences rely on signals to inform their assessments of organizational legitimacy (Willems *et al.*, 2016). For the social acceptance of HEI to emphasize reputation among the sector, adherence to social norms and expectations co-exist in most real-world settings as 'multidimensional' phenomena consisting of progressive and interconnected, yet different, constructs (Lind *et al.*, 2022). In such a context, voluntary sustainability reporting, which signals an institution's contribution to SD and informs continuous improvement across the HE, can serve as a sensemaking instrument that aims at managing HEIs' image and legitimizing audience relationships.

Only recently have researchers explored SD in HEIs (see Amaral *et al.*, 2020). Interestingly, however, the responsiveness of the HE to SD pressures is an under-researched area (e.g., Cooper *et al.*, 2014; Egan, 2014). The impacts of compliance with the duty of accountability to public transparency, sustainable responsibility, and stakeholder engagement on HEIs are still unknown (Godemann *et al.*, 2014). The quantifiable reputational effects of such disclosures remain undefined in the literature on the HE sector, both in the UK and elsewhere. This research gap may partly exist because HEIs are not accountable to shareholders or driven by profit. Overall, there is little prior evidence that suggests a specific direction of the association between HEIs reporting for SD and reputations for environmental and ethical responsibility. Hence, we hypothesize:

H2: There is an association between the extent of HEIs' reporting for SD and reputations for environmental and ethical responsibility.

The debate surrounding catalyzing either the HEIs' knowledge of SD or reporting for SD allows for observing a collective mobilization for SD and its related impacts on HEIs' reputation (e.g., Godemann *et al.*, 2014). Thornton *et al.* (2012,

p. 133) regard collective mobilization as 'a set of mechanisms by which [an organization] generates shared commitments and energy to contest or promote particular aspects of organisational life' (see also Rao *et al.*, 2003; Schneiberg and Lounsbury, 2008). Here, the theory of public trust argues that 'trust can be built if, for example, the actions and public communication are congruent, if the organisation speaks with one voice, or if the organisation acts transparently in public and is adaptive to external demands' (Schultz and Wehmeier, 2010, p. 19).

Maciel and Fischer (2020), for example, conclude that emerging US firms drive new markets by mobilizing for collective action that converts resources into market-driving power (i.e., economic and political initiatives) in ways that increase their overall competitiveness and benefit these firms as a whole. Additionally, Mak and Tse (2022) find that collective action of civil servants goes hand in hand with mass or interpersonal communications to confirm their role in promoting social change when a social movement threatens institutional legitimacy and engenders efficacy. Therefore, behaving in a socially responsible manner (i.e., decision-making) and translating these manners into substantive ritualized justifications or understandings (i.e., sensemaking) represent an HEI's collective mobilization towards SD. Such mobilization offers a more subtle tool for trust-building and, hence, binds the HEI to a higher reputable status than HEIs, which are divergent regarding actions and communications. Taken together, we hypothesize that:

H3: There is a positive association between the extent of HEIs' collective mobilization for SD and reputations for environmental and ethical responsibility.

RESEARCH DESIGN AND DATA

Sample Selection

Our sample includes all UK HEIs covered by the combined People & Planet's University League (PPUL) surveys for the year 2014/15 regarding Environmental and Ethical (EE) performance. A total of 151 HEIs were listed in this league table. Financial data and Estate Management Statistics (EMS) records were obtained from the Higher Education Statistics Agency (HESA).[3] Internal governance and managerial structure data were primarily collected from the HEIs' annual reports and supplemented by publicly available documents and official HEI websites. The final sample comprises 148 UK HEIs, representing 90% of the entire population of 164 UK HEIs, after excluding those with missing data.

Definition of Variables and Model Specification

Our dependent variable is environmental and ethical reputation (*EER*). To measure EER, we utilized the survey rankings of the UK HEIs as published in

[3] The underlying data can be accessed at https://www.hesa.ac.uk/data-and-analysis/publications

PPUL for the years 2014 and 2015. PPUL, a charitable company and a comprehensive student-led movement, stands as the sole independent league table for UK HEIs based on their EE performance. The PPUL Oversight Group (GLOG) for the years 2014 and 2015 comprised diverse stakeholders from the HE, ranging from large research-intensive HEIs to small specialist and non-university colleges. Sector stakeholders included environmental and sustainability coordinators, directors of estates, and energy managers. Non-university stakeholders included representatives from external organizations with relevant expertise, such as Carbon Trust, Environmental Management Schemes, Universities and Colleges Union, the National Union of Students, Soil Association, Sustain, Fairtrade Foundation, and Marine Stewardship Association. The GLOG determined the final scores for HEIs to validate the league, which was then published in the *Guardian* and on the People and Planet website. HEIs are ranked into five approximately equal classes: First Class, Second Class (2:1 Awards and 2:2 Awards), Third Class, and Failed, based on HEI EE reputational scores (Bawden, 2015) (see Appendix 1).

Our use of an external rating is similar to approaches in the wider corporate literature that uses measures such as recent membership on the Dow Jones Sustainability World Index (DJSI) or external ratings of corporate social responsibility (CSR) from *Fortune*'s 'World's Most Admired Companies' and *Management Today*'s 'Britain's Most Admired Companies'. This approach remains one of the most popular methods due to its comprehensiveness and availability (Hasseldine *et al*., 2005; Lourenço *et al*., 2014). This method offers two advantages (Fombrun *et al*., 2015). First, external ratings summarize the responses of a key constituency to various organizations. Second, it is consistent because one evaluator applies the same criteria to each organization.

Our measures for knowledge for sustainable development (KSD) align with the voluntary initiatives UN Principles of Responsible Management Education (UN PRME) and the Aspen Institute's Beyond Grey Pinstripes to conceptualize constructs within research and curriculum orientation that fall within SD. UN PRME contains six principles to involve management-related HEIs in developing responsible business leaders. The initiative emphasizes rolling reviews of SD-focused curriculum (i.e., Principle 3: Method) and active participation of academic staff and early career scholars in SDG-related research areas (i.e., Principle 4: Research) (Azmat *et al*., 2023). The Aspen Institute's Beyond Grey Pinstripes initiative was an independent survey and global ranking that spotlights innovative ways business schools include SDG stewardship in the curriculum (The Aspen Institute, 2012).

The research component of KSD was measured by the extent to which an HEI's publication in academic journals engages with the SDGs (Schantz *et al*., 2021) using HEIs' submission to the 2014 Research Excellence Framework (REF).[4] To measure education, we also assessed how many opportunities students have to

[4] The final sample includes one HEI that does not receive research income from government funding grants. Our screening of this HEI's official website and the detailed, publicly available profile verified the explicit presence of publications in academic journals engaging with the SDGs by the HEI's academic staff.

take courses with SDG content (Cullen, 2020). As HEI education is organized around disciplines, we focused on undergraduate, graduate, and executive education relevant to SD challenges. Building responsible corporate leadership that is ethically, culturally, and racially literate is considered to be essential for promoting a sustainable future (Williams, 2014). Therefore, we focused on courses that explicitly discuss how business processes, strategy, and investment can be engines for improving social, growth, and environmental conditions (The Aspen Institute, 2012). To do so, we screened all full-time courses listed on the HEI official website or the detailed, publicly available profile to verify the explicit presence of SDG content using a list of keywords related to SD, which we discuss later in this section.[5]

The disclosures on sustainable development (DSD) were identified based on the HEIs' annual reports. We employed the automated content analysis technique (Li, 2010) to code all direct or indirect statements on SD issues, assessing the extent of openness and transparency with which the HEIs discussed actions to promote the sustainability agenda (see Torelli *et al.*, 2020). Our developed reporting scheme for SD draws on the University that Counts (UTC) disclosure framework (Environmental Association for Universities and Colleges (EAUC), 2010). The UTC disclosure framework is a verified external assessment tool used to identify, scrutinize, and benchmark whether the funding and regulatory actions that foster UK HEIs' sustainable performance have had the expected results.

The UTC survey collects HEI responses on policies and achieved impacts, covering four key pillars of SD: community, environment, marketplace (students and suppliers), and workplace (employees). The index then asserts the reliability and accuracy of SD contributions by tagging three additional reporting issues: strategy, integration, and assurance. The definitions of key success factors for each SD area are revised according to the Public Accountability and Transparency Index (PATI) (for a discussion, see Ntim *et al.*, 2017) to reflect significant changes in UK HEI targets and indicators (see Appendix 2). Thus, our reporting scheme for sustainability disclosure is also closely linked to the reporting guidelines defined by the Global Reporting Initiative (GRI version 3.1), considered the most widely accepted international sustainability reporting standards (Hummel and Schlick, 2016).

In three steps, we used *QSR NVivo 11* to find, capture, assign, and aggregate all references, phrases, or clauses related to each SD topic. First, we developed a comprehensive list of sustainability-related keywords compiled from three sources. The first source was prior academic and professional research on SD concepts (e.g., White *et al.*, 2004; EAUC, 2010; GRI, 2011; United Nations (UN), 2013; Godemann *et al.*, 2014; Hummel and Schlick, 2016; Cullen, 2020). The second source included *QSR NVivo 11* built-in dictionaries, from which sourcing was

[5] We focus on conventional campus-based full-time courses to ensure that students are exposed to the SDG content (The Aspen Institute, 2012), established regular study routines (Crawford and Wang, 2016), involved in face-to-face teaching, and developed a sense of belonging to the HEI (see Kember and Leung, 2004). We include distance/open-learning methods if the HEI established teaching model is only dedicated to distance learning.

performed on all relevant stems, synonyms, specializations, and generalizations for words already identified. The third source included other words indicative of SD issues identified by reading and examining the HEIs' annual reports and sustainability policies. Next, we conducted an intensive text search for a random sample of 20 annual report narratives.

We retained only the words appearing in this text search. Thus, the final sustainability word list was identified.[6] Second, following the specific instructions for *QSR NVivo* 11, we searched for and coded all relevant phrases or clauses with a keyword related to SD featured in our final list. To align the study with the PPUL method in using data and HEI evidence documents dated a year (or more) before the survey year and to test the proposed cause-and-effect relationship (Hasseldine *et al.*, 2005), we codified both SD-related knowledge regarding publicly available profiles and SD-related phrases regarding annual reports for fiscal years 2013, 2014, and 2015 for each HEI of interest.[7] Therefore, our knowledge of SD and disclosure of SD variables is lagged by the years covered in the survey analysis.

Lastly, we read every coded phrase or clause to test its conveyed content. We identified six different disclosure types to reflect six unique combinations of the spread and the level of depth and detail of the information provided in the narratives. We assigned each disclosure type a score between zero, 'underlining no disclosure', and 6, 'underlining detailed provision of a range of qualitative and quantitative (numerical or monetary) information' (see Ntim *et al.*, 2017). This process gave the HEIs a maximum potential score of 222 points for each sample reporting year (see Appendix 2 for examples of Type 1–6 provisions and scoring procedures). The respective HEI's actual score was then expressed as a percentage of the total potential score (Ntim *et al.*, 2017). We followed the same procedure for the disclosure of the sustainable development index (DSDI) subthemes of the reporting scheme. The interpretation of the DSDI is that the higher (lower) the score, the more (less) the HEI reports sustainability disclosure of substantive (rhetoric) nature; as a result, the more (less) reputable a HEI will appear to be.

