International Journal of Finance & Economics

WILEY

RESEARCH ARTICLE OPEN ACCESS

Do Vice Chancellors' Career Horizon Matter for University Sustainability Performance? The Moderating Role of Soft Information

Lee Roberts[1] | Yang Wang[1] | Ahmed A. Elamer[2,3,4,5]

[1]School of Business, University of Dundee, Dundee, UK | [2]Brunel Business School, Brunel University London, London, UK | [3]Gulf Financial Center, Gulf University for Science and Technology (GUST), Kuwait, Kuwait | [4]UNEC Accounting and Finance Research Center, Azerbaijan State University of Economics (UNEC), Baku, Azerbaijan | [5]Department of Accounting, Faculty of Commerce, Mansoura University, Mansoura, Egypt

Correspondence: Ahmed A. Elamer (ahmed.elamer@brunel.ac.uk)

Received: 30 April 2024 | **Revised:** 4 September 2024 | **Accepted:** 16 September 2024

Funding: The authors received funding from Principles for Responsible Management Education UK & Ireland Chapter.

Keywords: boilerplate | career horizon | forward-looking | higher education institutions | soft information | sustainability

ABSTRACT

In the evolving landscape of higher education, leadership plays a pivotal role in directing institutional strategies towards sustainability. This study examines how the career horizons of Vice Chancellors (VCs)—often akin to CEOs in the corporate sector—influences the sustainability performance of UK universities. Using a unique hand-collected dataset covering the years 2018–2022, our results show that shorter VC career horizons negatively impact universities' sustainability performance, indicating that VCs closer to retirement are more ethically and sustainability-focused. Moreover, we explore how the disclosure of soft information—characterised as boilerplate and forward-looking language in sustainability reports—affects this relationship. Our analysis indicates that this soft information significantly moderates the effects of VCs' career horizons on sustainability outcomes. Specifically, we discover that extensive use of forward-looking and boilerplate language tends to exacerbate the negative impacts of shorter VC tenures on sustainability performance. This research contributes to the academic discourse by documenting how leadership tenure and the strategic use of narrative in public disclosures interact to shape institutional sustainability. The findings advocate for a strategic approach in leadership appointments and reporting practices, enhancing the alignment between leadership characteristics and the long-term sustainability goals of higher education institutions.

1 | Introduction

In the evolving landscape of UK higher education institutions (HEIs), Vice Chancellors (VCs) are increasingly adopting roles akin to CEOs, with their personal attributes shaping institutional outcomes (Ha, Kang, and Kwon 2024; Lucey, Urquhart, and Zhang 2022). Despite extensive research on the 'career horizon problem' in the corporate domain (Ali and Zhang 2015; Strike et al. 2015), little is known about the impact of VCs' career horizons on HEIs' sustainability performance. As HEIs align with the United Nations Sustainable Development Goals (SDGs) to enhance global standing and societal impact (de Villiers, Dimes, and Molinari 2024), concerns arise about the authenticity of sustainability disclosures, which often use soft, boilerplate and forward-looking language potentially aimed at impression management rather than true accountability (Bertomeu and Marinovic 2016; Bradshaw et al. 2020).

Our study focuses on the career horizon of VCs, investigating how this specific leadership characteristic affects the HEIs sustainability performance. While previous studies have explored various VC attributes (Cheah et al. 2023; Elmagrhi et al. 2021), this research

hones in on career horizon, offering a targeted analysis valuable to institutions seeking to enhance sustainability practices during periods of leadership transitions. UK HEIs face increasing pressure to advocate for social change, with sustainability now embedded in core principles through the UK Quality Code for Higher Education (QAA 2024). Rankings, accreditation bodies and movements like People and Planet are key indicators of institutional reputation (Abdelbadie, Braakmann, and Salama 2024).

Sustainability is increasingly central to UK HEIs strategic development, driven by global and national reforms. Many institutions are signatories to frameworks like the UN's Principles for Responsible Management Education (PRME), with SDG alignment now a core metric of success (HESI 2021). Rankings such as the Times Higher Education (THE) Impact Rankings and QS University Rankings evaluate HEIs on their SDG alignment, with higher rankings bolstering global competitiveness by attracting international students, research funding and partnerships. However, concerns remain that HEIs may overstate sustainability credentials through soft disclosures that highlight broad goals but lack measurable performance data, creating a gap between perceived and actual impact.

VCs play a pivotal role in embedding sustainability within institutional strategies, with leadership traits and ethical commitment being crucial (Elmagrhi et al. 2021). Long-term VCs are more likely to invest in transformative, sustainability-centred projects, while shorter-tenured leaders may prioritise immediate, visible gains over systemic change. Frequent VC turnovers can disrupt sustainability initiatives, stalling long-term progress. VCs career trajectories also influence their leadership focus (Elmagrhi and Ntim 2023), with late-career VCs often move motivated to drive lasting sustainability performance as a legacy-building effort.

Our study addresses two primary questions: First, how does the career horizon of VCs impact HEIs sustainability performance? Second, does the use of soft information in sustainability disclosures moderate this relationship? Previous research has largely overlooked sustainability disclosures, focusing instead on broader voluntary disclosures (Elmagrhi and Ntim 2023; Ntim, Soobaroyen, and Broad 2017). As sustainability becomes increasingly important in university rankings, the need for robust leadership to guide HEIs towards meaningful sustainability practices grows (Parker 2024). Moreover, HESI (2021) highlights sustainability contributions to the SDGs as crucial performance measurements for HEIs, urging them to lead sustainability initiatives (Lozano et al. 2013).

Our study examines how VCs' nearing retirement may prioritise sustainability initiatives to enhance their institutions' reputations and legacies (Cai et al. 2020). Using upper echelons theory, we suggest that the VCs' career horizons significantly influence sustainability efforts (Arena, Michelon, and Trojanowski 2018; Hambrick 2007). While some research shows older executives focus on legacy-building through sustainability (Ali and Zhang 2015), others argue that younger leaders may bring more dynamism to these practices (Strike et al. 2015).

We also examine whether the prevalence of soft information such as boilerplate and forward-looking, symbolic language in sustainability reports serves as a strategic facade to mask poor performance, thereby complicating the interpretation of HEIs' sustainability endeavours (Hassanein and Hussainey 2015). Such language has been highlighted in the literature as a concern, suggesting it is strategically used to discharge meaningless language and conceal unfavourable sustainability performance (Bertomeu and Marinovic 2016; Michelon, Pilonato, and Ricceri 2015).

Our study contributes to the HEI literature in several significant ways. First, by employing hand-collected data over 5 years, we enhance the existing research landscape that has primarily focused on broader temporal scopes or less granular data (Elmagrhi and Ntim 2023; Ntim, Soobaroyen, and Broad 2017). This methodological rigour allows us to capture nuanced changes and trends that may have been overlooked, offering a longitudinal insight into the sustainability practices. Secondly, we extend the theoretical understanding of the career horizon effect, traditionally studied within corporate governance contexts, to the domain of academic leadership. Our findings contribute to upper echelons theory by demonstrating that the career horizon of VCs, significantly influence institutional sustainability outcomes (Hambrick 2007). Specifically, we find that VCs nearing retirement are likely to prioritise and enhance sustainability initiatives, reflecting a stronger ethical orientation and a legacy-building mindset. This extends the applicability of career horizon theory to the academic sector and underscores the potential for late-career leaders to drive substantial institutional change.

Thirdly, we believe we are the first to distinctively examine the natural language used in sustainability disclosures within the academic setting. We reveal that the prevalence of soft, boilerplate language—often symbolic and lacking substantive information—may serve as a strategic mechanism to obscure actual sustainability performance (Hassanein and Hussainey 2015). This suggests that HEIs, despite their commitment to transparency, may strategically manipulate narratives to project a desired image, especially under pressure to meet SDGs and improve global rankings. This highlights that leadership characteristics play a crucial role in aligning institutional practices with these global standards (de Villiers, Dimes, and Molinari 2024). Given HEIs' influential role in sustainability, our findings are important for policy and strategic decisions in the education sector.

Practically, our research has significant implications for the governance of HEIs. The identification of career horizons as a determinant of sustainability focus suggests that strategic VC appointments can be a lever for enhancing institutional commitment to sustainability. Moreover, our analysis of disclosure practices provides a basis for HEIs to reevaluate how they communicate their sustainability efforts, potentially leading to more genuine and transparent reporting. Our findings will aid in shaping future policies and practices that seek to align the leaders of UK HEIs with the broader goal of achieving the SDGs by 2030.

The remainder of the paper is structured as follows. Section 2 sets out the theoretical background and hypothesis development. Section 3 describes the sample, variables, and empirical models to test the hypotheses. Section 4 presents and discusses

the mains results and provides several robustness analyses. Finally, Section 5 concludes the study.

