

Center for Critical Accounting & Auditing Research, *12th July 2024*

Nature Positive Disclosure in the UK higher Education sector

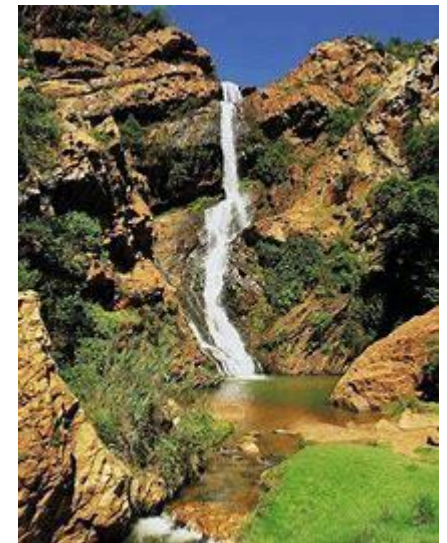


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Overview of the Study

- What are the Nature positive/activities/disclosure?

“Nature positive” is a disruptive idea that compels humans to think differently about the destiny of humanity and apply the philosophy of regenerating, building resilience in and recirculating natural resources (World Economic Forum, WEF, 2021).

So, nature positive activities encompass the augmentation of protection and sustainable management of ecosystem and biodiversity. This involves fostering a harmonious collaboration among diverse animals, plants, species and organisms within ecosystems (UN, 2023)

The term nature positive disclosure (**NPD**) is used to explain/express the survival of plant, animal species, genetic diversity, natural ecosystems provide clean water and air and contribute to food security and human health for achieving poverty reduction and sustainable development (GRI, 2016). (GRI, 2016)



Nature Positive

Relevance of the Study

Why nature positive activities disclosure is important?

- Biodiversity loss and the decline of nature are part of wider global environmental challenges facing humanity (Sobkowiak et al., 2020).
- Global climate emergency, recognition of biodiversity loss and species extinctions are top three global risks (WEF, 2022).
- Various national and international organisations e.g., United Nations (UN), European Union (EU) and other non-Governmental organisations (NGOs) have increasingly focused on global awareness of nature positive activities engagement.
- All private or public organisations are expected to align to Sustainable development goals (SDGs) and contribute to achieving sustainable development for all by 2030 (UN, 2023).
- Corporate organisations now recognise the important of natural capital for sustainable development (Atkins et al., 2018).



Relevance of the Study Cont.



Why higher education institutions (HEIs)?

- Universities have unique place in society and are centres of creative thinking and innovation but also fulfil many additional roles and prepare future leaders (Adams, 2018; Hassan et al., 2019).
- They play a vital role for societal development and their graduates and professionals are expected to provide positive impact on people, society, environment and the planet (Moscardini et al., 2022).
- However, the varied contribution has often been little reflected in the communications between universities and wider society about their teaching, research and internationalisation activities (BUFDG, 2016, Adhikariparajuli et al., 2022).
- HEIs can benefit from being more transparent when disclosing various activities as teaching, research and community involvement on two-way relationship biodiversity, including both the impact of HEIs on biodiversity, and the impact of nature positive activities and disclosure on HEIs (BUFDG, 2016; Hassan et al., 2019).
- the covid-19 global pandemic and highly global competitive market, and significant cuts in HE budgets, together need for greater transparency, good **governance** and accountability within HE sector (Ntim, 2018; Elmaghri et al., 2022). Therefore, tackling wider sustainability issues remains a challenging agenda, and HEIs needs to move forward to achieve it (Lozano, 2011 Moscardini et al., 2022). In this regard, this study seeks to advance the understanding on what motivates UK HEIs to provide NPD.

Research Aim

- The main aim of this study is to explore the extent to which UK higher education institutions (HEIs) voluntarily make nature positive activities disclosures and examine whether corporate governing mechanisms and vice-chancellors' characteristics and tenure have any influence on voluntary disclosure.