Our reporting system includes SD indicators and key success factors for each area. These are clearly defined so that stages of coding and scoring can be repeated in HEIs' annual reports and the same results can be obtained (Rourk *et al.*, 2000). We applied a three-stage measurement procedure whereby the HEI

[6] This list includes the following words: accreditation, agenda*, alumni, assurance, audit, awareness, baseline, biodiversity, carbon, climate*, community, culture*, curriculum, cycling*, dioxide, disability*, diversity, economic*, eco-*, ecology, emissions, energy, environment*, equality*, estate, ethical, female*, feminism*, fossil*, fuel*, fairtrade, garden*, global*, green*, health, inclusion*, innovation*, NGOs*, partnership*, poverty, pollution, procurement, recycle*, refurbish*, regional*, renewable*, rights*, safety, security*, social*, spinout*, startup*, survey*, sustainability*, tones, training, urban*, waste, wellbeing, widening*, woman*, youth*. Words denoted by * also include derivatives, a very close meaning, a more specialized meaning, and a general meaning of the original.

[7] The PPUL reputation ranking is compiled using HEIs' publicly verified data from the year 2012/13 through the autumn publication date of the league in 2014/15. In so doing, the PPUL forms an inclusive image of EE progress in the HE sector.

annual reports were independently coded. We repeated the coding of the sample reports after a short period, and the scores from the two consecutive coding steps were precisely matched. We then ensured that any uncertainties regarding the definition, interpretation, and extrapolation of data were resolved among the coders by calculating Krippendorff's alpha coefficient of agreement (Milne and Adler, 1999). An alpha value of 81.75% was achieved (Krippendorff, 2013). We used Cronbach's alpha to examine how well our dataset and DSD scores captured an underlying construct. For the computed DSD scores, Cronbach's alpha is 76.79%. This score shows high consistency compared to the widely accepted social science measure of 70% (Elshandidy *et al.*, 2013). Hence, we conclude that our DSD scores are reliable and valid.

We include several control variables that may affect the EER based on empirical studies from the corporate sector and literature reviewed in the HEI setting. For instance, we controlled for whether the HEI has an externally verified environmental management system (*ENVA*), governance structure (*GBSIZE*×*ETSIZE*), proficiency of audit committee (*QABI*), auditor quality (*BIG4*), monitoring/advising mechanism(s) on HE quality (*QAA*), interaction effect of age and size advantages (*LNAGE*×*SIZE*), stakeholder power (*IFUND*×*TEA*), leverage (*LEVG*), income volatility (*RISK*), and growth prospects (*AVGROA)* (see Vendelo, 1998; Hasseldine *et al.*, 2005; Philippe and Durnad, 2011; Hummel and Schlick, 2016; Liu *et al.*, 2016; Willems *et al.*, 2016; Ntim *et al.*, 2017; McCann *et al.*, 2022).

Hence, given the cross-sectional nature of our data and the ordinal nature of our reputation for sustainability variable, our rank-ordered cross-sectional regression model to be estimated is specified in equantions (1), (2), and (3), which are linked to Hypotheses 1, 2, and 3 respectively, with a summary of defined key variables:

$$P(EER_{i,t}=j)=\left(\alpha_{j-1}<\tau*KSD_{i,t-3}+\beta' X_i+\epsilon_i\leq\alpha_j\right) \quad (1)$$

$$P(EER_{i,t}=j)=\left(\alpha_{j-1}<\tau*DSDI_{i,t-3}+\beta' X_i+\epsilon_i\leq\alpha_j\right) \quad (2)$$

$$P(EER_{i,t}=j)=\left(\alpha_{j-1}<\tau*KSD_{i,t-3}*DSDI_{i,t-3}+\beta' X_i+\epsilon_i\leq\alpha_j\right) \quad (3)$$

where *EER* is the environmental and ethical reputation of the UK HEIs as reported by the PPUL 2014–2015. *KSD* refers to knowledge for sustainable development lagged by three years and includes the following variables: *RSD* is the percentage of all HEI scholarly articles published in peer-reviewed journals that contain some degree of SDG content; *ESD* measures the percentage of all HEI full-time courses offered that include SDG content; and *BISD* considers the percentage of all HEI business schools' full-time courses offered that have module(s) that specifically address the intersection of SDGs–impact management and mainstream for-profit business. *DSDI* is the disclosure on sustainable development index, which has lagged by three years. X_i contains the control variables. Table 1 presents the definitions of measures and variables used in the analysis.

The following section reports the empirical analyses, including the descriptive statistics, bivariate analysis, and ordinal regression analyses.

TABLE 1

SUMMARY OF MEASURES AND VARIABLES

Dependent variable: Environmental and ethical reputation	
EER	Environmental and ethical reputation as measured by the survey ranking of HEIs for the PPUL
Independent variable(s): Knowledge for sustainable development and Disclosure on sustainable development index	
RSD	Research for sustainable development measured as the percentage of all HEI scholarly articles published in peer-reviewed journals that contain some degree of SDGs content
ESD	Education for sustainable development measured as the percentage of all HEI full-time courses offered that include SDGs content
BISD	Business impact for sustainable development measured as the percentage of all HEI business schools' full-time courses offered that have module(s) specifically addressing the intersection of SDGs–impact management and mainstream for-profit business
DSDI	Total disclosure on sustainable development index containing 37 items based on five key themes, including: three items on strategy (STR); four items on integration (INTG); 23 items on management practices together with sustainable impacts (MANIMP); and seven items areas on assurance (ASSUR). All 37 items have a score ranging from zero to six, resulting in a total potential score of 222 for each reporting year of three sample years; scaled to a value between 0% and 100%. Appendix 2 contains the detailed disclosure scheme and the scoring procedure
Control variable(s): Estates management, governance, and HEI characteristics	
ENVA	One if a HEI EMS is externally audited (verified and accredited) for the three sample years; zero otherwise
GBSIZE	Natural log of total number of HEI governing board members
ETSIZE	Natural log of total number of HEI university executive team
QBACI	Audit committee quality index containing 14 provisions obtained mainly from the 2009 CUC Guide that takes a value of one if each of the 14 audit committee quality provisions is disclosed in the annual report, zer otherwise; scaled to a value between 0% and 100%. These audit committee quality provisions are presented in Panel A of Table 1
BIG4	One if a HEI is audited by a Big 4 audit firm (PwC, Deloitte and Touche, Ernst and Young, and KPMG); zero otherwise
QAA	One if a HEI was reviewed by a quality assurance agency (QAA) for the three sample years; zero otherwise
LNAGE	Natural log of HEI age as of the date on which the UK HEI gained its degree awarding powers or gained a university status
LNSTAFFNO	Natural log of HEI staff number
IFUND	Percentage of total funding body grants to total income
TEA	Percentage of total endowment assets to total assets
RISK	Standard deviation of total income
LEVG	Percentage of total debt to total assets. Total debt is calculated as follows: creditors falling due within one year (including creditors, current portion of long-term liabilities, and bank overdrafts) plus creditors falling due after more than one year (including repayable loans to funding council, external borrowing, and other (including grant claw back))
AVGROA	Average return on assets (ROA) for the sample 3 years (t, …,t–3)

Panel A: Quality of board audit committee (QBACI)

Presence of an audit committee	0-1
Composed of at least three independent members of the governing board, co-opted members with relevant expertise, or interested parties who are not members of the governing board	0-1

(Continues)

TABLE 1

CONTINUED

Panel A: Quality of board audit committee (QBACI)	
Chaired by an independent member	0-1
Disclosure of membership	0-1
Disclosure of meetings attendance record	0-1
Disclosure of the committee's remit/terms of reference	0-1
Review of committee effectiveness and performance	0-1
Whether sufficient internal controls are in place	0-1
Arrangement relating to risk governance and disclosure	0-1
Whether there is sufficient and well re-sourced internal audit Unit	0-1
Statement on going concern status	0-1
Mix of skill and experience: whether at least one member has recent and relevant experience in finance, accounting, or auditing	0-1
Frequency of committees meetings: if the committee meets at least four times in a year	0-1
Whether an academic (with or without accounting and finance experience) is present on the committee	0-1
Total quality of board audit committee index (QBACI) items	14

EMPIRICAL FINDINGS AND DISCUSSION

Descriptive Statistics, and Univariate and Bivariate Analyses

Table 2 reports the summary statistics related to the UK HEI environmental and ethical reputational rankings (*EER*), knowledge for sustainable development (*KSD*), and disclosure on sustainable development (*DSDI*). The descriptive statistics reveal several findings. Of all leagued HEIs, the average university has a membership in the PPUL Second Class reputational rank (*EER*). There is a high variability in how scholars (*RSD*), curricula (*ESD*), and business education (*BISD*) have integrated SD-related issues, which falls between 1% and 96% in the case of *RSD* and between no sustainability content at all and 46.15% in the case of *ESD* and 53.85% in the case of *BISD*, respectively. There is a widespread distribution in the DSD measure (*DSDI*), which spans from the highest score of 82.88% to the lowest score of 19.82% with the average (median) HEI scoring 56.05% (58.41%).

Significant differences exist between the old and new HEIs regarding membership in the EE reputation ranking (*EER*) and SD scholarly activity (*RSD*).[8] These differences can be seen in univariate tests of the mean and median. However, there is a lack of significant differences between pre- and post-1992 HEIs in the *DSDI* scores. Untabulated bivariate correlations among the main effects are relatively low; thus, there is no signal of severe multicollinearity. Likewise, all covariates' variance inflation factor (VIF) is within acceptable limits

[8] New HEIs (also known as 'post-1992' or 'modern' UK HEIs) are former polytechnics/colleges that were given university status through the the Further and Higher Education Act 1992 or an institution that has been granted university status since 1992 without receiving a royal charter. This is used in contrast to 'old', 'pre-1992', or 'traditional' UK HEIs (see Ntim *et al*., 2017).

TABLE 2

SUMMARY DESCRIPTIVE STATISTICS OF VARIABLES FOR ALL 148 UK HEIS

						Pre-1992–post- 1992
	Mean	Median	SD	Min.	Max.	Mean diff.
Dependent variable: Environmental and ethical reputation based on all 148 UK HEIs						
EER	2.68	3.00	0.96	1.00	4.00	–0.36**
Independent variable(s): Knowledge for sustainable development (KSD) and Disclosure on sustainable development index sustainability disclosure index (DSDI) based on all 148 UK HEIs (%)						
RSD	16.81	15.04	11.89	1.47	96.23	–3.31*
ESD	12.53	11.88	7.04	0	46.15	1.11
BISD	3.01	1.88	5.41	0	53.85	0.12
DSDI	56.05	58.41	13.72	19.82	82.88	2.18

The table reports summary descriptive statistics relating to ethical and environmental reputation (*EER*); research for sustainable development (*RSD*); education for sustainable development (*ESD*); business impact for sustainable development (*BISD*); disclosure on sustainable development index (*DSDI*). See Table 1 for definitions of all variables. ****, ***, **, and * denote that the mean difference between pre- and post-1992 HEIs is significant at .001, 0.01, 0.05, and 0.10, respectively (two-tailed test).

(less than 10). Hence, any remaining collinearity among the variables does not seem statistically harmful (Hair *et al*., 2010).