2 | Theoretical Background and Hypothesis Development

2.1 | Theoretical Background

A stream of prior studies has utilised the upper echelons theory (UET) to explain the influence of top executives on environmental activities (e.g., Marie et al. 2025; Bilal et al. 2023; Bilal Khan et al. 2024; Huang et al. 2023) and environmental reporting (Shahab et al. 2020). According to UET (Hambrick 2007; Hambrick and Mason 1984), top executives possess distinct observable attributes such as age, personality, career experience and education which significantly shape organisational outcomes and performance (Ha, Kang, and Kwon 2024; Zhao and Qu 2023). UET suggests that scholars can use observable managerial characteristics as indicators (Hambrick and Mason 1984) such as age, tenure and experience to explore how executives personal attributes manifest in strategic decisions (Ullah, Jiang, and Elamer 2024; Wang et al. 2016). The literature has continued to stress that the unique characteristics of top executives influence strategies and outcomes, and their personal attributes impact their decision-making abilities (Carvajal, Nadeem, and Zaman 2022). The theory posits that as VCs are spotlighted like CEOs, their characteristics may influence sustainability strategies, warranting an investigation into the interplay between VC horizon and sustainability performance (Bugeja et al. 2021).

So far, the literature emphasises the importance of personal attributes in shaping sustainability strategies (Albitar, Abdoush, and Hussainey 2023; Andersson et al. 2022; Tang et al. 2023). Despite clear evidence that the personal characteristics of the CEO matters in the corporate context (Al-Asmakh, Elamer, and Uadiale 2024; Usman, Nwachukwu, and Ezeani 2022), recent studies have extended this focus to examine the role of the VCs characteristics in HEIs, revealing that VC leadership is a key predictor of disclosures (e.g., Cheah et al. 2023). For instance, Elmagrhi et al. (2021) find that VC tenure and board specific determinants of committee presence and board meetings positively influence governance disclosures in UK HEIs, while factors like VC age and gender show negative associations. Lucey, Urquhart, and Zhang (2022) observe that UK VCs are not overcompensated, with female VCs earning less than their male counterparts, and longer-tenured VCs receiving higher salaries. Similarly, Elmagrhi and Ntim (2022) reveal a negative relationship between VC pay and HEIs' long-term social performance but a positive relationship with short-term performance. More recently, Cheah et al. (2023) highlight VC power's effect on HEI efficiency.

Building upon the existing body of research, it is evident that the personal characteristics of VCs play a critical role in shaping various aspects of HEIs, particularly in the area of sustainability performance. The UET provides a valuable framework for understanding how VCs' attributes affect their strategic decisions and, consequently, the institution's sustainability performance. So far, the theory has been instrumental in highlighting how these characteristics influence leadership decisions and there is growing recognition of its relevance to the HEI context (Elmagrhi and Ntim 2023). However, while these studies underscore the importance of VC characteristics in shaping governance and financial outcomes, they also point to a gap in understanding how these personal attributes affect sustainability performance. The interaction between a VC's personal horizon—encompassing their long-term vision and commitment to sustainability—and the institution's sustainability strategies remains underexplored. Investigating this relationship through UET could reveal how leadership characteristics directly influence institutional sustainability performance, offering deeper insights into the link between executive attributes and broader sustainability outcomes in HEIs.

2.2 | Hypotheses Development

2.2.1 | Career Horizon and Sustainability Performance

The exploration of the career horizon problem has been well-documented within the corporate domain, with considerable attention given to how CEOs' career horizons—defined as the remaining tenure until retirement—affect organisational strategy and outcomes (Matta and Beamish 2008). Typically, a nearing retirement is associated with an increase in risk aversion, as decision-makers prioritise immediate gains over long-term strategic investments. This conservatism is often marked by a preference for maintaining the status quo and a reluctance to embark on ventures that would only yield returns beyond their tenure. In contrast, younger leaders with longer career horizons may adopt a more explorative approach, embracing innovative strategies and showing a greater openness to making bold, long-term commitments (Bertrand and Schoar 2003).

Significantly, as VCs near retirement, they may also experience intensified agency dilemmas, manifesting as the career horizon problem, where the impending end of their career influences their strategic choices to favour personal benefits such as securing retirement compensation or bolstering their reputation (Davidson et al. 2007). This phase of their career might also witness a shift towards strategies that reinforce their legacy, which could include enhancing corporate social responsibility (CSR) and sustainability initiatives, areas where the tangible impacts of their decisions help cement their long-term legacy (Matta and Beamish 2008).

Empirical studies offer mixed findings, in the corporate context, some suggest that younger executives are more proactive in improving firms' environmental strategies (Shahab et al. 2020), whereas others indicate a decline in CSR commitment as executives approach retirement (Kang 2015). Yet, the tenure progression may also lead executives to prioritise sustainability when they feel less pressure to deliver short-term financial results and more freedom to establish a lasting impact through ethical leadership (Chen, Zhou, and Zhu 2019). Research has also found that older professionals generally uphold higher ethical standards, a trait that could translate into more robust sustainability practices (Peterson, Rhoads, and Vaught 2001).

Within the context of HEIs, we propose that VCs mirror this pattern observed in corporate executives (Elmagrhi and Ntim 2022).

Early in their tenure, VCs might focus on aggressive financial performance metrics, often at the expense of sustainability initiatives. As VCs approach the end of their careers, diminished financial pressures and an increased focus on ethical standing may lead them to prioritise environmental and societal issues, contributing to a stronger sustainability orientation within their institutions. Drawing on UET, which posits that organisational outcomes can be predicted from the characteristics of its leaders (Hambrick and Mason 1984), VCs nearing retirement, with extensive experience in responding to external pressures, may be particularly adept at aligning their institutions with sustainability goals. UK HEIs are also under increasing pressure to comply with government policies aimed at achieving net-zero and broader sustainability targets. Compliance is not only a legal obligation but also critical for shaping public perception and securing funding. Initiatives such as the SDGs and PRME, coupled with ongoing UK educational reforms and intensified competition within the sector, are driving UK HEIs to adopt more robust sustainability practices (de Villiers, Dimes, and Molinari 2024). Older VCs at this stage of their careers are likely motivated by a desire to leave a lasting legacy. By prioritising sustainability initiatives, their aim to secure funding, improve institutional rankings, and cement their long-term impact. On this basis, and although no existing study has examined the link between VC career horizon and sustainability performance of HEI's, we hypothesis that:

Hypothesis 1. *There is a negative relationship between VCs' career horizon and sustainability performance.*

2.2.2 | Boilerplate Language, Career Horizon and Sustainability Performance

It is crucial to explore whether the VC horizon correlates with genuine ethical sustainability reporting or serves as an impression management tool using boilerplate language. Research suggests that organisations often employ symbolic gestures to report sustainability information, strategically highlighting positive actions while downplaying less favourable ones (Diouf and Boiral 2017). This strategic shaping of perspectives involves repetitive, vague and uninformative content—commonly referred to as boilerplate language—used to obscure inaction and shape user perceptions (Crilly, Hansen, and Zollo 2016). The prevalence of such disclosures poses critical concerns for HEIs, as it undermines transparency, reducing sustainability reports to mere compliance documents (Christensen, Hail, and Leuz 2021). Boilerplate language in CSR reporting has been found to mask poor performance and make unsubstantiated claims, fostering a more favourable impression (Michelon, Pilonato, and Ricceri 2015). Organisations often expand boilerplate use in a response to new disclosure requirements, signalling weaker commitment to sustainability efforts (Dyer, Lang, and Stice-Lawrence 2017). Eng, Fikru, and Vichitsarawong (2022) further argue that firm's risk devaluing their reputation if their sustainability disclosures are perceived as boilerplate, a risk heightened when faced with external pressures from governments or regulatory bodies.

From an upper echelon's perspective, VCs nearing retirement may be inclined to favour boilerplate language as sustainability becomes a key metric in rankings such as the THE Impact Ranking and QS University Rankings, as well as accreditation standards. These VCs may prioritise superficial adherence to sustainability frameworks rather than committing to complex potentially disruptive transformative actions, which could provoke resistance. This approach helps maintain institutional reputation, meet accreditation requirements and preserve the university's standing with external bodies that increasingly value sustainability as a marker of excellence (HESI 2021).

This raises important questions about the genuine sustainability commitment of HEIs under different VC career horizons. Accordingly, this study examines the extent to which VC's career horizons influence the use of boilerplate language in sustainability disclosures. We hypothesise that VCs with shorter career horizons, who may prioritise immediate reputational gains over long-term institutional sustainability, are more likely to employ boilerplate language in sustainability reporting. This hypothesis aligns with the theoretical framework of UET which posits that organisational outcomes are shaped by the personal characteristics and career motives of top executives and tests the following proposition:

Hypothesis 2a. *The negative relationship between VCs' career horizon and sustainability performance is more pronounced when universities' annual reports contain more boilerplate statements.*

2.2.3 | Forward-Looking Information, Career Horizon and Sustainability Performance

There is a risk that VCs nearing retirement may prioritise future policies and strategies in sustainability disclosures, potentially downplaying past performance or less favourable outcomes. From a UET perspective, this behaviour reflects personal motives ties to career horizons, where leaders prioritise immediate reputational gains and external perceptions over long-term accountability. This creates a risk that sustainability reporting becomes skewed towards soft, forward-looking information, which, while signalling commitment to future goals, lacks verifiability and may be susceptible to manipulation (Bradshaw et al. 2020).

VCs may leverage forward-looking disclosures to influence stakeholder' perceptions, especially in response to external pressures like PRME, the SDGs and quality assurance standards that emphasise sustainability as a marker of excellence (de Villiers, Dimes, and Molinari 2024). The emphasis on future goals, allows VCs to signal alignment with sustainability initiatives, even if past performance is inadequately addressed. This strategy aligns with findings that forward looking information is often used to manage impressions, as it is easier to manipulate and replicate than hard, verifiable data (Bertomeu and Marinovic 2016).