Prior empirical studies of NPD in public sector

Literature review and research gap



- But none of the prior studies are based on HEIs

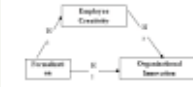
- Most of prior studies covered many sectors and very few focused on tackling NPD in the public sector .
- For instance, Schneider et al., (2014) established whether **New Zealand local authorities** report biodiversity-related information and examined the approaches through which those were communicated. Applying various data sources (councils' website, annual report, sustainability report, organisation's strategy and policy), and concluded that biodiversity related information are disclosed in different range of documents e.g. annual report, annual plan, long-term plan statement and comprehensive standalone biodiversity strategies. However, there is no consistent framework or method to guide local councils in the presentation of biodiversity related information.
- Weir, (2019) investigated current biodiversity accounting practices in 4 UK local councils. The study involved conduction 26 semi-structured interviews with local authorities. The author identified significant concerns regarding the biodiversity reporting practices related to human activities aimed at averting future species and habitat loss. Additionally, institutional decision-making frequency overlooks ecological considerations, instead prioritizing financial representations of nature.
- Gaia and John Jones, (2020) analysed the nature and content of biodiversity reporting practices adopted by English local councils and investigated the factors which explain the extent of biodiversity disclosure within the local councils. Through the self-constructed disclosure index application, the authors analysed 351 English local councils' website. The research revealed that biodiversity information reported by local councils were very limited and does not allow the interested stakeholders to get a concise picture of current status local councils biodiversity practices. This study also provided the evidence that the level of biodiversity disclosure is significantly associated with level of local councils` population, the presence of councillor's from environmentally oriented parties, environmental NGOs operating in the area, poor diversity mgmt. practices and local councils' visibility.

Prior empirical studies of voluntary disclosure in UK HEIS

- Elmaghri and Ntim, (2023) investigated corporate governance mechanisms, accountability and risk management disclosure practices within UK HEIs. Employing 117 UK HEIs studies sample the authors concluded that the risk disclosure level amongst UK HEIs is very low, relatively increased from 2009 to 2014, corporate governance board structure, governing board size and governing arm structure as senate, all have significant positive relationship with financial, operational and strategic risk disclosure.
- Elmaghri et al., (2021) examined the association between vice chancellors characteristics and corporate governance mechanisms disclosure within UK HEIs. Using 117 UK HEIs for 6 years of study period, the authors revealed the research results as the level of governance disclosure among the UK HEIs is very low, vc characteristics (gender, age, educational background, tenure) and governing mechanisms (board meetings, governors` background and board independence, have significant positive association of governance quality index disclosure.
- Ntim et al., (2017) explored corporate governance, public accountability and voluntary disclosure within UK HEIs. Employing 130 UK HEIs, the authors examined corporate governance mechanisms and voluntary activities disclosure. The authors found the large degree of variability in voluntary disclosure, very low disclosure of public accountability [teaching and research output]. Again, the authors found that audit committee quality, governing board diversity, governor`s independence and presence of governing committee are positively associated with public accountability disclosure.

Theoretical framework

Theoretical Framework



Deep Ecology

[Deep ecologists believe that nature has intrinsic value, and all nonhuman life should be preserved (Roberts et al., 2022).

NPD

Stakeholder theory

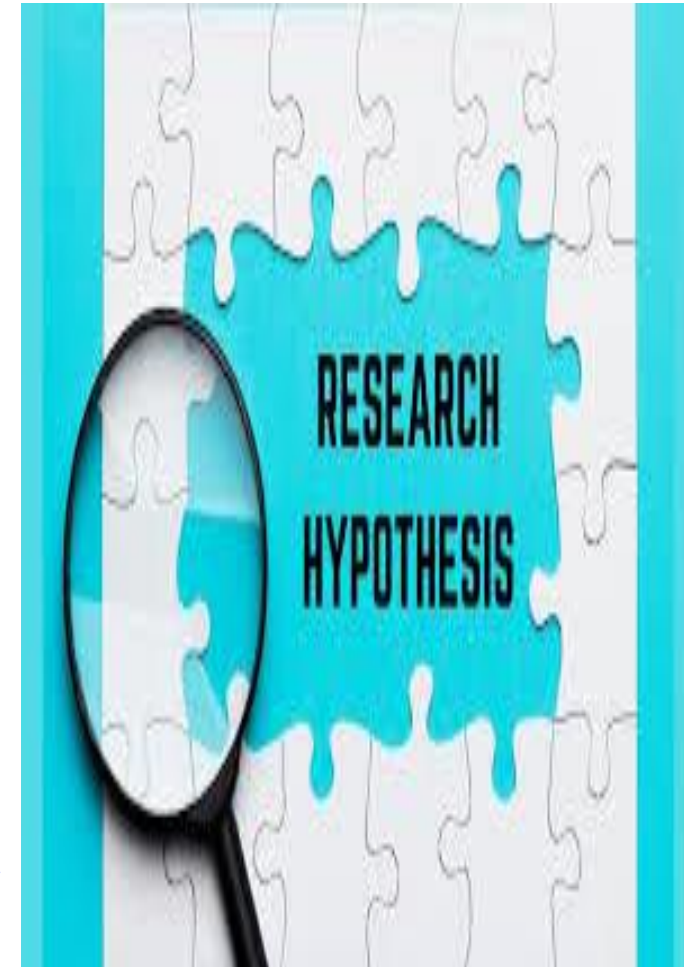
Firms being borrowers of scarce valuable resources (air, water, and other human and natural resources) are ethically and morally liable to pay back to the society and environment (Galbreath, 2018;

