Best Practices in Internal Control, Auditing, and Sustainable Investment Efficiency

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Abstract

This paper explores the connection between internal control, audit, and the efficiency of sustainable investments. The study is structured around three pillars: best practices in internal control, audit, and sustainable investment performance. Using a qualitative approach, it draws from academic literature, and expert guidelines.

The first pillar examines how strong internal control systems such as those based on the COSO framework and automation technologies help manage ESG-related risks and support financial performance.

The second pillar highlights the role of audit in increasing transparency and investor trust, focusing on auditor independence, ISA standards, and modern tools like data analytics and AI.

The third pillar investigates how effective internal controls and auditing improve the impact and credibility of ESG investments by reducing greenwashing risks and enhancing non-financial reporting.

The study underscores the strategic importance of audit and control systems in fostering responsible and efficient investment practices.

Key words: audit, ESG, sustainable investment, internal control
J.E.L. classification: M42, G15

1. Introduction

In the current context of global pressures toward a green and responsible economy, organizations are increasingly aware of the importance of integrating ESG (Environmental, Social, Governance) criteria into their financial strategies. Within this framework, internal control and both internal and external audit play a fundamental role in strengthening investor confidence and increasing the efficiency of sustainable investments. A well-designed internal control system contributes to identifying, monitoring, and managing ESG risks, while the audit function provides assurance and independence regarding the accuracy and transparency of reported information.

Recent studies show that companies investing in ESG audit and assurance services reduce reputational risks and improve their perceived market value. Therefore, the interdependence between internal control, audit, and sustainability reporting not only supports compliance and corporate governance but also becomes a strategic element essential for attracting capital and maximizing long-term value (Asante & Lambert, 2023) .

The purpose of this research paper is to analyze the relationship between the three concepts: internal control, audit, and the efficiency of sustainable investments, as well as their interdependence in the current economic context. This topic is highly relevant in a world where technology evolves at an incredible pace, and new professions, techniques, and technologies are constantly emerging, transforming processes through automation and reducing execution time, thereby increasing organizational efficiency. In this context, starting from the literature, this paper aims to answer the following research questions:

RQ: Do best practices in internal control, along with rigorous auditing, increase the efficiency of sustainable investments? To answer this question this study used a qualitative analysis approach, focusing on the examination of multiple academic articles from Web of Science database about best practices in internal control, audit, and sustainable investment performance. This study aims to fill gaps in literature through an empirical approach by examining the connection between these three concepts.

As it turns out, alongside these technological developments, the concept of sustainability has also gained widespread popularity over time, with sustainable investments becoming increasingly common alongside non-financial reporting, which remains difficult to quantify.

2. Literature review

2.1 Internal Control – Best Practices

Internal control has become one of the most important tools for companies seeking to develop self-discipline and improve managerial performance. The Committee of Sponsoring Organizations of the Treadway Commission (COSO) identifies two key ways in which internal control systems influence corporate sustainability. First, internal control enhances operational effectiveness and efficiency while ensuring compliance with applicable laws and regulations, thereby contributing to future performance improvement. Second, it increases the reliability of reports produced and published by companies, enabling stakeholders to more accurately assess and monitor the firm's sustainability (Ja & Eun, 2020). However, there is limited empirical evidence regarding the impact of internal control on corporate sustainability indicators.

Internal control encompasses various control activities aimed at achieving a firm's managerial objectives. Its importance has grown especially after the U.S. adopted the Sarbanes-Oxley Act (SOX) following the Enron scandal, which introduced strict regulations for establishing and maintaining internal control systems. Since SOX implementation, academic research on internal control systems has intensified. These studies typically fall into two categories: one focuses on the characteristics of firms with integrated internal control systems (ICWs), while the other explores the effects of ICWs on stakeholders, such as market responses and capital cost implications (COSO, 2013).