Multivariate Regression Analyses

We used rank-ordered probit analysis to test our hypothesis on the EE Reputation (EER) ranking variable (Love and Kraatz, 2009). Following prior studies (for a discussion, see Williams, 2010), we improved our empirical modelling and explicitly controlled for any potential source of heteroscedasticity (i.e., unobserved variation in parameters) by using the heteroskedastic ordered probit model as a reasonable alternative to binary or ordinal regression models.[9] We identified the covariates that may enter into the variance equation of all our

[9] The rank-ordered logit and probit models have been commonly used in accounting research. Therefore, both models were initially performed, and the results were mostly similar. The rank-ordered models are necessarily followed by testing whether the parallel lines assumption holds, and thus, verifying that the relative effects of the DSDI and control variables are the same at each rank of the EER. We ran two tests to do so: an approximate likelihood-ratio test of proportionality of odds and the Brant test. Both tests indicated that parallel lines assumption is violated at overall significant test statistics (for brevity not reported, but available upon request). However, it has been argued that the parallel lines constraint of logistic response models could potentially lead to invalid conclusions, and thus the degree of residual variation across levels of key and control covariates is the principal source that may produce apparent differences in slope coefficients (see Williams, 2010). Given that the Brant or similar tests are not indicative of these true differences, we used the heteroskedastic ordered (also known as location-scale) model to better identify and control for the determinants of heterogeneity and gain insights into the effects of group characteristics on outcomes that would be missed by other methods (Williams, 2010). In practice, the probit models can be generalized to account for non-constant error variances in more advanced econometric settings (Reardon *et al*., 2017).

models using the stepwise selection procedure as a diagnostic check (ibid.).[10] All analyses were run with robust standard errors. The descriptive results show that older HEIs (e.g., Cambridge and Oxford), HEI research groups (e.g., the Russell Group), and funding councils (e.g., OfS) may have different institutional cultures, managerial talents, and operational complexity, which may impact the EE reputation of HEIs differently.[11] Thus, all models were estimated with a dummy variable fixed effect to account for endogeneity issues that may result from unobserved HEI-specific differences (Ntim et al. 2017).

Tables 3, 4, and 5 present the models that explain the EER. Table 3 shows the impact of knowledge, namely research (*RSD*), teaching (*ESD*), and business (*BISD*), for SD on EER. The results presented in Model 4 of Table 3 suggest that only a coherent system that dedicates research platforms and fosters the provision of valued subjects related to the SDGs ($RSD \times ESD$) has a considerable influence on the ranking positions (*EER*). Meanwhile, Models 1–3, 5, and 6 imply that the institutional SDG research and teaching perceived quality do not individually contribute to the ranking outcomes. Thus, less support exists for Hypothesis 1.

Model 1 of Table 4 shows the impact of disclosure on SD (*DSDI*) on EER. In light of testing for important cut levels in the DSDI, we show versions of the models that evaluate whether ascending quartiles of DSDI, referring to rhetoric (*RHDSDI*) in Model 2 and nominal (*NOMDSDI)*, specific-endeavour (*SEDSDI*), and substantive (*SUBDSDI*) disclosure in Model 3, are independently associated with the development of EER. Our findings show DSDI can explain cross-sectional differences in the EE reputational ranks.

Model 1 of Table 4 shows a significant and positive effect of DSD (the *DSDI*) on HEIs' ethical and environmental reputation (*EER*), indicating that Hypothesis 2 has empirical support. Model 2 and the AMEs in Panel A of Table 4 show that the coefficient of *RHDSDI* is negative and significant, implying that HEIs with no disclosure or a mere outline of selected topics exhibit impaired reputations.

As the results suggest in Model 3, *NOMDSDI* has a positive, but statistically insignificant, relationship with the EE ranking (the *EER*). This is an indication that generalized sustainability statements have no benefit to reputation. By contrast, the coefficients of *SEDSDI* and *SUBDSDI* are strongly significant and positively associated with *EER*. This implies that increasing HEI transparency through disclosing a range of specific targets and impacts offers substantial help in improving reputation.

This finding suggests that membership in the top reputational ranks might be generated by moving up the sustainability disclosure hierarchy. For instance, the

[10] The stepwise estimation does not identify factor or interaction covariates. Therefore, we keep only those covariates that prove to be significant from the stepwise diagnostic procedure in the variance equation of all our robust models after factoring and adding interaction as stated in the model specification (Williams, 2010).

[11] New HEIs (also known as 'post-1992' or 'modern' UK HEIs) are former polytechnics/colleges that were given university status through the Further and Higher Education Act 1992 or an institution that has been granted university status since 1992 without receiving a royal charter. This is used in contrast to 'old', 'pre-1992', or 'traditional' UK HEIs (see Ntim *et al*., 2017).

TABLE 3

EFFECTS OF RESEARCH, EDUCATION, AND BUSINESS IMPACT FOR SUSTAINABLE DEVELOPMENT ON ETHICAL AND ENVIRONMENTAL REPUTATION

	Dependent variable					
Independent variables (model)	*EER(1)*	*EER(2)*	*EER(3)*	*EER(4)*	*EER(5)*	*EER(6)*
RSD	0.004			–0.018	–0.002	
	(0.740)			(0.284)	(0.554)	
ESD		0.001		–0.026		0.005
		(0.975)		(0.294)		(0.813)
BISD			0.083		–0.010	0.000
			(0.482)		(0.169)	(0.991)
RSD×ESD				0.001*		
				(0.089)		
RSD×BISD					0.001	
					(0.180)	
ESD×BISD						–0.001
						(0.732)
Control variables	Included	Included	Included	Included	Included	Included
HEI92 FE	YES	YES	YES	YES	YES	YES
RGROUP FE	YES	YES	YES	YES	YES	YES
UGEO FE	YES	YES	YES	YES	YES	YES
Variance[LNSIGMS]						
RSD					–0.040**	
					(0.020)	
BISD			0.116*			
			(0.050)			
ENVA	–1.016****	–1.021****	–1.021****	–1.113****	–1.226****	–0.993****
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
IFUND	0.041*	0.040**	0.041**	0.044**	0.037***	0.039**
	(0.054)	(0.044)	(0.013)	(0.033)	(0.005)	(0.039)
TEA					–1.240***	
					(0.005)	
N	148	148	148	148	148	148
Log likelihood	–148.253	–148.332	–144.413	–146.555	142.003	–147.891
Wald chi-square	86.78****	91.79****	75.14****	97.03****	1235.67****	115.68****

Panel A: Average marginal effects on coefficients of research, education, and business impact for sustainable development on ethical and environmental reputation

	Dependent variable				Dependent variable				Dependent variable			
	EER(1)				*EER(2)*				*EER(3)*			
Independent variables (model)	Failed class	Third class	Second class	First class	Failed class	Third class	Second class	First class	Failed class	Third class	Second class	First class
RSD	–0.001 (0.721)	0.000 (0.732)	0.001 (0.721)	0.001 (0.731)								
ESD					0.000 (0.975)	0.000 (0.975)	0.000 (0.975)	0.000 (0.975)				
BISD									0.006 (0.486)	–0.011 (0.255)	–0.012 (0.140)	0.017 (0.271)

Independent variables (model)	Dependent variable				Dependent variable				Dependent variable			
	EER(4)				*EER(5)*				*EER(6)*			
	Failed class	Third class	Second class	First class	Failed class	Third class	Second class	First class	Failed class	Third class	Second class	First class
RSD	0.000 (0.822)	0.000 (0.862)	0.000 (0.806)	0.000 (0.878)	–0.005* (0.094)	0.002 0.257	0.006 0.149	–0.003** (0.020)				
ESD	0.001 (0.793)	0.000 (0.795)	–0.001 (0.737)	0.000 90.867)					0.000 (0.934)	–0.001 (0.817)	0.000 (0.874)	0.000 (0.877)
BISD					0.001 (0.790)	0.001 (0.677)	–0.001 (0.748)	–0.001 (0.679)	0.002 (0.373)	0.001 (0.342)	–0.002 (0.358)	–0.001 (0.353)

This table reports results of rank-ordered probit analysis in the form of a heteroskedastic ordered probit regression. Panel A reports the AME results. *EER* is ethical and environmental reputation; *RSD* is research for sustainable development; *ESD* is education for sustainable development; *BISD* is business impact for sustainable development; *RSD*×*ESD* is a two-way interaction term of research for sustainable development and education for sustainable development; *RSD*×*BISD* is two-way interaction term of research for sustainable development and business impact for sustainable development; *ESD*×*BISD* is a two-way interaction term of education for sustainable development and business impact for sustainable development. Table 1 fully defines all the control variables used. *p*-values are in parentheses. ****, ***, **, and * denote significance at 0.001, 0.01, 0.05, and 0.10, respectively (two-tailed test).

TABLE 4

EFFECTS OF DISCLOSURE ON SUSTAINABLE DEVELOPMENT ON ETHICAL AND ENVIRONMENTAL REPUTATION

	Dependent variable		
Independent variables (model)	*EER(1)*	*EER(2)*	*EER(3)*
DSDI	0.023***		
	(0.009)		
RHDSDI		–0.466*	
		(0.059)	
NOMDSDI			0.033
			(0.911)
SEDSDI			0.669**
			(0.040)
SUBDSDI			0.940**
			(0.014)
Control variables	Included	Included	Included
HEI92 FE	YES	YES	YES
RGROUP FE	YES	YES	YES
UGEO FE	YES	YES	YES
Variance[LNSIGMS]			
ENVA	–0.921****	–1.039****	–0.861****
	(0.000)	(0.000)	(0.001)
IFUND	0.031**	0.039**	0.032**
	(0.046)	(0.044)	(0.050)
N	148	148	148
Log likelihood	–144.028	–146.307	–142.808
Wald chi-square	126.14****	107.80****	105.09****

Panel A: Average marginal effects on coefficients of disclosure on sustainable development on ethical and environmental reputation

	Dependent variable			
	EER			
Independent variables	Failed class	Third class	Second class	First class
DSDI	–0.004***	–0.002***	0.003***	0.003**
	(0.003)	(0.009)	(0.002)	(0.011)
RHDSDI	0.076**	0.049**	–0.067**	–0.057**
	(0.029)	(0.054)	(0.034)	(0.041)
NOMDSDI	–0.007	–0.001	0.005	0.004
	(0.912)	(0.913)	(0.912)	(0.911)
SEDSDI	–0.117**	–0.062**	0.093**	0.087**
	(0.022)	(0.037)	(0.017)	(0.029)
SUBDSDI	–0.145***	–0.102**	0.118***	0.129**
	(0.003)	(0.013)	(0.003)	(0.015)

This table reports results of rank-ordered probit analysis in the form of a heteroskedastic ordered probit regression. Panel A reports the AME results. Variables are defined as follows: ethical and environmental reputation (*EER*); disclosure on sustainable development index (*DSDI*). Ascending quartiles of *DSDI* refer to rhetoric (*RHDSDI*); nominal (*NOMDSDI*); specific-endeavour (*SEDSDI*); substantive (*SUBDSDI*) disclosure. Table 1 fully defines all the control variables used. *p*-values are in parentheses. ****, ***, **, and * denote significance at 0.001, 0.01, 0.05, and 0.10, respectively (two-tailed test).