However, reliance on forward-looking information may raise concerns about the integrity of sustainability performance. Hard disclosures, which are more substantive and less prone to mimicry, are crucial for genuine accountability (Brockman and Cicon 2013). Yet, in the context of shorter VC horizons,

forward-looking information may dominate, reflecting a focus on enhancing short-term institutional and personal reputations rather than driving meaningful, long-term sustainability efforts.

Although the natural language in sustainability reporting remains unexplored within HEIs, we anticipate that these institutions, striving to demonstrate commitment to sustainability, increasingly use forward-looking information, focusing on future policies and strategies. Social justice campaigns like the People and Planet university league pressure HEIs to address sustainability concerns, such as fossil fuel disinvestment and garment sweatshop boycotts, making forward-looking information a tool to satisfy such concerns (Abdelbadie, Braakmann, and Salama 2024). VCs may face obstacles in internalising sustainability concepts and challenging prevailing paradigms (Lozano et al. 2013). Even when attempting to implement sustainability reporting, inconsistencies may arise due to difficulties in disclosing sustainability performance.

Given these dynamics, our study examines the role of forward-looking disclosures in the interplay between VCs' career horizons and the perceived integrity of sustainability reporting. We hypothesise that forward-looking information will be particularly prevalent under VCs with shorter career horizons, who might leverage these disclosures strategically to enhance their personal and institutional reputations in the short term:

Hypothesis 2b. *The negative relationship between VCs' career horizon and sustainability performance is more pronounced when universities present more forward-looking information in their annual reports.*

3 | Research Methodology

3.1 | Data

To examine these hypotheses, we have utilised a hand-collected dataset for our research, incorporating relevant data gathered from the *Times Higher Education Ranking,* Complete University Guide websites, universities' annual reports and their official websites. As most ranking league tables have only recently begun to focus on sustainability-related information, our sample includes all universities in the United Kingdom from 2018 to 2022.[1] Additionally, using the Higher Education Statistics Agency (HESA) website, we identified the entire population of HEIs—including universities, colleges and other HEIs—in the United Kingdom as of 31 December 2022. We then visited the websites of all 164 identified universities to download their annual reports for the years 2018–2022. After excluding missing values across all variables, our final sample consists of 523 firm-year observations.

3.2 | Variables

Our dependent variable, 'sustainability' is constructed using a machine-learning approach for textual analysis, using Python software and an array of essential libraries (Bochkay et al. 2023; Ibrahim, Elamer, and Ezaet 2021). The incorporation of Python in our research for conducting textual analysis confers notable advantages in comparison to prior methods. Python as a programming language facilitates the integration of diverse NLP libraries and tools, thereby streamlining the entire analysis process (Bhandari, Ranta, and Salo 2022). Additionally, unlike traditional methodologies, which are susceptible to errors, Python's capacity for automation and scalability enables the efficient processing and analysing of large volumes of textual data. Furthermore, Python's status as an open-source platform and there is active support from a dynamic community, offer researchers an avenue to access the latest techniques, hereby bolstering data analysis capabilities (Bochkay et al. 2023).

We use the wordlist developed by Mansouri and Momtaz (2022), which specifically identified distinct words associated with each of the three components of ESG. After cleaning the text of the corporate narrative and employing requisite Python libraries, we compute the frequency of occurrences for each word list in the corporate narrative. In particular, we analyse each university's annual report by searching and counting the specific words that relate to ESG. These word counts are guided by topic-specific dictionaries, as outlined in the methodology developed by Mansouri and Momtaz (2022).

Our independent variable is the VCs' career horizon. Following Strike et al. (2015), a VC's career horizon is defined as 70 deducting a VC's current age. We select 70 years of age as the end of the VC's career based on the assumption that the VC's retirement age is around 70 years. In other words, an older VC has a relatively shorter career horizon, whereas a younger VC has a relatively longer career horizon.

To explore the moderating effect of soft information, we introduce the following two variables, including 'boilerplate score' and 'forward-looking' information. Specifically, to obtain the boilerplate score of each observation, we initially define boilerplate phrases as those 4-g that are more commonly used than average in the reports of that year. Subsequently, we calculate the boilerplate score as the total number of boilerplate phrases in annual reports exceeding the average frequency observed within a given year, divided by the total number of 4-g present in those annual reports (Küster 2024). In addition, we define 'forward-looking' information as the ratio of sentences that reference future activities or expectations to the total number of sentences in annual reports based on Loughran and McDonald (2015). This metric quantifies the extent of forward-looking information provided in the university annual report disclosures.

A series of control variables are also included in our model, including a VC's other characteristics, university-specific information, and the financial performance of the university. The information on the VCs' other characteristics includes their education level and compensation. In particular, VC education is defined as a dummy variable that equals one if a VC has an environmental or sustainability related educational background or degree, and zero otherwise. It is generally believed that a VC with a sustainability-related degree is more likely to pay attention to a university's ESG compliance. In addition, we control a VC's compensation, including their base salary, pension, and other short- and long-term benefits. This is because a VC may over-invest in ESG-related activities and push for more

sustainability disclosures to build their personal reputations and secure greater compensation (Jian and Lee 2015).

In terms of university-specific information, we control 'student-to-staff ratio', 'Big 4' and 'Post 1992 University' status. Firstly, we include the 'student-to-staff ratio', recognising that a lower ratio indicates more available staff resources. This increased staff resource capacity within the university is expected to help enhance sustainable performance. Additionally, we incorporate a control variable for 'Big 4' accounting firms, which is a dummy variable that equals to one if a university's financial statement is audited by one of the biggest four accounting firms, and zero otherwise. Previous evidence such as Pflugrath, Roebuck, and Simnett (2011) find that 'Big 4' accounting firms are more likely to provide reliable ESG assurance services. Moreover, we introduce a control variable named 'Post-1992 Uni' represented as a dummy variable. It takes the value of one if a university is a member of the Post-1992 University Group, and zero otherwise. Generally, post-1992 universities are more entrepreneurial-focused and have relatively restricted financial resources compared to Russell Group Universities (Fotiadou 2022). Consequently, this may limit their ability to invest in ESG-related activities.

Regarding university financial performance, we include the following financial variables such as university size, leverage and return on assets. We include university size as universities with greater size are in a better position to allocate resources, invest in and actively participate in sustainable activities (Huang et al. 2023). Universities with higher leverage are more prone to prioritising short-term financial interests, and therefore are less likely to pursue sustainability-related disclosures (Wang et al. 2024). Subsequently, we include leverage as a control variable. Lastly, we include return on assets, which is calculated as the ratio of net income to total assets. This is attributed to the likelihood that universities with stronger financial performance are more inclined to allocate resources and carry out sustainable related initiatives (Huang et al. 2023). The variable definitions are summarised in Table 1.

3.3 | Research Method

The below regression model is adopted to examine the impact of VCs' career horizon on a university's sustainable performance:

$$\boldsymbol{Y_{i,t}} = \beta_0 + \beta_1 \,\text{Horizon}_{i,t} + \boldsymbol{X}_{i,t} + \omega_i + \varepsilon_i \qquad (1)$$

where $\boldsymbol{Y_{i,t}}$ is the university sustainable performance. $\text{Horizon}_{i,t}$ is the VC's career horizon and $\boldsymbol{X}_{i,t}$ is a vector of firm i's control variables. We add year dummies (ω_i) to the regression model to isolate VC career horizon's impact from unobserved time invariant features. The robust standard errors are clustered at the firm level to mitigate the concerns of serial autocorrelations. ε_i is the error term and β_1 captures the impact of VCs' career horizon on universities' sustainable performance.

To examine moderating Hypothesis 2a, we reassess Equation (1) by segregating the entire sample into two subsamples: one comprising university annual reports with higher boilerplate scores (i.e., scores higher than the sample median), and the other with lower scores. Similarly, to examine Hypothesis 2b, we divide the entire sample into two subsamples: university annual reports with greater forward-looking information (i.e., a ratio greater than the sample median), and those with less forward-looking information.

4 | Results

4.1 | Descriptive Statistics

The summary statistics are presented in Table 2A. On average, the sustainability score of the sample universities is 484.28. Additionally, the mean VC's career horizon is about 10.59 years. About 6% of observations have boilerplate phrases exceeding the average frequency observed within a given year. Moreover, approximately 1% of words refer to future activities in the universities' annual reports. Moreover, approximately 13% of VCs have sustainability and environmental-related degrees, and on average, they earned about £298,107. It is also reported that approximately 64% of university annual reports are audited by 'Big 4' accounting firms. The correlation matrix has also been calculated. According to the results in Table 2B, it indicates that multicollinearity is not a concern for our study.