Signalling Theory

Signalling theory assumes that disclosure is costly, and companies will disclose when the benefits outweigh the associated costs to substantively signal their superior commitment to stakeholders (Cho *et al.*, 2012).

Research hypotheses

- *H1: Governing board effectiveness has a positive relationship with NDP.*
- *H2: Governing board structure has a positive relationship with NPD.*
- *H3: VC characteristics and tenure has a positive relationship with NPD.*
- *H4: Assurance audited by big 4 has a positive relationship with NPD.*
- *H5: Gaining an environmental award has a positive relationship with NPD.*



Research Methodology

- **Research population**

130 UK HEIs listed in complete university guide on 31st January 2023.

Study year 2019 – 2022 (4 years)

520 observations in total

Data collection method

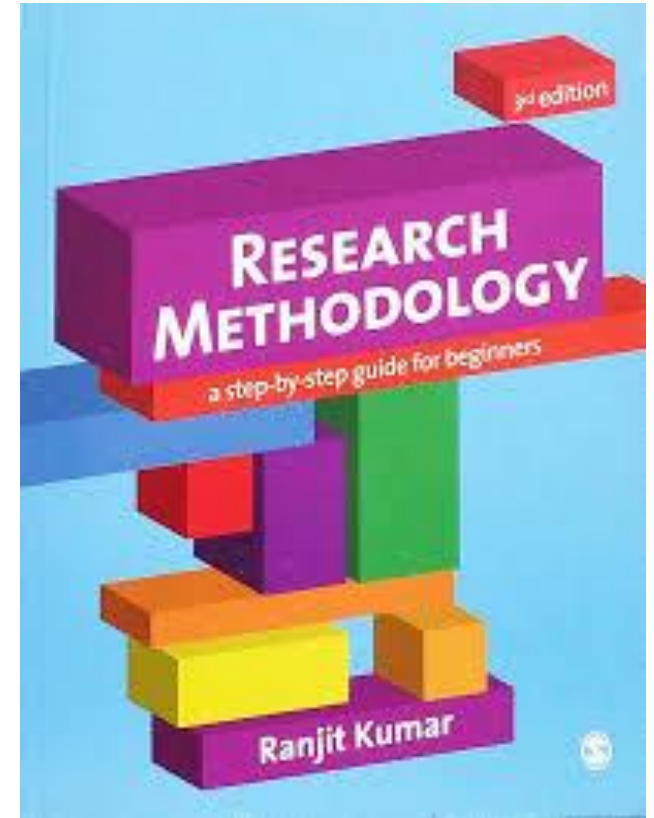
Content analysis, Weighted scoring method

Results presentation

Panel data, bivariate correlations, OLS regression

Regression Model

- $$TOTAL\ NPD = \beta_0 + \beta_1 GBE + \beta_2 GBS + \beta_3 VCCT + \beta_4 AAA + \beta_5 EWA + \beta_6 EST + \beta_7 GLH + \beta_8 SIZE + \beta_9 FUND + \beta_{10} GWTH + \beta_{11} LIQ + \varepsilon \quad \text{-----} \quad (1)$$