AMEs in Panel A of Table 4 show that the EER is promoted by 31.25% when there is a change in the character of the DSD from setting out general objectives (*NOMDSDI*) to sending quantified and verifiable messages on investments in implementing and monitoring sustainable development activities (*SUBDSDI*). Overall, these results indicate the potential benefit of creating EE reputation via sensemaking signals difficult to replicate by competitors in the HE, thus providing strong support for Hypothesis 2.

Testing for the impact of HEIs' collective mobilization towards SD through different sustainability practices (*RSD, ESD*, or *BISD*) and substantive sustainability reporting (*SUBDSDI*) on the EER lends partial support to Hypothesis 3. Specifically, Model 2 of Table 5 shows that the coefficient of $SUBDSDI \times RSD \times BISD$ is positive and significant. This finding suggests that a better EE reputation is exhibited by HEIs, which are at the forefront of accountability and transparency, whose faculty members are already acting as change agents, and whose business schools are the most influential in embracing SD as their teaching model. Nevertheless, Models 1 and 3 of Table 5, respectively, show that the coefficients of $SUBDSDI \times RSD \times ESD$ and $SUBDSDI \times ESD \times BISD$ are negative and significant.

The results of these tests, along with those shown in Tables 3, 4, and 5, allow us to draw the following conclusions based on our hypotheses and previous research. At the decision-making level of SD, our findings suggest that decision-making and actions for 'excellence' relevant to sustainable campuses alone do not reflect the increasing importance attached to rankings as strategic targets and drivers for change in HEIs' 'reputational' logics (e.g., Locke *et al.*, 2008). We contend that HEIs need to account for more than the radical change in their practices (i.e., how we act) for SD to legitimize a highly reputable identity (i.e., who we are). We improve the existing empirical work (e.g., Weick *et al.*, 2005; Whittington, 2006), which focuses on 'practices and activities' as a detached framework for understanding organizational behaviours from other forms of social interaction. We also extend the diverse and growing scholarly attention paid to sustainability research and education beyond instrumental evaluations (see Williams *et al.*, 2017).

Our estimates strongly support creating an EE reputation via sensemaking for SD. The results confirm the institutional logics perspective that improvement in reputation is consistently associated with effective sensemaking through the disclosure of specific policies, quantified information, and detailed monitoring efforts.[12] Additionally, in an area of financial reporting dominated by voluntarism,

[12] Arguably, the HEIs may only reap the benefits of a reputable image by the actual progress of verifying responsibility and expanding the voluntary reporting process. Hence, after adding the main effect of the DSDI levels, we capture the effect of issuing stand-alone sustainability reports (hereafter, SASR) and its attributes (i.e., reliability and credibility) on EER (Dhaliwal *et al.*, 2012). In untabulated results, we find that while infrequent issuance of SASR has a strong negative impact on reputation, the association between levels of DSDI and EER is in line with our main results as presented in Model 3 of Table 4. This provides additional empirical support that DSD in the annual reports adds to EE reputation over and above any alternate disclosure channel. The length of SASR offers some help in creating a reputation in the presence of substantive disclosure in the HEIs' annual reports. SASR that were subject to auditing and accrediting schemes do not add further credibility to reputation.

TABLE 5

EFFECTS OF DISCLOSURE, RESEARCH, EDUCATION, AND BUSINESS IMPACT FOR SUSTAINABLE DEVELOPMENT ON ENVIRONMENTAL AND ETHICAL REPUTATION: INTERACTION EFFECTS

	Dependent variable		
Independent variables (model)	*EER(1)*	*EER(2)*	*EER(3)*
SUBDSDI	–3.868*	2.234****	–4.112*
	(0.051)	(0.000)	(0.059)
RSD	–0.021	–0.007	
	(0.178)	(0.125)	
SUBDSDI×RSD	0.272*	–0.125***	
	(0.057)	(0.001)	
ESD	–0.022		0.000
	(0.330)		(0.989)
SUBDSDI×ESD	0.389**		0.470**
	(0.039)		(0.026)
RSD×ESD	0.001*		
	(0.092)		
SUBDSDI×RSD×ESD	–0.024*		
	(0.079)		
BISD		–0.019	0.221
		(0.126)	(0.554)
SUBDSDI×BISD		–1.058****	2.522**
		(0.000)	(0.040)
RSD×BISD		0.001	
		(0.117)	
SUBDSDI×RSD×BISD		0.067****	
		(0.000)	
ESD×BISD			–0.005
			(0.716)
SUBDSDI×ESD×BISD			–0.219*
			(0.056)
Control variables	Included	Included	Included
HEI92	YES	YES	YES
RGROUP	YES	YES	YES

(Continues)

TABLE 5

CONTINUED

Independent variables (model)	Dependent variable *EER(1)*	*EER(2)*	*EER(3)*
UGEO	YES	YES	YES
Variance[LNSIGMS]			
BISD			0.212**
			(0.024)
ENVA	–0.927****	–1.043****	–1.128***
	(0.000)	(0.000)	(0.010)
QAA			1.020***
			(0.001)
IFUND	0.030*		
	(0.085)		
RGROUP			0.590*
			(0.070)
N	148	148	148
Log likelihood	–142.186	–141.819	–134.991
Wald chi-square	125.69****	238.85****	80.86****

Panel A: Average marginal effects on coefficients of disclosure, research, education, and business impact for sustainable development on ethical and environmental reputation: Interaction effects

Independent variables (model)	Dependent variable *EER(1)*				Dependent variable *EER(2)*				Dependent variable *EER(3)*			
	Failed class	Third class	Second class	First class	Failed class	Third class	Second class	First class	Failed class	Third class	Second class	First class
SUBDSDI	–0.064	0.012	0.074	–0.022	0.042	–0.391**	0.130	0.219**	–0.059	–0.030	0.024	0.066
	(0.31)	(0.85)	(0.331)	(0.822)	(0.758)	(0.020)	(0.521)	(0.011)	(0.428)	(0.740)	(0.766)	(0.352)
RSD	0.001	0.001	0.002	–0.004	0.001	0.001	–0.002	0.000				
	(0.808)	(0.477)	(0.460)	(0.212)	(0.483)	(0.646)	(0.212)	(0.851)				

(Continues)

TABLE 5

CONTINUED

Panel A: Average marginal effects on coefficients of disclosure, research, education, and business impact for sustainable development on ethical and environmental reputation: Interaction effects

	Dependent variable *EER(1)*				Dependent variable *EER(2)*				Dependent variable *EER(3)*			
Independent variables (model)	Failed class	Third class	Second class	First class	Failed class	Third class	Second class	First class	Failed class	Third class	Second class	First class
ESD	0.000	–0.001	0.001	0.000					0.000	0.000	0.000	0.000
	(0.985)	(0.828)	(0.812)	(0.963)					(0.985)	(0.930)	(0.943)	(0.910)
BISD					0.003	0.008	–0.013	0.002	0.002	–0.009	–0.012	0.018
					(0.569)	(0.255)	(0.240)	(0.805)	(0.899)	(0.335)	(0.407)	(0.396)

This table reports results of rank-ordered probit analysis in the form of a heteroskedastic ordered probit regression. Panel A reports the AME results. Variables are defined as follows: *EER* is ethical and environmental reputation; *SUBDSDI* is substantive disclosure on sustainable development; *RSD* is research for sustainable development; *ESD* is education for sustainable development; *BISD* is business impact for sustainable development; *SUBDSDI*×*RSD*×*ESD* is a three-way interaction term of collective mobilization towards sustainable development through substantive disclosure on sustainable development, research for sustainable development, and education for sustainable development; *SUBDSDI*×*RSD*×*BISD* is a three-way interaction term of collective mobilization towards sustainable development through substantive disclosure on sustainable development, research for sustainable development, and business impact for sustainable development; *SUBDSDI*×*ESD*×*BISD* is a three-way interaction term of collective mobilization towards sustainable development through substantive disclosure on sustainable development, education for sustainable development, and business impact for sustainable development. Table 1 fully defines all the control variables used. *p*-values are in parentheses. ****, ***, **, and * denote significance at 0.001, 0.01, 0.05, and 0.10, respectively (two-tailed test).

the findings show that there are broad options available to HEIs concerning how they might account for their positive impacts on society (de Villiers and Van Staden, 2011). For instance, whereas the focus is still on conveying teaching- or research-related disclosure in seeking block funding from government or grant-awarding bodies (Suchman, 1995; Ntim *et al.*, 2017), a HEI might, for example, show interest in social responsibility and refer to it in its annual reports as 'lip service' or 'window dressing' (de Villiers and Van Staden, 2011). Therefore, such rhetorical disclosures might be regarded as vague or lacking in sincerity or meaningful content since they are not backed by specific objectives and actions. The University of Sunderland, for example, stated in its 2014 annual report that:

> 'The University is acutely aware of its social responsibilities and is confident in stating that it already goes well beyond what is expected of similar organisations. Sunderland was the second university to create a Corporate Social Responsibility (CSR) statement. The University has embraced sustainability principles for many years, and our internal and external practices have been externally recognised' (2014, p. 12).

At the collective mobilization level for SD, the findings are consistent with the assumption that HEIs with sustainable-intensive reporting and knowledge are overconfident (e.g., Libby and Rennekamp, 2016). In this sense, HEIs overestimate how much their 'actual' contributions to meet the biggest SDGs and challenges of time in all aspects suffice to distinguish their moral stances and extend their cognitive legitimacy. Meanwhile, they may have concerns that rankings do not recognize the differences between institutions, claim that the surveys are prescriptive, and refer to the burdensome nature of providing data besides the time involved in collating the type and scale of evidence needed (Wakefield, 2015). These HEIs choose not to participate in the survey or refuse to submit data; hence, opting out of the ranking leads to identifying them as underperforming institutions (Bawden, 2015).

Taken together, existing studies on reputational branding in the HE setting are primarily normative, thus offering descriptive insights and qualitative evidence. Also, scant attention has been given to examining the empirical relationship between HEI sustainability communication and reputation, and therefore, the scope of a like-for-like comparison is insufficient (e.g., McCann *et al.*, 2022). Our results provide much-needed evidence that HEIs have become increasingly aware that effective sustainability messaging (as a marketing strategy and dynamic tool to embed change) helps spread and enrich institutional culture.

Given the increasing 'market-like' conditions in HE, we draw on insights from previous empirical studies within the corporate sector. Specifically, results provided by Hasseldine *et al.* (2005) and Li *et al.* (2018) indicate that firms can improve their reputation by signalling the implementation and monitoring of environmental policies using disclosures in annual reports. We can also interpret our findings in light of Philippe and Durand's (2011) findings, which show that the perceived value of environmental disclosure depends mainly on the degree of its specificity. One implication of this finding is that, in this new competitive and

market/quasi-market environment, HEI governors, executives, and management should carefully invest in sustainable processes. Then, for potential advantages, a non-financial proxy, such as a disclosure strategy, should complement or supplement this investment.