4.2 | Main Results

Table 3 presents results for H1. In Model 1, the dependent variable is each university's ESG score, and in Models 2–4, we decompose ESG scores into Environment (E), Social (S) and Governance (G) scores respectively as alternative dependent variables and run them against the independent variable of VCs' career horizon. It is observed that the coefficients of VC career horizon are significantly negative across Models 1–4. Given our definition of career horizon (e.g., 70—VC current age), this finding can translate to the fact that older VCs tend to pay greater attention to the university's sustainability performance. This is probably because a younger VC may tend to focus more on financial performance and thus pay less attention to sustainable performance at an early stage. When they get older, financial concerns reduce, and they are more likely to focus on addressing sustainability issues. It resonates with previous findings indicating that older professionals tend to exhibit greater ethical and conservative behaviour, addressing social and environmental concerns (Peterson, Rhoads, and Vaught 2001).

Models 1 and 2 of Table 4 present the impact of VC career horizon on university sustainability performance by higher and lower boilerplate scores separately. It is observed that the relationship between career horizon and university sustainability performance is significantly negative in the high boilerplate score group. In comparison, there is no impact of career horizon on sustainability performance in the low boilerplate score group. This finding supports Hypothesis 2a, indicating that longer VCs' career horizon deteriorates university sustainability performance, especially when universities strategically use more repetitive, vague and uninformative content to fill their annual reports.

TABLE 1 | Variable definitions.

Panel A: Main variable definitions		
Variable type	**Variable name**	**Definition**
Dependent variable	Sustainability	A university's comprehensive Environment, Social and Governance (ESG) score is calculated using a machine-learning method. This method analyses the university's annual reports by counting specific words that relate to each ESG category. These word counts are guided by topic-specific dictionaries, as outlined in the methodology developed by Mansouri and Momtaz (2022).
Main independent variables	Horizon	The VC's current age deducted from 70 years of age.
	Boilerplate Score	The total number of boilerplate phrases in annual reports is calculated by scaling the count of specific 4-g, which exceed the average frequency observed within a given year, by the total number of 4-g present in those reports (Küster 2024). We define boilerplate phrases as those 4-g that are more commonly used than average in the reports of that year.
	Forward looking	The ratio of sentences that reference future activities or expectations to the total number of sentences in annual reports based on Loughran and McDonald (2015). This metric quantifies the extent of forward-looking information provided in the disclosures.
Control variables	Education	A dummy variable that equals one if a VC has an environmental or sustainability related educational background or degree and zero otherwise.
	Compensation	The total compensation (£ '000) of the VC, including base salary, pension contribution and other benefits.
	Staff–student ratio	The ratio of total number of students to the total number of staff in a university.
	Uni size	The natural logarithm of a university's total assets (£ '000).
	Leverage	The ratio of total debts to the book value of total assets.
	ROA	The ratio of net income to total assets.
	Big 4	A dummy variable that equals to one if a university's financial statement is audited by one of the biggest four accounting firms and zero otherwise.
	Post 1992 Uni	A dummy variable that equals to one if a university is established after year 1992 and zero otherwise.
Panel B: Variable in the additional analysis		
Variables in additional analysis	Sustainability ranking	The sustainability score that comes from the Times Higher Education Impact Ranking.
	SDG 17	A dummy variable that equals one if a university's annual report includes information relating to UN Sustainable Development Goals (SDG) 17 and zero otherwise. SDG 17 (strengthen the means of implementation and revitalise the Global Partnership for Sustainable Development).
	VC gender	A dummy variable that equals to one if a VC is a female and zero otherwise.
	Russell group	A dummy variable that equals to one if a university belongs to the Russell Group and zero otherwise.
	Council meetings	Number of the university's council meetings.
	Sustainability committee	A dummy variable that equals to one if a university has a sustainability committee and zero otherwise.

Models 3 and 4 of Table 4 report results for Hypothesis 2b. For universities that use more forward-looking statements in their annual reports, the estimated coefficient of career horizon in Column (3) is significantly negative. In contrast, there is no relationship between career horizon and sustainability performance when universities use fewer forward-looking statements in their annual reports. These findings suggest that when universities have high sustainability concerns, they use more forward-looking statements to dilute the focus on current performance. Subsequently, the greater number of forward-looking

TABLE 2 | Descriptive statistics.

A. Summary statistics

Variables	Mean	SD	Min	Max	Median
Sustainability	484.28	205.88	0.00	1387.00	484.28
Horizon	10.59	5.02	−5.00	24.00	10.59
Boilerplate score	0.06	0.02	0.00	0.19	0.06
Forward looking	0.01	0.02	0.00	0.35	0.01
Education	0.13	0.34	0.00	1.00	0.13
Compensation	298.11	76.40	68.00	714.00	298.11
Staff–student ratio	15.99	2.60	10.10	31.60	15.99
Uni size	5.97	1.02	3.53	9.17	5.97
Leverage	0.55	0.26	−4.25	1.17	0.55
ROA (%)	−0.42	4.76	−30.80	13.16	0.29
Big 4	0.64	0.48	0.00	1.00	0.64
Post 1992 Uni	0.40	0.49	0.00	1.00	0.40

B. Correlation matrix

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1) Sustainability	1.000											
(2) Horizon	−0.152***	1.000										
(3) Boilerplate score	0.432***	−0.059	1.000									
(4) Forward looking	−0.027	0.028	−0.045	1.000								
(5) Education	−0.011	−0.004	0.018	−0.025	1.000							
(6) Compensation	0.296***	−0.136***	0.139***	−0.058	−0.072*	1.000						
(7) Staff–student ratio	−0.267***	0.025	−0.088**	0.123**	−0.036	−0.382***	1.000					
(8) Uni size	0.409***	−0.104**	0.158***	−0.062	−0.060	0.519***	−0.518***	1.000				
(9) Leverage	0.010	0.114***	0.011	−0.046	0.038	−0.142***	0.071*	−0.021	1.000			
(10) ROA	−0.039	−0.023	−0.043	0.002	0.023	0.050	−0.056	0.068*	−0.146***	1.000		
(11) Big4	0.121***	−0.093**	0.055	−0.052	0.012	0.160***	−0.155***	0.230***	−0.042	0.070*	1.000	
(12) Post 1992 Uni	−0.154***	0.025	−0.078*	−0.032	−0.064*	−0.234***	0.318***	−0.279***	0.232***	0.060	−0.093**	1.000

Note: *, ** and *** represent significance at the 0.10, 0.05 and 0.01 levels, respectively.

statements in a university's annual report, the more pronounced the negative impact of VCs' career horizon on university sustainability performance.

Our findings are embedded within the framework of UET. According to UET, top executives' observable characteristics significantly influence organisational outcomes (Hambrick and Mason 1984). Our findings align with this theory by demonstrating that VCs, akin to CEOs, exert substantial influence on the sustainability initiatives of HEIs, particularly through their career stage. This is consistent with previous research (e.g., Wang et al. 2024) that has utilised UET to examine the impact of CEOs on environmental activities. Specifically, for VCs nearing retirement, they are more likely to drive substantive sustainability initiatives, reflecting a deeper ethical commitment and strategic focus on long-term environmental goals. In this regard, we contribute to the growing body of literature that highlights the role of VC characteristics in shaping institutional performance (e.g., Elmagrhi et al. 2021).

Moreover, our results highlight the importance of transparency in sustainability reporting, as advocated by Cheah et al. (2023), who examined VC power and HEI efficiency. We observe that the use of non-substantive, boilerplate and forward-looking language in sustainability reports undermines the credibility of sustainability efforts, suggesting a need for more genuine and transparent communication. This finding contributes to the literature by emphasising the important role of clear and honest ESG reporting in enhancing the effectiveness of sustainability initiatives.

TABLE 3 | Main regression: VC horizon and sustainability performance.

Variables	Model 1	Model 2	Model 3	Model 4
Horizon	−3.846***	−0.438**	−1.674**	−1.734***
	(−2.864)	(−2.203)	(−2.134)	(−3.353)
Education	−6.322	2.145	−6.945	−1.523
	(−0.326)	(0.543)	(−0.659)	(−0.212)
Compensation	−0.043	−0.021	−0.016	−0.005
	(−0.396)	(−1.080)	(−0.279)	(−0.127)
Staff–student ratio	−2.838	−0.101	−0.900	−1.836*
	(−1.060)	(−0.230)	(−0.588)	(−1.769)
Uni size	85.402***	7.839***	44.684***	32.879***
	(10.709)	(5.463)	(9.715)	(9.971)
Leverage	4.967	−3.157	13.925	−5.801
	(0.205)	(−1.123)	(0.861)	(−0.698)
ROA	−339.074*	−38.084	−163.477	−137.513**
	(−1.960)	(−1.553)	(−1.648)	(−2.020)
Big 4	24.711*	3.209	6.110	15.391***
	(1.669)	(1.356)	(0.703)	(2.775)
Post 1992 Uni	−14.387	−3.116	−4.220	−7.051
	(−0.897)	(−1.286)	(−0.455)	(−1.170)
Constant	−29.491	−11.820	−20.026	2.355
	(−0.393)	(−0.894)	(−0.462)	(0.081)
Year dummies	Yes	Yes	Yes	Yes
Observations	523	523	523	523
Adjusted R^2	0.355	0.208	0.303	0.358

Note: In Model 1, the dependent variable is the university's ESG score. In Model 2, the dependent variable is the university's environmental score. In Model 3, the dependent variable is the university's social score. In Model 4, the dependent variable is the university's governance score. Year dummies are included in all specifications. t-Statistics for coefficient estimates in parentheses are based on the robust standard errors. The definitions of the variables are summarised in Table 1. *, ** and *** represent significance at the 0.10, 0.05 and 0.01 levels, respectively.