Summary of Variables and measurement

NPD Dependent Variable	<p>Is the total nature positive disclosure score. Containing 26 items based on four main themes Including (a) HEI report on current/previous actions (CPA) including 10 items; (b) HEI prevent activities happening in the future (PAF) including 6 items; (c) HEI report on activities contribution to nature positive loss (ELOSS) including 6 items; (d) HEI report on guidelines or adopt the following (FG) including 4 items (FG). All 26 items have a score threshold of 0-3, resulting in a total potential score of $(26 \times 3) 78$.</p> <p>A score of “0” was awarded for no disclosure at all.</p> <p>A score of “1” was awarded when the disclosure relating to a particular item was minimal, vague, and/or completely general.</p> <p>A score of “2” was awarded when disclosures contained objective, verifiable and current data.</p> <p>A score of “3” was awarded when disclosure included all the ingredients of code “2,” as well as providing specific information identifying the site/operating facility, affected species, and/or number of affected flora/fauna; a description of specific measures taken and/or amount of money spent; a discussion of trend information; and/or a linking of the data presented to a company strategy, aim performance measure, target, incident, or accident (Adler et al., 2018; Hassan et al, 2020).</p>
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Summary of Variables and measurement

	Independent variables
GBE	Corporate governing board effectiveness measured by number of governing board meetings. Data collected from HEIs annual report. No of executives' meetings. Data collected from HEIs annual report.
GBS	Corporate governing board structure measured by HEI corporate governance board size. Data collected from HEIs annual report. Percentage of female members within HEI governance board. Data collected from HEIs annual report.
VCCT	VCs gender and tenure measured by VC gender, has a value of "1" if VC is male, "0" otherwise. Data collected from HEIs annual report. VC tenure denotes no years' work as VC in HEI. Data collected from HEIs annual report. Remuneration based on sustainability performance has a value of "1" if the VC remuneration are based on sustainability performance, "0" otherwise. Data collected from HEIs annual report.
AAA	Assurance has a value of "1" if the HEI has the sustainability report assured, "0" otherwise. Data collected from HEI sustainability report. Has a value of "1" when HEI has sustainability report assured by one of Big4, "0" otherwise. Data collected from HEI sustainability report.
EWA	Environmental award, value of "1" if award is given, "0" otherwise. Data collected from HEI sustainability report.
	Control variables
EST	HEI establishment has a value of "1" if established before 1992, and "0" otherwise. Data collected from HEIs annual report.
GLH	Geographical location of HEI has a value of "0" if HEI located in Scotland, value of "1" if HEI located in England, value of "2" if HEI located in Northern Ireland and value of "3" if HEI located in Wales. Data collected from HEIs annual report
SIZE	Measured by total number of full-time HEI students. Data collected from HEIs annual report [Ntim et al., 2017; Adhikariparajuli et al., 2022]
FUND	Measured by annual council funding/total income [Ntim et al., 2017; Hassan et al., 2019].
GWTH	Measured by current years total income minus previous years total income divided by previous years total income multiply by 100. [Hassan et al., 2019; Adhikaiparajuli et al., 2022].

Results



- **H1 Governing board effectiveness has a positive relationship with NDP**
- *The governing board effectiveness (GBE), representing the total sum of sub-indices (frequency of board meetings and number of executive meetings) has significant positive association with total NPD, hence H1 is supported.* This aligns with prior studies that have found a positive relationship between the frequency of board meetings and voluntary disclosure within UK HEIs (Ntim et al., 2017; Elmaghri et al., 2021).
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Results



H2: Governing board structure has a positive relationship with NPD

- the results related to the governing board structure (GBS), is insignificantly associated with the total NPD, which does not support H2. The insignificant influence of governing board size and board diversity on voluntary disclosure within not-for-profit organisation is consistent with (Buse et al., 2016). However, the absence of a clear association with board structure might be attributed to the potential for greater diversity and larger board size to increase disagreement between members, possibly impacting board performance and NPDs negatively (Elmaghri et al., 2021).
- It is worth noting that some studies found a positive association of governing board size and voluntary disclosure in UK HEIs (Ntim et al., 2017; Hassan et al., 2019). Therefore, hypothesis two does not find support within the context of our theoretical framework.