Robustness

This section summarizes results from a variety of robustness checks.[13] First, we delve deeper into whether EE reputation favours different foundations of legitimacy and, consequently, whether HEIs use different disclosure strategies to address those foundations. Sustainability disclosures can be viewed as a mechanism HEIs employ to honour the 'social contract' between universities and society (Schepers, 2010; Schwoon *et al.*, 2023). Voluntary disclosures are part of legitimating strategies that draw on pragmatic, moral, or cognitive foundations to either gain, maintain, or repair legitimacy, serving to enhance university status and protect the public image. To test this possibility, we examine the effect of disclosure strategies on debating EER by re-running equation (2) after replacing the DSDI with sustainable strategic reporting (*STR*), sustainable integration of decision-making and stakeholders' engagement (*INTG*), sustainable management practices and impacts (*MANIMP*), and sustainable assurance schemes (*ASSUR*).

Untabulated results demonstrate that HEIs notably enhance the openness and transparency of DSD over time. The findings strongly support a noticeable change in DSD patterns in 2015 compared to previous years. The estimates confirm that strategic sustainability stewardship, policies, objectives, and targets (*STR*) and integrating sustainability into leadership from the top (*INTG*) have direct and incremental impacts on EER. Reporting actual outcomes against targets (*MANIMP*) significantly contributes to the creation of EER. This finding shows that only clear and thoughtful disclosure methods are needed to give HEIs a legitimate status, win back the public's approval, and build long-lasting tacit or team-based complex resources like reputation. The estimates also emphasize the importance of clarity and specificity regarding the functioning and governance of sustainable assurance schemes (*ASSUR*). Overall, the results show that HEIs develop a referential disclosure that draws on the outputs of a radical departure to SD to reinforce the constructed boundary across pragmatic, moral, and cognitive legitimacy. This also underscores the notion of a higher social identity. Hence, legitimizing disclosure mediates the conflicting logics of competition, policy, and community.

Second, we investigate robustness to endogeneity issues. We addressed concerns related to endogeneity and reverse causality by estimating the regressions using lagged *DSDI*. However, endogeneity problems could exist if HEIs chose to report substantively due to the prospect of a high EE reputation. Therefore, to alleviate any such problems, we re-estimated the regressions using the instrumental variable approach. We drew on a reduced-form equation for the DSDI, which is

[13] These results are available upon request.

the potentially endogenous variable, and a structural form equation for the effect on EER, following the lead of earlier studies (Knapp and Seaks, 1998) by using the simultaneous equation system (more specifically, the bivariate probit estimation).[14]

We utilized several instrumental variables. By comparing the proportion of independent governors to all governing board members (*IGOV*), we specifically looked at the influence of current independent (lay) governors on disclosure (Ntim *et al*., 2017). Additionally, the diversity of HEI executive teams (*ETDIV*) and leadership (*VCG*) serves as an intriguing ideological and pragmatic instrument for DSD in the HE setting (Read and Kehm, 2016). HEI governance has inherently evolved into a shared arrangement, characterized by close interactions between a senior university management team and an externally dominated governing board. So, we include the interaction effect of the roles played by the presence of a lay governor and the gender and ethnicity of the executive team ($IGOV \times ETDIV$) on the DSDI level (Ntim *et al*., 2017).

Untabulated results of the bivariate probit with endogenous DSDI confirm the significance of, yet different, effects of present independent (lay) governors, team gender/ethnic diversity, and collegial form of management on influencing substantive sustainability disclosure. The estimates align with those reported in Model 3 of Table 4. This alignment indicates that our findings are insensitive to endogeneity due to reverse causality. Finally, the likelihood-ratio test does not support the evidence of endogeneity.

CONCLUSION

Over the past 10 years, extensive national and international initiatives have shaped the HE sector's role in addressing various key sustainability concerns. Nonetheless, there has been no detailed discussion or analysis of whether these initiatives constitute a powerful mechanism to legitimize and regain public trust in HEIs through sustainability engagement. To fill this research gap, this study examines how institutional logics for sustainable responsibility, which necessitate social accountability and stakeholder engagement, influence the increasingly complex HE sector.

First, we attempt to identify how HEIs engage with the goal of SD by reforming their social interactions through decision-making on knowledge for SD, sensemaking narratives for SD, and collective mobilization towards a sustainable

[14] There are two principal advantages to the bivariate probit approach. Firstly, unlike some alternative procedures (e.g., 2SLS or IVPROBIT), the bivariate probit does not require either the outcome variable (e.g., 2SLS), the response variable (e.g., IVPROBIT), or both to be continuous. In addition, the bivariate probit approach takes into account the ordinal nature of both the outcome variable (i.e., the EER) and the endogenous regressor (i.e., the DSDI) by enabling both variables to be recoded into binary variables (Knapp and Seaks, 1998).

campus. Second, we empirically examine the relationship between these social interactions and HEIs' ethical and environmental reputations.

In the light of institutional logics metatheory, our findings reveal interesting observations. Since 2012, UK HEIs have been characterized by the interdependence of logics related to competition, public policy, and community. These logics have influenced how HEIs engage with broader sustainability principles, demonstrating socially meaningful knowledge activities. The findings show how little influence decision-making tools, such as the responsible staff at HEIs and learning about SDGs, have on improving reputation. There is a clear link between how HEIs' sensemaking (e.g., by including information on SD in their annual reports) and their environmental and ethical reputation, as well as between stakeholder involvement and changes in society, the economy, technology, and the environment. From this point of view, the set of practices fits with a way of talking to people that involves 'culturist-oriented sensegiving and sensemaking' to change how institutions work in higher education (e.g., Nigam and Ocasio, 2010).

Our results show that a greater depth of sustainability disclosure ensures more reputational benefits for UK HEIs. Nevertheless, the results may suggest that the improvement of sensegiving accounts (i.e., DSD levels) is gradual. This is because our results may show how HEIs behaved regarding sustainability in the first few years following the reforms that started in 2012. The full impact of these reforms on DSD strategies may not have been realized until 2015.

HEIs' annual reports are increasingly used as 'public displays' of social, environmental, and economic initiatives and actions. Our findings confirm a cultural shift from a significant focus on financially led disclosure by UK HEIs in 2012. This potential cultural shift compounds the vital need to improve present findings by more closely examining DSD behaviours after a relatively extended period; such examination is required to fully appreciate the strengths, opportunities, and threats of the new UK reforms and logics. As the disclosure on the sustainable development index (DSDI) reflects the information demanded by the primary users of HEIs' annual reports, one crucial practical implication is that wider stakeholders and resource providers give greater primacy to news disseminated through formal accountability channels. Therefore, we contend that HEIs should promote and link a specific understanding of their 'sustainable' identities to logics and organized practices around 'shared purpose and similar outputs' to catalyze the building of cognitively legitimate status and reputation.

Taken together, the pledge of business schools to include sustainability purposes as the cornerstone of education lends credibility to the collective mobilization of logics by HEIs in a way that brings about an enduring competitive advantage. Towards such a competitive advantage, our evidence supports applying recommendations by Lozano *et al.* (2015) to place a greater emphasis on staff and scholar training programmes for SD.

This study also offers critical policy and regulatory insights. Regarding DSD, our evidence suggests that policy-makers should initiate an active dialogue to determine the exact role of initiatives and declarations related to sustainability.

Such dialogue may reduce the uncertainty surrounding the role of HEIs in delivering sustainability contributions, such as developing SD requirements as a meaningful accountability device and benchmarking tool. If ongoing transformation towards sustainability is to be achieved, funding agencies and the HE accounting board of the Financial Reporting Council (FRC) are expected to enforce, strengthen, and enhance compliance with these requirements.

Notably, this paper takes a necessary step to present a finer-grained picture of how sustainability performance and disclosure may relate to the HE sector. Even though our results hold up under several different analyses and sensitivity checks that find better ways to measure sustainability disclosure and account for various endogeneity issues, more research is needed to address some of the study's shortcomings. Using an ordinal weighting scheme to determine how specific the disclosure was might have helped us understand the impact of narrative based on how well it describes things and fits with social norms. However, the inherent difficulty in determining the appropriate impact value for each type of disclosure might limit scale numbering. For instance, further research using the textual sentiment approach could better investigate whether a sincere and optimistic tone in HEI annual reports is congruent with and can predict reputational performance.

Future research may also emphasize DSD through a social medium, such as Twitter or Facebook, and examine the value of its content in terms of reputation. Due to the partially automated data collection and the unique nature of the relatively labour-intensive hand-coding process, we limit our analysis to UK HEIs. Thus, future studies may arguably consider a cross-cultural investigation of DSD behaviours and the evaluative logic of cross-country reputation-granting audiences.

We take the novel approach of using the *Guardian* newspaper's annual reputation survey of the PPUL, the UK's only ranking of all public UK universities according to various environmental and social sustainability criteria. Nonetheless, the evidence in this study is limited to cross-sectional associations precisely because of the reliance on PPUL's much more articulate and refined methodology. Future tests, therefore, may consider league tables beyond 2015, given that future league tables will be consistently compiled across the years to allow for longitudinal analyses. This approach could provide new insights by re-examining our evidence and enabling comparisons over time. Reputational ratings offer vital advantages for assessing stakeholder trust, and the PPUL optimally uses publicly available data. However, to capture the multidimensional nature of HEIs' public image, future studies may rely on other measures of reputation that may encompass additional criteria. Also, it would be interesting for future research to investigate whether greenwashing and, by contrast, green highlighting differentiate HEI motives for engagement in green talk or green walk, thereby managing their public image.

HEIs also face upward pressure related to financial sustainability. HEIs' pension scheme deficit and upward pressure on costs are acute risk areas. A failure to secure industrial relations and commercial and non-academic income threatens HEIs' future investment in student and staff development, infrastructure, and facilities. Future research may investigate how DSD relates to reducing the perennial risk of financial sustainability.

It is argued that UK HEIs, which control a network of interdependencies with other organizations and have power over critical resources (e.g., teaching and research income, international students, enterprise activities, and human capital), take more proactive actions. With time, these HEIs may tend to disclose more information or enhance their disclosure strategies compared with resource- or cash-strapped universities. Future tests, therefore, can examine whether resource munificence leads to more disclosure using longitudinal studies.

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REFERENCES

Amaral, A. R., E. Rodrigues, A. R. Gaspar, and A. Gomes (2020), 'A Review of Empirical Data of Sustainability Initiatives in University Campus Operations', *Journal of Cleaner Production*, Vol. 250, 119558.

—— (2023), 'How Organizational Constraints Undermine Sustainability Actions in a University's Campuses: A Case Study', *Journal of Cleaner Production*, Vol. 411, 137270.

Azmat, F., A. Jain, and B. Sridharan (2023), 'Responsible Management Education in Business Schools: Are We There Yet?', *Journal of Business Research*, Vol. 157, p. 113518.

Bawden, A. (2015), 'How Green Is My University?', *The Guardian*, 20 January, retrieved from https://www.theguardian.com/education/2015/jan/20/how-green-university-people-planet-green-league

Brink, C. (2018), *The Soul of a University: Why Excellence Is Not Enough*, Bristol University Press, Bristol.

Carbon Trust (CT) (2014), *Reducing Footprints and Increasing Brainprints: The Role of UK Universities in Carbon Reduction*, retrieved from https://www.carbontrust.com/news/2014/06/reducing-footprints-increasing-brainprints-uk-universities-role-carbon-reduction/

Clifford, D. and C. Petrescu (2012), 'The Keys To University–Community Engagement Sustainability', *Nonprofit Management and Leadership*, Vol. 23, No. 1, pp. 77–91.