4.3 | Robustness Tests

We have conducted several additional analyses for robustness purposes. First, we consider if our results are robust to alternative choices of dependent variables. Subsequently, we replace 'sustainability performance' with 'sustainability score' and 'SDG 17'. These two variables are obtained from the *Times Higher Education Impact Ranking* official website. The 'sustainability score' examines how a university manages its sustainable performance. In addition, the 'SDG 17' emphasises the implementation and revitalisation of the Global Partnership for Sustainable Development. This is measured as a dummy variable that equals one if a university's annual report includes information relating to SDG 17, and zero otherwise. The results reported in Table 5 (Models 1 and 2) display statistical significance, indicating that the VCs' career horizon reduces sustainable performance, which is consistent with our previous findings.

We then re-estimate the main regression analysis using another regression model: Poisson regression. This is because our dependent variable is a count of the number of disclosures. Poisson regression is particularly suitable when the outcome variable represents the number of occurrences of an event within a fixed period (Coxe, West, and Aiken 2009). The results are reported in Table 5 (Models 3–6), indicating that our main findings remain unchanged even when selecting alternative regression models.

We also examine how a VC's gender affects the relationship between their career horizon and sustainability performance. Generally, females value social responsibilities highly relative to their male counterparts (Elamer and Boulhaga 2024; Elamer, Boulhaga, and Ibrahim 2024; Hui, Li, and Elamer 2024). Consequently, female VCs may exert additional pressure on universities to engage in socially responsible activities (Wang et al. 2022). Models 1 and 2 of Table 6 report the impact of the

TABLE 4 | Main regression: VC horizon, soft information and sustainability performance.

Variables	Model 1: High boilerplate score	Model 2: Low boilerplate score	Model 3: More forward looking	Model 4: Less forward looking
Horizon	−6.569***	−0.815	−5.478***	−2.306
	(−3.927)	(−0.374)	(−2.953)	(−1.275)
Education	−22.380	24.101	14.064	4.736
	(−1.212)	(0.632)	(0.556)	(0.181)
Compensation	−0.139	0.075	0.004	−0.008
	(−1.060)	(0.396)	(0.028)	(−0.067)
Staff–student ratio	−4.291	−2.672	0.303	−2.755
	(−1.001)	(−0.706)	(0.066)	(−1.083)
Uni size	84.816***	76.246***	91.356***	47.412***
	(8.788)	(5.069)	(7.534)	(5.143)
Leverage	10.522	40.580	91.194	3.456
	(0.509)	(0.552)	(1.312)	(0.249)
ROA	−280.762	−218.148	−272.863	−289.661*
	(−1.331)	(−0.822)	(−1.093)	(−1.899)
Big 4	20.524	31.449	25.689	−3.132
	(1.152)	(1.259)	(1.186)	(−0.182)
Post 1992 Uni	−6.853	−31.025	−24.325	−9.318
	(−0.357)	(−1.108)	(−1.024)	(−0.457)
Constant	105.211	−121.025	−147.194	165.298**
	(0.925)	(−1.092)	(−1.125)	(2.040)
Year dummies	Yes	Yes	Yes	Yes
Observations	270	253	355	168
Adjusted R^2	0.374	0.327	0.345	0.264

Note: In all models, the dependent variables are the universities' ESG scores. Year dummies are included in all specifications. t-Statistics for coefficient estimates in parentheses are based on the robust standard errors. *, ** and *** represent significance at the 0.10, 0.05 and 0.01 levels, respectively. The definitions of the variables are summarised in Table 1.

career horizon on sustainability performance among female and male VCs, respectively. It is reported that there are significant and negative coefficients in both groups, although the magnitude of the coefficient is greater in the female VC group. The results indicate that older female VCs with shorter career horizons pay more attention to sustainability activities, leading to enhanced sustainability disclosure by universities.

Next, we examine the relationship between career horizon and sustainability performance while considering the university's 'Russell Group Status'. The Russell Group is a self-selected association of 24 public research universities in the United Kingdom, known for their academic excellence and research-intensive focus (Elmagrhi et al. 2021). These universities are considered more prestigious and are therefore more likely to receive greater financial support. In this regard, we may expect that in these universities, longer career horizon VCs may not necessarily reduce sustainability performance, as younger VCs with longer career horizons have fewer short-term financial concerns. The empirical results presented in Models 3 and 4 of Table 6 indicate that there is a negative relationship between career horizon and sustainability performance in the non-Russell Group universities. In contrast, there is no impact of career horizon on sustainability performance for universities belong to the Russell Group, which is in line with our aforementioned expectation. We also control for the four countries (England, Scotland, Wales and Northern Ireland) in Model 5 of Table 6, and the results remain consistent, confirming the robustness of our findings.

To address potential endogeneity arising from differences in fundamental characteristics between the treated and control groups, we employ propensity score matching (PSM). This non-parametric method allows for a 'like-for-like' comparison, crucial for examining the relationship between VCs' career horizon and university sustainability performance (Noureldeen et al. 2024; Owusu et al. 2023; Ullah, Owusu, and Elamer 2024). Our analysis involves matching 154 universities

TABLE 5 | Robustness checks: Alternative sustainability measures and regression models.

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Horizon	−0.751*	−0.008*	−0.008***	−0.013**	−0.006**	−0.009***
	(−1.93)	(−1.74)	(−2.76)	(−2.10)	(−2.06)	(−3.29)
Education	−3.802	−0.043	−0.002	0.075	−0.018	0.006
	(−0.75)	(−0.69)	(−0.05)	(0.69)	(−0.45)	(0.16)
Compensation	−0.065**	−0.001**	−0.001	−0.001	−0.001	−0.001
	(−2.16)	(−2.02)	(−0.70)	(−1.25)	(−0.51)	(−0.53)
Staff-student ratio	1.415*	0.015	−0.004	0.001	−0.001	−0.009
	(1.77)	(1.45)	(−0.64)	(0.05)	(−0.20)	(−1.38)
Uni size	13.719***	0.148***	0.177***	0.224***	0.171***	0.177***
	(6.09)	(4.90)	(10.39)	(5.00)	(9.47)	(10.03)
Leverage	7.545	0.075	0.055	−0.083	0.121	−0.007
	(0.67)	(0.54)	(0.75)	(−0.73)	(1.37)	(−0.11)
ROA	−104.405***	−1.164**	−0.730**	−1.142	−0.610	−0.817**
	(−2.62)	(−2.34)	(−2.00)	(−1.56)	(−1.59)	(−2.17)
Big 4	0.107	0.006	0.051	0.096	0.022	0.086***
	(0.03)	(0.13)	(1.62)	(1.33)	(0.65)	(2.76)
Post 1992 Uni	6.392	0.109**	−0.028	−0.096	−0.016	−0.034
	(1.54)	(2.09)	(−0.79)	(−1.21)	(−0.44)	(−0.98)
Constant	−71.685***	−0.736**	5.043***	2.055***	4.403***	4.188***
	(−3.03)	(−2.46)	(27.66)	(4.43)	(22.86)	(23.12)
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Observations	422	422	523	523	523	523
Adjusted R^2	0.13	0.12	0.29	0.21	0.24	0.27

Note: In Model 1, the dependent variable is the university's sustainability ranking. In Model 2, the dependent variable is SDG 17. In Model 3, the dependent variable is the university's ESG score. In Model 4, the dependent variable is the university's environmental score. In Model 5, the dependent variable is the university's social score. In Model 6, the dependent variable is the university's governance score. In Models 3–6, Poisson regression models are applied. Year dummies are included in all specifications. t-Statistics for coefficient estimates in parentheses are based on the robust standard errors. The definitions of the variables are summarised in Table 1.
*, ** and *** represent significance at the 0.10, 0.05 and 0.01 levels, respectively.

in the treatment group with 350 in the control group, using data derived from university annual reports that include adherence to the UN (SDGs).

For the matching procedure, we utilise the logit model to estimate propensity scores:

$$\text{Pscore}(X_{it}) = \Pr(\text{Career Horizon} = 1 | X_{it}) \quad (2)$$

where Pscore(.) is the propensity score assigning function and Pr(.) denotes the probability. This scoring helps in identifying comparable units based on observable characteristics, using the nearest neighbour matching algorithm (1:1 matching without replacement), enhancing the reliability of our causal inferences.

The results, detailed in Models 1–5 of Table 7, affirm the consistency of our findings with our primary results displayed in Table 3. We observe that universities with VCs nearing the end of their career horizon tend to exhibit stronger sustainability performance. This pattern underscores the influence of VCs' career horizon on sustainability strategies, with older VCs demonstrating a stronger commitment to sustainability objectives. Such findings highlight the critical role of leadership characteristics in shaping university strategies towards sustainability, reinforcing the robustness of our analysis against potential biases introduced by unobserved heterogeneity. Overall, our PSM approach not only addresses the self-selection bias effectively but also supports the robustness of our findings.

Lastly, we explore the mechanisms through which VCs' career horizons impact university sustainability performance in Table 8, where channel analysis provides insights into the dynamic interplay between governance structures and leadership tenure. This table highlights the significant role of council meetings and sustainability committees in moderating the influence of VCs' career horizons on sustainability

TABLE 6 | Robustness checks: VC gender and Russell group universities.