Management is responsible for designing, implementing, and maintaining effective internal controls, while the audit committee oversees these controls (COSO, 2013). Internal auditors provide independent assessments of control effectiveness but do not participate in their design or implementation (COSO, 2015). In public companies, management is required to report publicly on the effectiveness of internal controls over financial reporting (ICFR). In the presence of significant deficiencies, management must declare the ICFR as ineffective. Internal auditors assist in evaluating ICFR in accordance with Section 404(a) of SOX, maintaining the objectivity required by the Institute of Internal Auditors (IIA), 2012.

However, their objectivity may be compromised by the influence of management or the audit committee over the internal audit function (IAF), as well as by the type of deficiency under review. Since these parties are part of the internal control system, internal auditors may hesitate to report deficiencies that could harm the organization's image. Studies show that auditors are less likely to classify pervasive deficiencies (e.g., "tone at the top") as material weaknesses, compared to process-specific issues. Additionally, when top management exerts primary influence over the IAF, auditors may downplay procedural deficiencies. Predominant oversight by the audit committee can also lead to underreporting of issues where the committee itself is a control weakness – a problem only external auditors can correct through independent testing. These findings highlight how organizational context and power dynamics can influence internal auditors' evaluations, with potential implications for the quality of reported information (Gramling & Schneider, 2018).

A fundamental principle of control activities is the segregation of duties. For example, “Segregation of duties between programmers and operational staff significantly reduces the risk that these individuals, possessing programming knowledge, might introduce intentional errors or malicious code without detection” (Curtea de Conturi, 2012).

To ensure the quality of financial and non-financial reporting, especially in the context of sustainability, the standards issued by the International Auditing and Assurance Standards Board (IAASB) provide an essential framework. ISSA 5000 establishes principles for ESG assurance engagements, requiring a rigorous understanding of internal control and, in the case of reasonable assurance, testing its effectiveness. Furthermore, ISAE 3000 (Revised) and ISAE 3410 regulate non-financial reporting and greenhouse gas emissions disclosures, helping combat greenwashing. ISA 315 emphasizes risk assessment from the perspective of internal control systems, including the ESG dimension. In addition, ISAE 3402 offers assurance over service providers’ controls, supporting ESG data reliability across the supply chain. Collectively, these standards promote strong governance, enhance investor trust, and improve the efficiency of sustainable investments (IAASB).

2.2 Audit – best practices

To ensure transparency, credibility, and rigor in qualitative research, the literature recommends the use of a clearly defined audit procedure. This involves full documentation of the research process (audit trail), the involvement of an independent auditor with domain expertise, and a clear definition of the auditor’s role. Such a procedure strengthens the validation of interpretations and facilitates replicability. Furthermore, publishing the audit trail and the criteria used to select the auditor is encouraged, as it enhances the transparency of the scientific process (Rodgers & Cowles, 2018).

Building on the importance of audit committees, the article "Firm Characteristics and Audit Committees Complying with ‘Best Practice’ Membership Guidelines" (Rainsbury, Bradbury, & Cahan, 2008) analyzes how the characteristics of firms in New Zealand influence the voluntary adoption of audit committees that meet best practice standards. The study finds that demand-side factors (e.g., investor pressure) are not significant drivers, whereas supply-side factors, such as firm size and board independence, are highly influential. Larger firms with more independent boards are more likely to implement audit committees aligned with best practices. These findings suggest that internal structural characteristics play a more important role than external pressures in promoting effective financial governance.

In a related context, the article "Assessing the Impact of the New Auditor’s Report" (Li, Hay, & Lau, 2019) examines the effects of introducing new auditor reporting standards, particularly the inclusion of "Key Audit Matters" (KAMs), on audit quality and transparency. The study demonstrates that the inclusion of KAMs has led to improved communication between auditors, management, and investors, offering clearer insight into significant risks and critical areas in the financial statements. The authors also note that the new standards have encouraged more rigorous auditor behavior and greater accountability to stakeholders. However, the effectiveness of these practices depends on the quality of disclosures and the extent to which auditors engage in explaining their professional judgments. Thus, the consistent and detailed application of the new reporting standards is considered the best practice that contributes to strengthening trust in financial governance.