Conrath-Hargreaves, A. and S. Wüstemann (2019a), 'Managing Multiple Institutional Logics and the Use of Accounting: Insights from a German Higher Education Institution', *Abacus*, Vol. 55, No. 3, pp. 483–510.

—— (2019b), 'Multiple Institutional Logics and Their Impact on Accounting in Higher Education: The Case of a German Foundation University', *The Accounting, Auditing and Accountability Journal*, Vol. 32, No. 3, pp. 782–810.

Cooper, S., C. Parkes, and J. Blewitt (2014), 'Can Accreditation Help a Leopard Change Its Spots? Social Accountability and Stakeholder Engagement in Business Schools', *The Accounting, Auditing and Accountability Journal*, Vol. 28, No. 2, pp. 234–58.

Cornelissen, J. P., S. A. Haslam, and J. M. Balmer (2007), 'Social Identity, Organizational Identity and Corporate Identity: Towards an Integrated Understanding of Processes, Patternings and Products', *British Journal of Management*, Vol. 18, pp. S1–S16.

Crawford, I. and Z. Wang (2016), 'The Impact of Placements on the Academic Performance of UK and International Students in Higher Education', *Studies In Higher Education*, Vol. 41, No. 4, pp. 712–33.

Cullen, J. G. (2020), 'Varieties of Responsible Management Learning: A Review, Typology and Research Agenda', *Journal of Business Ethics*, Vol. 162, No. 4, pp. 759–73.

Davis, J. A. and M. A. Farrell (2016), *The Market Oriented University: Transforming Higher Education*, Edward Elgar Publishing, Cheltenham.

De Villiers, C. and C. J. Van Staden (2011), 'Where Firms Choose to Disclose Voluntary Environmental Information', *Journal of Accounting and Public Policy*, Vol. 30, No. 6, pp. 504–25.

Deegan, C. (2014), 'An Overview of Legitimacy Theory as Applied Within the Social and Environmental Accounting Literature', in J. Bebbington, J. Unerman, and B. O'Dwyer (eds.), *Sustainability Accounting and Accountability*, Routledge, London, pp. 248–72

Dhaliwal, D. S., S. Radhakrishnan, A. Tsang, and Y. G. Yang (2012) 'Nonfinancial Disclosure and Analyst Forecast Accuracy: International Evidence on Corporate Social Responsibility Disclosure', *The Accounting Review*, Vol. 87, No. 3, pp. 723–59.

Dupin, L. and F. C. Wezel (2023), 'Artisanal or Just Half-baked: Competing Collective Identities and Location Choice Among French Bakeries', *Administrative Science Quarterly*, Vol. 68, No. 3, pp. 867–909.

Egan, M. (2014), 'Making Water Count: Water Accountability Change Within an Australian University', *The Accounting, Auditing and Accountability Journal*, Vol. 28, No. 2, pp. 259–82.

Elshandidy, T., I. Fraser, and K. Hussainey (2013), 'Aggregated, Voluntary, and Mandatory Risk Disclosure Incentives: Evidence from UK FTSE All-share Companies', *International Review of Financial Analysis*, Vol. 30, pp. 320–33.

Environmental Association for Universities and Colleges (EAUC) (2010), *Universities That Count (UTC) Annual Report (2009–2010): Transforming Environmental and Social Performance in Universities*, HEFCE, Bristol, retrieved from http://www.eauc.org.uk/universities_that_count_-_he_benchmarking_report

Ezzamel, M., K. Robson, P. Stapleton, and C. McLean (2007), 'Discourse and Institutional Change: 'Giving Accounts' and Accountability', *Management Accounting Research*, Vol. 18, No. 2, pp. 150–71.

Fombrun, C. J., L. J. Ponzi, and W. Newburry (2015), 'Stakeholder Tracking and Analysis: The Reptrak® System for Measuring Corporate Reputation', *Corporate Reputation Review*, Vol. 18, No. 1, pp. 3–24.

Frølich, N., J. Huisman, S. Slipersæter, B. Stensaker, and P. C. P. Bótas (2013), 'A Reinterpretation of Institutional Transformations in European Higher Education: Strategising Pluralistic Organisations in Multiplex Environments', *Higher Education*, Vol. 65, No. 1, pp. 79–93.

Global Reporting Initiative (GRI) (2011), *Sustainability Reporting Guidelines Version 3.1*, GRI, The Netherlands.

Godemann, J., J. Bebbington, C. Herzig, and J. Moon (2014), 'Higher Education and Sustainable Development: Exploring Possibilities for Organisational Change', *The Accounting, Auditing and Accountability Journal*, Vol. 27, No. 2, pp. 218–33.

Graham, S. W. and J. F. Donaldson (2020), 'Academic Leaders' Response to the Volatility of Higher Education: The Influence of Institutional Logics', *Studies in Higher Education*, Vol. 45, No. 9, pp. 1864–77.

Hair, J. F., W. C. Black, B. J. Babin, and R. E. Anderson (2010), *Multivariate Data Analysis*, Prentice Hall, New York.

Hasseldine, J., A. I. Salama, and J. S. Toms (2005), 'Quantity Versus Quality: The Impact of Environmental Disclosures on the Reputations of UK PLCs', *The British Accounting Review*, Vol. 37, No. 2, pp. 231–48.

Hesselbarth, C. and S. Schaltegger (2014), 'Educating Change Agents for Sustainability–Learnings from the First Sustainability Management Master of Business Administration', *Journal of Cleaner Production*, Vol. 62, pp. 24–36.

Higher Education Funding Council in England (HEFCE) (2014), *Sustainable Development in Higher Education: HEFCE's Role to Date and a Framework for Its Future Actions*, HEFCE, Bristol, retrieved from https://ue4sd.glos.ac.uk/downloads/policies/north/sustainable%20development%20in%20higher%20education%20(higher%20education%20funding%20council%20for%20england,%202014).pdf

Hooghiemstra, R. (2000), 'Corporate Communication and Impression Management–New Perspectives Why Companies Engage in Corporate Social Reporting', *Journal of Business Ethics*, Vol. 27, No. 1, pp. 55–68.

Hosier, M. and B. K. A. Hoolash (2019), 'The Effect of Methodological Variations on University Rankings and Associated Decision-Making and Policy', *Studies In Higher Education*, Vol. 44, No. 1, pp. 201–14.

Hummel, K. and C. Schlick (2016), 'The Relationship Between Sustainability Performance and Sustainability Disclosure–Reconciling Voluntary Disclosure Theory and Legitimacy Theory', *Journal of Accounting and Public Policy*, Vol. 35, No. 5, pp. 455–76.

Kember, D. and D. Y. P. Leung (2004), 'Relationship Between the Employment of Coping Mechanisms and a Sense of Belonging for Part-time Students', *Educational Psychology*, Vol. 24, No. 3, pp. 345–57.

Knapp, L. G. and T. G. Seaks (1998), 'A Hausman Test for a Dummy Variable in Probit', *Applied Economics Letters*, Vol. 5, No. 5, pp. 321–23.

Krippendorff, K. (2013), *Content Analysis: An Introduction to Its Methodology*, Sage, California.

Lambrechts, W., I. Mulà, K. Ceulemans, I. Molderez, and V. Gaeremynck (2013), 'The Integration of Competences for Sustainable Development in Higher Education: An Analysis of Bachelor Programs in Management', *Journal of Cleaner Production*, Vol. 48, pp. 65–73.

Leal Filho, W., L. L. Brandli, D. Becker, C. Skanavis, A. Kounani, C. Sardi, D. Papaioannidou, A. Paço, U. Azeiteiro, L. O. De Sousa, and S. Raath (2018), 'Sustainable Development Policies as Indicators and Pre-conditions for Sustainability Efforts at Universities: Fact or Fiction?', *International Journal of Sustainability In Higher Education*, Vol. 19, No. 1, pp. 85–113.

Li, F. (2010) 'Textual Analysis of Corporate Disclosures: A Survey of the Literature', *Journal of Accounting Literature*, Vol. 29, pp. 143–65.

Li, Y., M. Gong, X.-Y. Zhang, and L. Koh (2018) 'The Impact of Environmental, Social, and Governance Disclosure on Firm Value: The Role of CEO Power', *The British Accounting Review*, Vol. 50, No. 1, pp. 60–75.

Libby, R. and K. M. Rennekamp (2016), 'Experienced Financial Managers' Views of the Relationships Among Self-serving Attribution Bias, Overconfidence, and the Issuance of Management Forecasts: A Replication', *Journal of Financial Reporting*, Vol. 1, No. 1, pp. 131–36.

Lind, C. H., O. Kang, A. Ljung, and P. Rosenbaum (2022), 'Involvement of Multinational Corporations in Social Innovation: Exploring an Emerging Phenomenon', *Journal of Business Research*, Vol. 151, pp. 207–21.

Liu, N. C., Y. Chang, and Q. Wang (2016), *Matching Visibility and Performance: A Standing Challenge for World-class Universities*, Sense Publishers, The Netherlands.

Locke, W., L. Verbik, J. T. Richardson, and R. King (2008), *Counting What Is Measured or Measuring What Counts? League Tables and Their Impact on Higher Education Institutions in* England, Higher Education Funding CounciliIn England (HEFCE), London, retrieved from https://webarchive.nationalarchives.gov.uk/20100303154124/http://www.hefce.ac.uk/pubs/hefce/2008/08_14/

Lourenço, I. C., J. L. Callen, M. C. Branco, and J. D. Curto (2014), 'The Value Relevance of Reputation for Sustainability Leadership', *Journal of Business Ethics*, Vol. 119, No. 1, pp. 17–28.

Love, E. G. and M. Kraatz (2009), 'Character, Conformity, or the Bottom Line? How and Why Downsizing Affected Corporate Reputation', *Academy of Management Journal*, Vol. 52, No. 2, pp. 314–35.

Lozano, R. (2010), 'Diffusion of Sustainable Development in Universities' Curricula: An Empirical Example from Cardiff University', *Journal of Cleaner Production*, Vol. 18, No. 7, pp. 637–44.

—— (2011), 'The State of Sustainability Reporting in Universities', *International Journal of Sustainability in Higher Education*, Vol. 12, No. 1, pp. 67–78.

Lozano, R., K. Ceulemans, M. Alonso-Almeida, D. Huisingh, F. J. Lozano, T. Waas, and J. Hugé (2015), 'A Review of Commitment and Implementation of Sustainable Development in Higher Education: Results from a Worldwide Survey', *Journal of Cleaner Production*, Vol. 108, pp. 1–18.

Lozano, R., R. Lukman, F. J. Lozano, D. Huisingh, and W. Lambrechts (2013), 'Declarations for Sustainability in Higher Education: Becoming Better Leaders, *Through Addressing the University System', Journal of Cleaner Production*, Vol. 48, pp. 10–19.

McCann, L., N. Hutchison, and A. Adair (2022), 'Calibration of Stakeholder Influence in the UK Higher Education Sector', *Studies in Higher Education*, Vol. 47, No. 7, pp. 1502–23.

Maciel, A. F. and E. Fischer (2020), 'Collaborative Market Driving: How Peer Firms Can Develop Markets Through Collective Action', *Journal of Marketing*, Vol. 84, No. 5, pp. 41–59.