Variables	Model 1: Female VC	Model 2: Male VC	Model 3: Russell group	Model 4: Non-Russell group	Model 5: Country fixed effects
Horizon	−5.999**	−2.687*	−3.855	−3.721***	−3.890***
	(−2.319)	(−1.686)	(−0.995)	(−2.657)	(−2.872)
Education	−14.972	0.911	−52.190	14.201	−5.826
	(−0.317)	(0.042)	(−1.070)	(0.662)	(−0.298)
Compensation	−0.113	−0.009	0.032	−0.142	−0.057
	(−0.567)	(−0.064)	(0.156)	(−0.986)	(−0.523)
Staff-student ratio	−3.767	−1.139	19.740	−2.066	−2.535
	(−0.637)	(−0.345)	(1.305)	(−0.753)	(−0.902)
Uni size	102.255***	83.465***	58.282*	64.702***	86.738***
	(7.013)	(8.348)	(1.785)	(6.764)	(10.722)
Leverage	143.372	−16.406	−549.211***	26.974	0.320*
	(1.533)	(−0.905)	(−3.308)	(0.773)	(1.738)
ROA	−123.191	−391.665*	−212.264	−340.616*	−3.232*
	(−0.482)	(−1.770)	(−0.385)	(−1.876)	(−1.919)
Big 4	47.803	17.482	16.548	15.231	27.156
	(1.601)	(0.981)	(0.349)	(0.945)	(1.643)
Post 1992 Uni	−37.937	−5.777	0.001	−2.374	−17.186
	(−1.202)	(−0.313)	(0.001)	(−0.143)	(−1.067)
Constant	−80.984	−80.392	122.545	79.557	−52.552
	(−0.457)	(−0.903)	(0.277)	(1.014)	(−0.675)
Year dummies	Yes	Yes	Yes	Yes	Yes
Country dummies	—	—	—	—	Yes
Observations	140	383	118	405	523
Adjusted R^2	0.475	0.319	0.307	0.218	0.354

Note: In Models 1–4, the dependent variable is the university's ESG score. In Models 1–2, samples are divided into two groups based on the gender of a VC. In Models 3–4, samples are divided into two groups based on whether a university is a member of the Russell group. Year dummies are included in all specifications. t-Statistics for coefficient estimates in parentheses are based on the robust standard errors. The definitions of the variables are summarised in Table 1. *, ** and *** represent significance at the 0.10, 0.05 and 0.01 levels, respectively.

outcomes. Firstly, the interaction between VCs' career horizons and the frequency of council meetings suggests that more engaged governance, through frequent council meetings, can mitigate some of the adverse effects associated with longer career horizons. Specifically, Model 1 of Table 8 shows that the coefficient on the interaction term between horizon and council meetings is negative and significant, indicating that as VCs near the end of their careers, the presence of active governance frameworks can still foster a commitment to sustainability. This finding underscores the importance of robust governance structures that can support sustained organisational focus on sustainability goals, irrespective of individual leadership timelines.

Secondly, the analysis involving sustainability committees reveals a more pronounced effect. The presence of these committees significantly enhances the sustainability performance of universities, as shown in Model 2 of Table 8 by the positive coefficient for sustainability committees alone. However, the negative interaction term between career horizon and sustainability committees suggests that while sustainability committees generally promote better sustainability practices, their effectiveness is somewhat reduced when VCs are closer to retirement. This could be interpreted as a need for these committees to have stronger empowerment or more independent functioning, especially when dealing with VCs who might have shorter-term focuses towards the end of their careers.

Overall, Table 8 highlights that while the career horizon of VCs does influence sustainability performance, this effect can be moderated by institutional mechanisms like council meetings and sustainability committees. These results suggest pathways

TABLE 7 | Robustness checks: Addressing endogeneity—A PSM approach.

Variables	Model 1: Overall sample	Model 2: High boilerplate score	Model 3: Low boilerplate score	Model 4: More forward looking	Model 5: Less forward looking
Horizon	−6.074**	−10.832***	0.515	−8.923***	−6.765**
	(−2.567)	(−3.259)	(0.111)	(−2.727)	(−2.372)
Education	37.441	−4.654	140.855***	28.666	54.648**
	(1.488)	(−0.165)	(3.159)	(0.906)	(2.030)
Compensation	−0.112	−0.088	−0.011	−0.087	−0.003
	(−0.737)	(−0.450)	(−0.041)	(−0.477)	(−0.017)
Staff–student ratio	−5.952	−16.129*	−2.621	−0.171	−8.901***
	(−1.467)	(−1.963)	(−0.504)	(−0.023)	(−3.054)
Uni size	79.312***	79.307***	53.926**	71.246***	35.029*
	(5.195)	(3.231)	(1.992)	(2.843)	(1.913)
Leverage	−10.545	64.223	−31.611	34.906	27.862
	(−0.134)	(0.567)	(−0.273)	(0.317)	(0.260)
ROA	−452.653	−78.205	−605.922	−489.739	−289.020
	(−1.385)	(−0.203)	(−1.147)	(−1.090)	(−0.967)
Big 4	54.920**	33.161	97.020**	41.102	35.858
	(2.244)	(1.013)	(2.505)	(1.342)	(1.107)
Post 1992 Uni	−34.281	−35.601	−57.756	−65.285*	−43.477
	(−1.311)	(−1.040)	(−1.291)	(−1.799)	(−1.194)
Constant	92.842	285.950	68.706	109.715	278.523*
	(0.625)	(0.902)	(0.407)	(0.393)	(1.819)
Year dummies	Yes	Yes	Yes	Yes	Yes
Observations	259	140	119	191	68
Adjusted R^2	0.305	0.329	0.272	0.267	0.317

Note: In all models, the dependent variables are the universities' ESG scores. The PSM approach is conducted based on a university's annual report which includes information relating to UN SDG via the nearest matching algorithm (1:1) without replacement. Year dummies are included in all specifications. t-Statistics for coefficient estimates in parentheses are based on the robust standard errors. The definitions of the variables are summarised in Table 1. *, ** and *** represent significance at the 0.10, 0.05 and 0.01 levels, respectively.

TABLE 8 | Robustness checks: Channel analysis.

Variables	Model 1	Model 2
Horizon	10.774*	−3.773***
	(1.660)	(−2.80)
Council meetings	17.557	
	(1.289)	
Horizon council meetings*	−2.710**	
	(−2.092)	
Sustainability committee		256.218***
		(4.36)
Horizon sustainability committee*		−16.545***
		(−3.23)
Education	−37.727	−2.760
	(−1.631)	(−0.14)
Compensation	0.298*	−0.064
	(1.798)	(−0.61)
Staff–student ratio	1.219	−1.900
	(0.237)	(−0.70)
Uni size	76.250***	86.560***
	(5.793)	(10.93)
Leverage	0.783	0.307*
	(1.011)	(1.75)
ROA	−0.497	−3.653**
	(−0.153)	(−2.14)
Big 4	−18.051	23.272
	(−0.647)	(1.57)
Post 1992 Uni	−79.018**	−19.512
	(−2.301)	(−1.24)
Constant	−197.267	−58.750
	(−1.144)	(−0.76)
Year dummies	Yes	Yes
Observations	191	522
Adjusted R^2	0.36	0.36

Note: In all models, the dependent variables are the universities' ESG scores. Year dummies are included in all specifications. t-Statistics for coefficient estimates in parentheses are based on the robust standard errors. The definitions of the variables are summarised in Table 1. *, ** and *** represent significance at the 0.10, 0.05 and 0.01 levels, respectively.

for enhancing university sustainability practices through strategic governance adjustments, particularly in light of leadership transitions. These insights are crucial for policy-makers and university boards aiming to enhance their sustainability trajectories in times of leadership change.

5 | Conclusion

This study evaluates the relationship between VCs' career horizons and sustainability performance across UK HEIs from 2018 to 2022. We find a negative relationship between VCs' career horizon and their institutions' sustainability performance, indicating that VCs with shorter career horizons, typically older individuals, prioritise long-term sustainability over short-term financial gains. This effect is more pronounced when forward-looking and boilerplate language is used in university reports. This aspect of our findings points to a potential risk: that such language, while ostensibly projecting future-oriented commitments, may sometimes serve to obscure less favourable performances or inflate the institution's sustainability posture. Robustness checks using alternative sustainability measures and regression models, including Poisson regression, reinforce the consistency of our results. Notably, the observed patterns were particularly strong among female VCs and institutions outside the prestigious 'Russell Group', suggesting nuanced dynamics in leadership and institutional context. PSM, further mitigate endogeneity concerns, affirming the reliability of our findings.

Theoretically, our study contributes to the enhanced understanding of leadership impact on sustainability within HEIs. Different from the existing theories that predominantly focus on corporate settings, we provide a novel lens to view leadership dynamics within the educational sector. Specifically, by establishing a link between VCs career horizons and sustainability performance, the study enriches the theoretical framework of upper echelons theory by demonstrating how the temporal aspects of leadership—specifically, the proximity of retirement—affect strategic decisions concerning sustainability. Moreover, by examining the intersection of soft information, we offer a more nuanced perspective on how disclosure tactics influence sustainability performance. This approach challenges the traditional view that leadership effectiveness is solely dependent on individual capabilities, suggesting that contextual factors also play a crucial role.