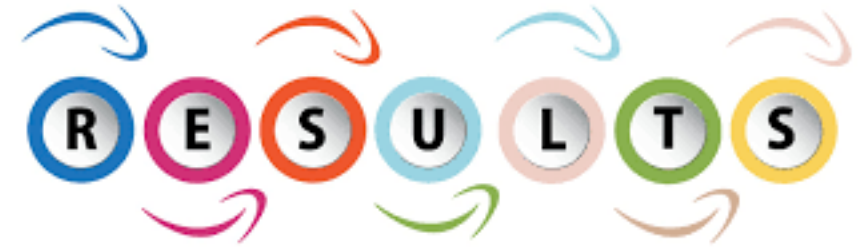
Results



H3: VC characteristics and tenure has a positive relationship with NPD.

Our results demonstrate a lack of significant association between VCCT and total NPD. This absence of a significant relationship provides no empirical support for H3. The non-significant relationship between VC gender, tenure, and HEIs voluntary disclosure aligns with previous findings (Ntim et al., 2017; Bell et 2022). Likewise, no significant relationship between VC gender and HEIs voluntary disclosure is in consistent with (Elmaghari et al., 2021; Ntim et al., 2017). This could be attributed to the predominantly male dominated VC leadership in UK HEIs, with a limited representations of female VCs (average 36.80%), suggesting that gender composition may have a limited impact on board decisions and NPDs Lucey et al., 2022; Bell et al., 2022; Elmaghari et al., 2021). Despite the critical role of VCs in improving HEIs sustainability practices, very few UK HEIs determine VC remunerations based on their sustainability preference (Adams, 2013). Therefore, this means hypothesis three does not find support within our theoretical framework.

Results



H4: Assurance audited by big 4 has a positive relationship with NPD.

- Our results show a significant positive association between assurance and NPD. The positive impact on HEIs sustainability disclosure aligns to the findings of previous studies (e.g., Maingot & Zeghal, 2008; Elmaghri et al., 2021). This result is also consistent with a stream of prior biodiversity literature, which finds a positive association between biodiversity disclosure and firms that have their reports assured, particularly by big four accounting firms, signalling their commitment to being responsible and ethical leaders (e.g. Hassan et al., 2020; Roberts et al., 2021).

Results



H5: Gaining an environmental award has a positive relationship with NPD

- the results shows a significant positive association between receiving an environmental award (EWA) and NPD. This empirical support confirms our H5 and aligns with the outcomes of earlier HE studies (Ralph and Stubbs, 2014). Moreover, it corroborates findings in the realm of biodiversity disclosures of corporate firms (Adler et al., 2018; Hassan et al., 2020). This result is in line with expectations of signalling theory which posits that HEIs signal responsible behaviour by obtaining environmental awards and demonstrate excellence in environmental performance

Conclusion, Implication and Next step

NPD disclosure is **increasing** which **signals UK HEIs are recognising the importance of nature for ongoing sustainable development**. However, although the overall score increased in the study, **scoring is extremely low**.

Our regression analysis presents significant first-time evidence of a **significant positive relationship between governance board effectiveness, assurance received and audited by big 4, and environmental award obtained by HEI and NPD**.

We find **no significant link between governing board structure, VC characteristics and tenure, and NPD**.

In relation with control variables, **the coefficients on the establishment of HEI (EST) and SIZE are consistent with our prediction**. However, **insignificant association of geographical location of HEI (GLH), growth (GWTH), liquidity (LIQ) are not expected**.

Our evidence implies that **UK HEIs must go much further in restoring and protecting nature and realise its intrinsic worth for sustainable development**. Furthermore, **our findings are insightful and impactful for HEIs in terms of aligning to and contributing the SDGs**. Additionally, it might be important for HEIs for **VC appointments and governance structure as VCs have the power to make meaningful action and set future strategies which must include efforts in preserving, restoring, and protecting nature to achieve future sustainable development**.

This is quantitative research and based on secondary data. Therefore, next would be an qualitative study interviewing with educators about their practices of nature positive activities/biodiversity/sustainability through teaching, research and community involvement within UK HEIs.

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