Mak, M. K. and H. Tse (2022), 'Institutional Actors' Participation in Social Movement: Examining the Roles of Perceived Damage to Work Reputation, Collective Efficacy, and Communication Patterns', *Social Movement Studies*, Vol. 21, No. 5, pp. 697–715.

Meyer, J. W. and B. Rowan (1991) 'Institutionalized Organizations: Formal Structure as Myth and Ceremony', in W. W. Powell and P. J. Dimaggio (eds.), *The New Institutionalism in Organizational Analysis*, University of Chicago Press, Chicago, pp. 41–62.

Mills, A. J., P. Eriksson, E. Aromaa, and O. M. Palo-Oja (2023), 'Mind the Gap! Building Bridges Between Institutional Work and Critical Sensemaking', *Journal of Organizational Change Management*, Vol. 36, No. 8, pp. 71–85.

Milne, M. J. and R. W. Adler (1999), 'Exploring the Reliability of Social and Environmental Disclosures Content Analysis', *The Accounting, Auditing and Accountability Journal*, Vol. 12, No. 2, pp. 237–56.

Modell, S. and F. Wiesel (2008), 'Marketization and Performance Measurement in Swedish Central Government: A Comparative Institutionalist Study', *Abacus*, Vol. 44, No. 3, pp. 251–83.

Morsing, M. and M. Schultz (2006), 'Corporate Social Responsibility Communication: Stakeholder Information, Response and Involvement Strategies', *Business Ethics: A European Review*, Vol. 15, No. 4, pp. 323–38.

Murray, F. (2010), 'The Oncomouse That Roared: Hybrid Exchange Strategies as a Source of Distinction at the Boundary of Overlapping Institutions', *American Journal of Sociology*, Vol. 116, No. 2, pp. 341–88.

National Audit Office (NAO) (2017), *The Higher Education Market*, retrieved from https://www.nao.org.uk/wp-content/uploads/2017/12/the-higher-education-market.pdf

Nigam, A. and W. Ocasio (2010), 'Event Attention, Environmental Sensemaking, and Change in Institutional Logics: An Inductive Analysis of the Effects of Public Attention to Clinton's Health Care Reform Initiative', *Organization Science*, Vol. 21, No. 4, pp. 823–41.

Ntim, C. G., T. Soobaroyen, and M. Broad (2017), 'Governance Structures, Voluntary Disclosures and Public Accountability: The Case of UK Higher Education Institutions', *The Accounting, Auditing and Accountability Journal*, Vol. 30, No. 1, pp. 65–118.

O'Mahony, S. and K. R. Lakhani (2011), 'Organizations in the Shadow of Communities', in *Communities and Organizations*, Vol. 33, Emerald Publishing Group, Bingley, pp. 3–36.

People and Plant University League (PPUL) (2023), 'People and Plant University League: Methodology', retrieved from https://peopleandplanet.org/university-league-methodology

Philippe, D. and R. Durand (2011), 'The Impact of Norm-conforming Behaviors on Firm Reputation', *Strategic Management Journal*, Vol. 32, No. 9, pp. 969–93.

Plotnikof, M. and D. K. Mumby (2023), 'Temporal Multimodality and Performativity: Exploring Politics of Time in the Discursive, Communicative Constitution of Organization', *Organization*, pp. 1–20.

PricewaterhouseCoopers (PwC) (2018), *Managing Risk in Higher Education: Higher Education Sector Risk Profile 2018*, retrieved from https://www.pwc.co.uk/government-public-sector/education/documents/higher-education-sector-risk-profile-2018.pdf

Rao, H., P. Monin, and R. Durand (2003), 'Institutional Change in Toque Ville: Nouvelle Cuisine as an Identity Movement in French Gastronomy', *American Journal of Sociology*, Vol. 108, No. 4, pp. 795–843.

Read, B. and B. M. Kehm (2016), 'Women As Leaders of Higher Education Institutions: A British–German Comparison', *Studies In Higher Education*, Vol. 41, No. 5, pp. 815–27.

Reardon, S. F., B. R. Shear, K. E. Castellano, and A. D. Ho (2017), 'Using Heteroskedastic Ordered Probit Models to Recover Moments of Continuous Test Score Distributions from Coarsened Data', *Journal of Educational and Behavioral Statistics*, Vol. 42, No. 1, pp. 3–45.

Robinson, M., A. Kleffner, and S. Bertels (2011), 'Signaling Sustainability Leadership: Empirical Evidence of the Value of DJSI Membership', *Journal of Business Ethics*, Vol. 101, No. 3, pp. 493–505.

Roos, J. (2017), 'Practical Wisdom: Making and Teaching the Governance Case for Sustainability', *Journal of Cleaner Production*, Vol. 140, pp. 117–24.

Rourk, L., T. Anderson, D. R. Garrison, and W. Archer (2000), 'Methodological Issues in the Content Analysis of Computer Conference Transcripts', *International Journal of Artificial Intelligence in Education*, Vol. 12, pp. 8–22.

Schantz, N. M., A. Charles, and J. Copestake (2021), *The Sustainable Development Goals and The University of Bath: An Opportunity*, Centre for Development Studies, Bath.

Schepers, D. H. (2010), 'Challenges to Legitimacy at the Forest Stewardship Council', *Journal of Business Ethics*, Vol. 92, No. 2, pp. 279–90.

Schmidt, U. and T. Günther (2016), 'Public Sector Accounting Research in the Higher Education Sector: A Systematic Literature Review', *Management Review Quarterly*, Vol. 66, No. 4, pp. 1–31.

Schneiberg, M. and M. Lounsbury (2008), 'Social Movements and Institutional Analysis: The Handbook of Organizational Institutionalism', in R. Greenwood, C. Oliver, T. B. Lawrence, and R. E. Meyer (eds.), *The Sage Handbook of Organizational Institutionalism*, Sage, London, pp. 648–70.

Schnietz, K. E. and M. J. Epstein (2005), 'Exploring the Financial Value of a Reputation for Corporate Social Responsibility During a Crisis', *Corporate Reputation Review*, Vol. 7, No. 4, pp. 327–45.

Schrempf-Stirling, J., G. Palazzo, and R. A. Phillips (2016), 'Historic Corporate Social Responsibility', *Academy of Management Review*, Vol. 41, No. 4, pp. 700–19.

Schwoon, B., S. Schembera, and A. G. Scherer (2023), 'Deliberate Organizational Responses to Sustainability Paradoxes! The Case of Hate Speech Governance', *Academy of Management Proceedings*, Vol. 1, 15319.

Schultz, F. and S. Wehmeier (2010), 'Institutionalization of Corporate Social Responsibility Within Corporate Communications: Combining Institutional, Sensemaking and Communication Perspectives', *Corporate Communications: An International Journal*, Vol. 15, No. 1, pp. 9–29.

Suchman, M. C. (1995), 'Managing Legitimacy: Strategic and Institutional Approaches', *Academy of Management Review*, Vol. 20, No. 3, pp. 571–610.

Suddaby, R. and R. Greenwood (2005), 'Rhetorical Strategies of Legitimacy', *Administrative Science Quarterly*, Vol. 50, No. 1, pp. 35–67.

Swan, J., M. Bresnen, M. Robertson, S. Newell, and S. Dopson (2010), 'When Policy Meets Practice: Colliding Logics and the Challenges of "Mode 2" Initiatives in the Translation of Academic Knowledge', *Organization Studies*, Vol. 31, Nos 9–10, pp. 1311–40.

The Aspen Institute (2012), *Beyond Grey Pinstripes 2011–2012 Top 100 MBA Programs*, retrieved from https://www.aspeninstitute.org/publications/beyond-grey-pinstripes-2011-2012-top-100-mba-programs/

The University of Sunderland (2014), *Report and Financial Statements*, retrieved from https://london.sunderland.ac.uk/images/external-websites/www/help-and-advice/corporate-and-legal/corporate-documents/Report_and_Financial_Statements_2013-2014.pdf

Thornton, P. H., W. Ocasio, and M. Lounsbury (2012), *The Institutional Logics Perspective: A New Approach to Culture, Structure, and Process*, Oxford University Press on demand.

Torelli, R., F. Balluchi, and A. Lazzini (2020), 'Greenwashing and Environmental Communication: Effects on Stakeholders' *Perceptions', Business Strategy and The Environment*, Vol. 29, No. 2, pp. 407–21.

Townley, B. (1997), 'The Institutional Logic of Performance Appraisal', *Organization Studies*, Vol. 18, No. 2, pp. 261–85.

Turnbull, S. (2018), *A Guide to UK League Tables in Higher Education (HEPI Report 69)*, Higher Education Policy Institute, London, retrieved from https://www.hepi.ac.uk/wp-content/uploads/2018/01/hepi-a-guide-to-uk-league-tables-in-higher-education-report-101-embargoed-4-jan-2018.pdf

United Nations (UN) (2013), *Transforming Our World: The 2030 Agenda for Sustainable Development*, Division For Sustainable Development (UN-DESA), Department of Economic and Social Affairs, New York, retrieved from https://sustainabledevelopment.un.org/content/documents/21252030%20agenda%20for%20sustainable%20development%20web.pdf

Van Gestel, N. and B. Hillebrand (2011), 'Explaining Stability and Change: The Rise and Fall of Logics in Pluralistic Fields', *Organization Studies*, Vol. 32, No. 2, pp. 231–52.

Vendelo, M. (1998), 'Narrating Corporate Reputation: Becoming Legitimate Through Storytelling', *International Studies of Management and Organization*, Vol. 28, No. 3, pp. 120–37.

Wakefield, L. (2015), 'Students Condemn "Green League Boycott"', *The Guardian*, retrieved from https://www.theguardian.com/education/2015/jan/20/students-condemn-green-league-boycott

Weber, K. and M. A. Glynn (2006), 'Making Sense with Institutions: Context, Thought and Action in Karl Weick's Theory', *Organization Studies*, Vol. 27, No. 11, pp. 1639–60.

Weick, K. E., K. M. Sutcliffe, and D. Obstfeld (2005), 'Organizing and the Process of Sensemaking', *Organization Science*, Vol. 16, No. 4, pp. 409–21.

White, E., A. Johnston, F. Brookes, and H. Buckland (2004), *Communicating for Sustainability: Guidance For Higher Education Institutions*, Forum for the Future Publishers, London.

Whittington, R. (2006), 'Completing the Practice Turn in Strategy Research', *Organization Studies*, Vol. 27, No. 5, pp. 613–34.

Willems, J., M. Jegers, and L. Faulk (2016), 'Organizational Effectiveness Reputation in the Nonprofit Sector', *Public Performance and Management Review*, Vol. 39, No. 2, pp. 454–75.

Williams, A., S. Kennedy, F. Philipp, and G. Whiteman (2017), 'Systems Thinking: A Review of Sustainability Management Research', *Journal of Cleaner Production*, Vol. 148, pp. 866–81.