The empirical implications of our research findings are significant. Our findings suggest that experience and maturity are critical factors in effectively advancing sustainability goals. This insight can guide HEIs to prioritise the appointment of leaders who are in the later stages of their careers, recognising that such individuals are likely to be more ethically driven and committed to substantive sustainability practices. Additionally, the distinct performance of female VCs nearing retirement highlights the importance of gender-specific considerations in leadership roles, suggesting that female leaders may bring unique strengths to the sustainability agenda, particularly as they approach retirement.

From a policy perspective, our research has important implications. The evidence that mature VCs enhance sustainability performance suggests that HEIs and governing bodies should consider adjusting strategies to favour candidates with substantial career experience. This could involve creating policies that encourage the hiring of more experienced leaders who are likely to have a stronger ethical drive and commitment to sustainability. This insight is particularly relevant for enhancing the strategic direction towards sustainability within universities.

Additionally, the identification of the nuanced role of gender and institutional type further diversifies our understanding of leadership impact. In particular, the distinct performance of female VCs nearing retirement underscores the potential for gender-specific considerations in leadership roles to bolster sustainability outcomes. Moreover, regulatory and accreditation bodies should also scrutinise the language used in sustainability reports to ensure they reflect genuine commitments rather than mere compliance or impression management. By addressing these policy implications, HEIs can foster a more authentic and effective approach to sustainability.

While this study provides foundational insights into the relationship between leadership career horizons and sustainability performance in UK HEIs, extending the analysis internationally could offer comparative insights across diverse regulatory and cultural landscapes. Future research might also explore other leadership characteristics beyond career horizons, such as prior experience or personal values, to develop a more comprehensive understanding of what drives sustainability in higher education. Additionally, qualitative methods like interviews could compliment quantitative findings, revealing the personal motivations and institutional strategies behind observed patterns and enriching the narrative to inform both theory and practice in sustainable education leadership.

Acknowledgments

We would like to thank the two anonymous reviewers for their valuable suggestions. We would also like to acknowledge the research assistance provided by Jehangir Chaudhry.

Ethics Statement

The authors have nothing to report.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

Endnotes

[1] We use the wording 'ESG' and 'sustainability' interchangeably throughout the paper.

References

Abdelbadie, R. A., N. Braakmann, and A. Salama. 2024. "Do Social Interaction Mechanisms Affect University Reputation? Evidence From the UK Higher Education Sector." *Journal of Accounting, Finance, and Business Studies*. https://doi.org/10.1111/abac.12323.

Al-Asmakh, S., A. A. Elamer, and O. Uadiale. 2024. "Cultural Dynamics and Tenure Trajectories: How Auditor Tenure and Culture Influence Key Audit Matters in the GCC." *Journal of Accounting Literature*. https://doi.org/10.1108/jal-04-2024-0081.

Albitar, K., T. Abdoush, and K. Hussainey. 2023. "Do Corporate Governance Mechanisms and ESG Disclosure Drive CSR Narrative Tones?" *International Journal of Finance and Economics* 28, no. 4: 3876–3890.

Ali, A., and W. Zhang. 2015. "CEO Tenure and Earnings Management." *Journal of Accounting and Economics* 59, no. 1: 60–79.

Andersson, E., M. Hoque, M. L. Rahman, G. S. Uddin, and R. Jayasekera. 2022. "ESG Investment: What Do We Learn From Its Interaction With Stock, Currency and Commodity Markets?" *International Journal of Finance and Economics* 27, no. 3: 3623–3639.

Arena, C., G. Michelon, and G. Trojanowski. 2018. "Big Egos Can Be Green: A Study of CEO Hubris and Environmental Innovation." *British Journal of Management* 29, no. 2: 316–336.

Bertomeu, J., and I. Marinovic. 2016. "A Theory of Hard and Soft Information." *Accounting Review* 91, no. 1: 1–20.

Bertrand, M., and A. Schoar. 2003. "Managing With Style: The Effect of Managers on Firm Policies." *Quarterly Journal of Economics* 118, no. 4: 1169–1208.

Bhandari, K. R., M. Ranta, and J. Salo. 2022. "The Resource-Based View, Stakeholder Capitalism, ESG, and Sustainable Competitive Advantage: The Firm's Embeddedness Into Ecology, Society, and Governance." *Business Strategy and the Environment* 31, no. 4: 1525–1537.

Bilal Khan, M., E. Ezeani, H. Saleem, and M. Usman. 2024. "Management Earnings Forecast and Technical Innovation: The Mediating Effects of Cost of Debt." *Journal of Accounting in Emerging Economies* 14, no. 5: 1103–1126. https://doi.org/10.1108/jaee-09-2023-0279.

Bilal, B. Komal, E. Ezeani, M. Usman, F. Kwabi, and C. Ye. 2023. "Do the Educational Profile, Gender, and Professional Experience of Audit Committee Financial Experts Improve Financial Reporting Quality?" *Journal of International Accounting, Auditing and Taxation* 53: 100580. https://doi.org/10.1016/j.intaccaudtax.2023.100580.

Bochkay, K., S. V. Brown, A. J. Leone, and J. W. Tucker. 2023. "Textual Analysis in Accounting: What's Next?" *Contemporary Accounting Research* 40, no. 2: 765–805.

Bradshaw, M. T., B. Lock, X. Wang, and D. Zhou. 2020. "Soft Information in the Financial Press and Analyst Revisions." *Accounting Review* 96, no. 5: 107–132.

Brockman, P., and J. Cicon. 2013. "The Information Content of Management Earnings Forecasts: An Analysis of Hard Versus Soft Information." *Journal of Financial Research* 36, no. 2: 147–174.

Bugeja, M., B. Govendir, Z. Matolcsy, and G. Pazmandy. 2021. "Is There an Association Between Vice-Chancellors' Compensation and External Performance Measures?" *Accounting and Finance* 61, no. 1: 689–726.

Cai, X., N. Gao, I. Garrett, and Y. Xu. 2020. "Are CEOs Judged on Their Companies' Social Reputation?" *Journal of Corporate Finance* 64: 101621.

Carvajal, M., M. Nadeem, and R. Zaman. 2022. "Biodiversity Disclosure, Sustainable Development and Environmental Initiatives: Does Board Gender Diversity Matter?" *Business Strategy and the Environment* 31, no. 3: 969–987.

Cheah, J. E. T., V. Tsiligkiris, T. N. Nguyen, and P. Nagirikandalage. 2023. "Does Vice-Chancellor Power Determine UK University Efficiency Performance?" *Studies in Higher Education*: 1–17.

Chen, W. T., G. S. Zhou, and X. K. Zhu. 2019. "CEO Tenure and Corporate Social Responsibility Performance." *Journal of Business Research* 95: 292–302.

Christensen, H. B., L. Hail, and C. Leuz. 2021. "Mandatory CSR and Sustainability Reporting: Economic Analysis and Literature Review." *Review of Accounting Studies* 26, no. 3: 1176–1248.

Coxe, S., S. G. West, and L. S. Aiken. 2009. "The Analysis of Count Data: A Gentle Introduction to Poisson Regression and Its Alternatives." *Journal of Personality Assessment* 91, no. 2: 121–136.

Crilly, D., M. Hansen, and M. Zollo. 2016. "The Grammar of Decoupling: A Cognitive-Linguistic Perspective on Firms' Sustainability Claims and Stakeholders' Interpretation." *Academy of Management Journal* 59, no. 2: 705–729.

Davidson, W. N., B. Xie, W. Xu, and Y. Ning. 2007. "The Influence of Executive Age, Career Horizon and Incentives on Pre-Turnover Earnings Management." *Journal of Management and Governance* 11, no. 1: 45–60. https://doi.org/10.1007/s10997-007-9015-8.

de Villiers, C., R. Dimes, and M. Molinari. 2024. "Determinants, Mechanisms, and Consequences of UN SDGs Reporting by Universities: Conceptual Framework and Avenues for Future Research." *Journal of Public Budgeting, Accounting & Financial Management*.

Diouf, D., and O. Boiral. 2017. "The Quality of Sustainability Reports and Impression Management: A Stakeholder Perspective." *Accounting, Auditing & Accountability Journal* 30, no. 3: 643–667.

Dyer, T., M. Lang, and L. Stice-Lawrence. 2017. "The Evolution of 10-K Textual Disclosure: Evidence From Latent Dirichlet Allocation." *Journal of Accounting and Economics* 64, no. 2–3: 221–245.

Elamer, A. A., and M. Boulhaga. 2024. "ESG Controversies and Corporate Performance: The Moderating Effect of Governance Mechanisms and ESG Practices." *Corporate Social Responsibility and Environmental Management* 31, no. 4: 3312–3327. Portico. https://doi.org/10.1002/csr.2749.

Elamer, A. A., M. Boulhaga, and B. A. Ibrahim. 2024. "Corporate Tax Avoidance and Firm Value: The Moderating Role of Environmental, Social, and Governance (ESG) Ratings." *Business Strategy and the Environment*. https://doi.org/10.1002/bse.3881.