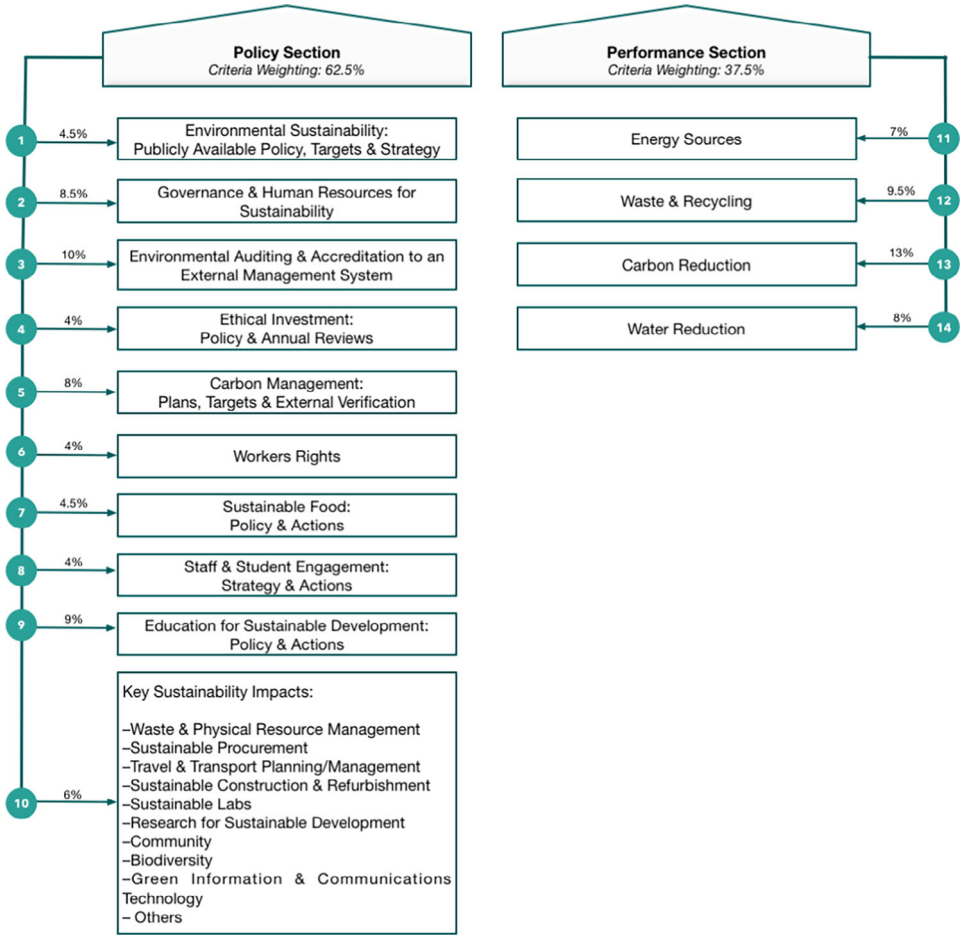
Williams, O. F. (2014) 'The United Nations Global Compact: What Did It Promise?', *Journal of Business Ethics*, Vol. 122, No. 2, pp. 241–51.

Williams, R. (2010), 'Fitting Heterogeneous Choice Models with OGLM', *The Stata Journal*, Vol. 10, No. 4, pp. 540–67.

Wu, Y. C. J., S. Huang, L. Kuo, and W. H. Wu (2010), 'Management Education for Sustainability: A Web-based Content Analysis', *Academy of Management Learning and Education*, Vol. 9, No. 3, pp. 520–31.

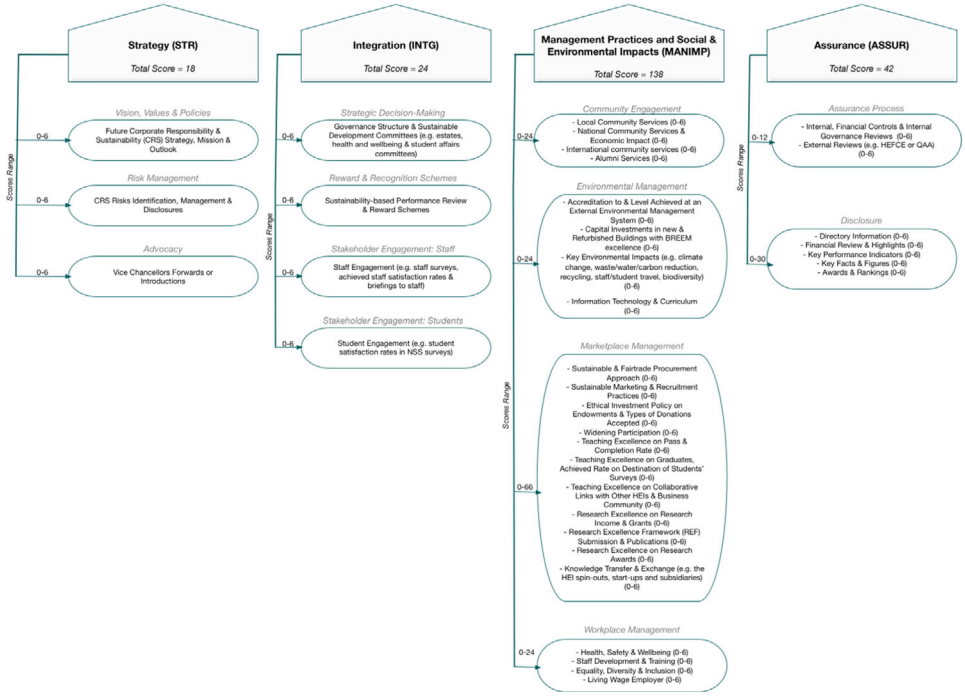
APPENDIX 1.

CRITERIA WEIGHTING FOR THE 2014/15 PEOPLE & PLANET GREEN LEAGUE METHODOLOGY



APPENDIX 2.

STRUCTURE OF THE DISCLOSURE ON SUSTAINABLE DEVELOPMENT INDEX



STRUCTURE OF DISCLOSURE ON SUSTAINABLE DEVELOPMENT INDEX: DISCLOSURE TYPES AND EXAMPLES OF HEIS' NARRATIVE SCORED TYPE 1–6

Disclosure type	Definition	Example
1	Disclosure focusing on only past/backward looking information	'Delivered specialist support for care leavers and held the Frank Buttle Trust Quality Mark for this area of work' (Cardiff Metropolitan University, 2013).
2	Disclosure focusing on past/backward looking, present, and future/forward looking information	'[T]o deliver teaching and learning programmes that are informed by current research, are attractive to students from all socio-economic and cultural backgrounds and deliver skills for life. Monitoring is undertaken through NSS and other student feedback including a developed structure of student representatives to ensure that the student voice is heard on delivering education. We are focusing effort on improving employability of graduates through our careers and employability services who are working with employers to provide more placement opportunities for students alongside leadership training and other targeted activities such as our flagship Sussex Plus programme, which allows all students to build up a portfolio of activities outside their accredited studies to demonstrate their organisation and social contributions while at Sussex. Successful employment in graduate-level jobs demonstrates the public benefit of our education' (University of Sussex, 2013).
3	Disclosure focusing on past/backward looking, present, future/forward looking, and bad/negative news information	'[T]he financial environment for higher education remains challenging with significant uncertainty surrounding the outcome of the forthcoming Comprehensive Spending Review. Should there be material changes to the operation of direct government funding, most notably for teaching of high cost science, technology, engineering and maths (STEM) subjects and/or dual support funding for research, these could have a material and disproportionate impact on Loughborough University given its subject mix. Student fees now account for a significant proportion of the University's consolidated income and the ability of the University to attract and retain good quality students across all subject disciplines is a material factor

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Disclosure type	Definition	Example
		in determining financial sustainability. Loughborough is heavily reliant on UK/EU undergraduate students and the continuing fixed level of fees for these students, now capped at £9,000 for a fourth consecutive year, places an inflation burden on institutions as costs inevitably continue to rise. Immigration policy continues to impact on our ability to attract international students and has a renewed focus as our London campus commences operation. Marco-economic challenges continue to impact on the principal pension schemes in which the University participates' (Loughborough University, 2015).
4	Disclosure focusing on past/backward looking, present, future/forward looking, bad/negative, and good/positive news information	'[T]he University of Reading takes its environmental responsibilities seriously and aims to manage its operations in ways that are environmentally sustainable, economically feasible and socially responsible. The University is committed to achieving the highest standards of environmental performance, preventing pollution and minimising the impact of its operations. The University aims to achieve continual environmental improvements by setting measurable performance targets that are reviewed and reported annually…[T]he University is assessed on its carbon emissions under the Carbon Reduction Commitment (CRC) scheme which is a requirement for organisations whose total electricity consumption is greater than 6,000MWh…[T]he University has its own Carbon Management Plan and is signed up to the Higher Education Carbon Management Programme (HECMP) with the Carbon Trust. The University has achieved the Carbon Trust Standard for its entire estate, which recognises the reductions achieved in carbon emissions and strong environmental management practices. It has also won a number of awards, including the Platinum EcoCampus award, which helps higher education institutions improve their environmental performance' (University of Reading, 2013).

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Disclosure type	Definition	Example
5	Disclosure focusing on past/backward looking, present, future/forward looking, bad/negative, good/positive, and qualitative/non-monetary information	'Offering training that is innovative, socially responsive and tailored to the needs of diverse groups by working with schools, voluntary and community organisations, businesses and communities and the public sector/ Reaching out to under-represented groups to inspire interest in pursuing a career in theatre arts/ developing a culture that productively uses and enjoys difference. The School responded to these linked objectives by: a) Undertaking the first year of a three-year partnership with Access All Areas, a theatre company for people with learning disabilities. The partnership provides a one-year performance making diploma for adults with learning disabilities and successfully raised funds from the Leverhulme Trust for scholarships allowing places to be heavily subsidised. The year-long project culminated in a three week devising project and performance at Central. In March, the project was awarded the 2015 Guardian HE Award for Student Diversity and Widening Participation. b) Delivering a four-day residential summer school to fifteen Looked After Children (LAC) secondary school participants in collaboration with the University of Hertfordshire and the University of Cambridge. c) The School delivered a range of non-award bearing professional and community programmes to over 3,000 individuals: 674 short-course students (including Diploma students); 372 Saturday Youth Theatre students; 31 individual clients and approximately 2,000 individuals from 39 client groups including St John's Hospice, Bartlett School of Architecture, Open University, Imperial College, European Commission, Accenture, NHS Chelsea & Westminster Trust, Cisco, Kings College and Twitter. 126 higher education workshops and master classes were delivered in schools, colleges and community groups across London and England to over 1000 participants' (The

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Disclosure type	Definition	Example
		Royal Central School of Speech and Drama, 2015).
6	Disclosure focusing on past/backward looking, present, future/future looking, bad/negative, good/positive, qualitative/non-monetary, and quantitative/monetary information	'CUE Ltd continues to be affected by delays with government funded business support programmes. However, it continues to aggressively pursue other sources of income within the UK, Europe and internationally. Diversification continues to be seen as an important strategy to mitigate the risk of significant contraction in existing income streams. The continued growth of the lettings business, The future lets, alongside the employment agency activity are good examples of the positive impact of this approach. CUE Ltd profits on normal trading were affected by a number of items including; a failure of a major consultancy services client and consequent bad debt, a change in accounting treatment of a receipt from an investment and a provision against a major grant funded project which in aggregate reduced profits by £0.9M. The company returned a loss of £303K after tax and gift aid in the year (2012/13: £38K profit)' (Coventry University, 2014).