Elmagrhi, M. H., and C. Ntim. 2022. "Vice-Chancellor Pay and Performance: The Moderating Effect of Vice-Chancellor Characteristics." *Work, Employment and Society* 38, no. 1: 180–205.

Elmagrhi, M. H., C. Ntim, Y. Wang, A. Elamer, and R. Crossley. 2021. "The Effect of Vice-Chancellor Characteristics and Internal Governance Mechanisms on Voluntary Disclosures in UK Higher Education Institutions." *Journal of International Accounting, Auditing and Taxation* 45: 100428.

Elmagrhi, M. H., and C. G. Ntim. 2023. "Non-Financial Reporting in Non-Profit Organisations: The Case of Risk and Governance Disclosures in UK Higher Education Institutions." *Accounting Forum* 47, no. 2: 223–248.

Eng, L. L., M. Fikru, and T. Vichitsarawong. 2022. "Comparing the Informativeness of Sustainability Disclosures Versus ESG Disclosure Ratings." *Sustainability Accounting, Management and Policy Journal* 13, no. 2: 494–518.

Fotiadou, M., ed. 2022. "Similarities and Differences in the Language Used by Post-1992 and Russell Group Universities." In *The Language of Employability: A Corpus-Based Analysis of UK University Websites*, 207–227. Cham: Springer International Publishing.

Ha, Y. S., J. Kang, and K. Y. Kwon. 2024. "CEO Cultural Heritage and R&D Expenditures." *International Journal of Finance and Economics*.

Hambrick, D. C. 2007. "Upper Echelons Theory: An Update." *Academy of Management Review* 32, no. 2: 334–343.

Hambrick, D. C., and P. A. Mason. 1984. "Upper Echelons: The Organization as a Reflection of Its Top Managers." *Academy of Management Review* 9: 193–206.

Hassanein, A., and K. Hussainey. 2015. "Is Forward-Looking Financial Disclosure Really Informative? Evidence From UK Narrative Statements." *International Review of Financial Analysis* 41: 52–61.

HESI. 2021. *Assessments of Higher Education's Progress Towards the UN Sustainable Development Goals*, 1–4. Higher Education Sustainability Initiative. https://sdgs.un.org/sites/default/files/2021-09/HEI%20assessment%20for%20the%20SDGs%20-%20Volume%202%20HEIs1.pdf.

Huang, C., X. Chang, Y. Wang, and N. Li. 2023. "Do Major Customers Encourage Innovative Sustainable Development? Empirical Evidence From Corporate Green Innovation in China." *Business Strategy and the Environment* 32, no. 1: 163–184.

Hui, Z., H. Li, and A. A. Elamer. 2024. "Financing Sustainability: How Environmental Disclosures Shape Bank Lending Decisions in Emerging Markets." *Corporate Social Responsibility and Environmental Management* 31, no. 5: 3940–3967. Portico. https://doi.org/10.1002/csr.2789.

Ibrahim, A. E. A., A. A. Elamer, and A. N. Ezaet. 2021. "The Convergence of Big Data and Accounting: Innovative Research Opportunities." *Technological Forecasting and Social Change* 173: 121171.

Jian, M., and K. W. Lee. 2015. "CEO Compensation and Corporate Social Responsibility." *Journal of Multinational Financial Management* 29: 46–65.

Kang, J. 2015. "Labor Market Evaluation Versus Legacy Conservation: What Factors Determine Retiring CEOs' Decisions About Long-Term Investment?" *Strategic Management Journal* 37, no. 2: 389–405.

Küster, S. 2024. "The Determinants of Linguistic Features in Key Audit Matters: Empirical Evidence From Europe." *International Journal of Auditing* 28: 582–614.

Loughran, T., and B. McDonald. 2015. "The Use of Word Lists in Textual Analysis." *Journal of Behavioral Finance* 16, no. 1: 1–11.

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* 48: 10–19.

Lucey, B., A. Urquhart, and H. Zhang. 2022. "UK Vice Chancellor Compensation: Do They Get What They Deserve?" *British Accounting Review* 54: 101108.

Marie, M., B. Qi, A. A. Elamer, I. N. Khatatbeh, and E. Al-Fakir Al Rabab'a. 2025. "How Does Board Gender Diversity Drive the ESG Performance-Cash Holdings Relationship? Evidence From China." *International Journal of Finance & Economics* 30, no. 3: 2705–2723. https://doi.org/10.1002/ijfe.3037.

Mansouri, S., and P. P. Momtaz. 2022. "Financing Sustainable Entrepreneurship: ESG Measurement, Valuation, and Performance." *Journal of Business Venturing* 37, no. 6: 106258.

Matta, E., and P. W. Beamish. 2008. "The Accentuated CEO Career Horizon Problem: Evidence From International Acquisitions." *Strategic Management Journal* 29, no. 7: 683–700.

Michelon, G., S. Pilonato, and F. Ricceri. 2015. "CSR Reporting Practices and the Quality of Disclosure: An Empirical Analysis." *Critical Perspectives on Accounting* 33: 59–78.

Noureldeen, E., M. Elsayed, A. A. Elamer, and J. Ye. 2024. "Two-Tier Board Characteristics and Expanded Audit Reporting: Evidence From China." *Review of Quantitative Finance and Accounting* 63, no. 1, 195–235. https://doi.org/10.1007/s11156-024-01256-6.

Ntim, C. G., T. Soobaroyen, and M. J. Broad. 2017. "Governance Structures, Voluntary Disclosures and Public Accountability: The Case of UK Higher Education Institutions." *Accounting, Auditing & Accountability Journal* 30, no. 1: 65–118.

Owusu, A., F. Kwabi, R. Owusu-Mensah, and A. A. Elamer. 2023. "Lead Independent Director, Managerial Risk-Taking, and Cost of Debt: Evidence From UK." *Journal of International Accounting, Auditing and Taxation* 53: 100576. Portico. https://doi.org/10.1016/j.intaccaudtax.2023.100576.

Parker, L. D. 2024. "Public University Research Engagement Contradictions in a Commercialising Higher Education World." *Financial Accountability & Management* 40, no. 1: 16–33.

Peterson, D., A. Rhoads, and B. C. Vaught. 2001. "Ethical Beliefs of Business Professionals: A Study of Gender, Age and External Factors." *Journal of Business Ethics* 31: 225–232.

Pflugrath, G., P. Roebuck, and R. Simnett. 2011. "Impact of Assurance and Assurer's Professional Affiliation on Financial Analysts' Assessment of Credibility of Corporate Social Responsibility Information." *Auditing: A Journal of Practice & Theory* 30, no. 3: 239–254.

QAA. 2024. "UK Quality Code for Higher Education." qaa.ac.uk.

Shahab, Y., C. G. Ntim, Y. Chen, F. Ullah, H. X. Li, and Z. Ye. 2020. "Chief Executive Officer Attributes, Sustainable Performance, Environmental Performance, and Environmental Reporting: New Insights From Upper Echelons Perspective." *Business Strategy and the Environment* 29, no. 1: 1–16.

Strike, V. M., P. Berrone, S. G. Sapp, and L. Congiu. 2015. "A Socioemotional Wealth Approach to CEO Career Horizons in Family Firms." *Journal of Management Studies* 52, no. 4: 555–583.

Tang, S., L. He, F. Su, and X. Zhou. 2023. "Does Directors' and Officers' Liability Insurance Improve Corporate ESG Performance? Evidence From China." *International Journal of Finance and Economics* 29: 3713–3737. https://doi.org/10.1002/IJFE.2849.

Ullah, F., P. Jiang, and A. A. Elamer. 2024. "Revolutionizing Green Business: The Power of Academic Directors in Accelerating Eco-Innovation and Sustainable Transformation in China." *Business Strategy and the Environment* 33, no. 6: 5051–5072. https://doi.org/10.1002/bse.3738.

Ullah, F., A. Owusu, and A. A. Elamer. 2024. "New Blood Brings Change: Exploring The Link Between Rookie Independent Directors and Corporate Cash Holdings." *Long Range Planning* 57, no. 4: 102451. https://doi.org/10.1016/j.lrp.2024.102451.

Usman, M., J. Nwachukwu, and E. Ezeani. 2022. "The Impact of Board Characteristics on The Extent of Earnings Management: Conditional Evidence From Quantile Regressions." *International Journal of Accounting & Information Management* 33, no. 5: 600–616. https://doi.org/10.1108/ijaim-05-2022-0112.

Wang, G., R. M. Holmes Jr., I. S. Oh, and W. Zhu. 2016. "Do CEOs Matter to Firm Strategic Actions and Firm Performance? A Meta-Analytic Investigation Based on Upper Echelons Theory." *Personnel Psychology* 69, no. 4: 775–862.

Wang, Y., Y. Zhang, X. Chang, and W. Kang. 2024. "CEO Tenure and Environmental Fraud for Listed Family Firms." *Business Strategy and the Environment* 33, no. 3: 1887–1905.

Wang, Y., Y. Zhang, W. Kang, and A. H. Ahmed. 2022. "Female Analysts and COVID-19 Corporate Donation." *Emerging Markets Review* 53: 100941.

Zhao, J., and J. Qu. 2023. "Decision-Making of Powerful CEOs on Green Innovation: The Roles of Performance Feedback and Institutional Investors." *International Journal of Finance and Economics*.