Returning to the study by Rainsbury, et al., (2008), the article reiterates that external demand factors such as investor pressure do not significantly influence the formation of high-quality audit committees. Instead, supply-side characteristics - particularly firm size and board independence - are key to the adoption of best practice frameworks. This reinforces the idea that robust corporate governance mechanisms are more likely to be adopted in large firms with the internal capacity to absorb the costs and efforts involved in implementing such standards.

Finally, the article "How Do Sustainability Assurance, Internal Control, Audit Failures Influence Auditing Practices?" (Alabdullah, 2023) highlights the growing role of internal control automation through IT tools, ERP systems, and AI-based monitoring in strengthening internal audit practices. Interviewed auditors report that a robust internal control system supported by technology not only improves audit quality but also drives the adoption of electronic auditing tools (e.g., data analytics, real-time dashboards). Automation enables auditors to identify deficiencies more quickly, efficiently, and accurately, enhancing the consistency and rigor of evaluations. Moreover, it allows for continuous and dynamic oversight—critical elements in ESG-integrated auditing and in boosting the efficiency of sustainable investments by reducing risks and increasing confidence in reported data.

2.3 Sustainable investment

The article investigates the impact of sustainability assurance on the cost of capital in financial markets, offering relevant insights into the efficiency of sustainable investments. The study finds that firms which externally verify their sustainability reports (third-party sustainability audits) benefit from a lower cost of capital. This suggests that investors perceive such firms as more transparent and accountable. The reduction in capital costs is more pronounced among large firms and in industries with significant ESG exposure, indicating that sustainable investments become more efficient when there is confidence in the quality and verifiability of non-financial information. Therefore, sustainability assurance is identified as a key best practice in promoting efficient sustainable investments and attracting capital at competitive rates (Liyanarachchi & Lee, 2022).

Expanding on this, another study explores the relationship between the quality of ESG reporting and firm value, emphasizing the impact of transparency and assurance practices on sustainable investment efficiency. The findings reveal that firms producing high-quality ESG reports, complemented by independent external assurance, tend to receive higher market valuations and experience reduced capital costs—indicators of greater investment efficiency. Furthermore, ESG assurance acts as a mechanism for reducing information asymmetry, increasing investor trust and enabling more informed capital allocation decisions. Thus, the quality and verifiability of ESG reporting emerge as key drivers of sustainable investment efficiency in today's finance landscape (Chen, Liu, & Wang, 2023).

In a similar vein, the article "Does ESG performance affect firm value? Evidence from global firms" (Zhang & Zhu, 2023) demonstrates that companies with higher ESG scores enjoy greater market value, reflecting superior efficiency in sustainable investing. This positive effect is stronger in countries with robust institutional frameworks and strict sustainability regulations. Strong ESG performance lowers perceived non-financial risks and boosts investor confidence, contributing to lower capital costs and increased long-term funding. The study confirms that sustainable investments are more efficient when ESG practices are not only reported but genuinely implemented within institutional environments that reward transparency and corporate responsibility.

Adding a broader perspective, the article "Sustainable finance and investment efficiency: A bibliometric and thematic review" (Khan et al., 2023) offers an extensive bibliometric analysis of sustainable finance literature. It finds that sustainable investing is becoming increasingly influential in global financial decision-making, with ESG integration correlating with more efficient capital allocation, reduced risk, and improved long-term performance. The authors highlight that sustainable investment efficiency is supported not only by ESG performance itself, but also by the quality of reporting, the presence of external sustainability assurance, and strong institutional frameworks—as previously concluded by Chen et al. (2023), Zhang & Zhu (2023), and Liyanarachchi & Lee (2022). The paper reinforces the notion that transparency, independent assurance, and the real integration of sustainability into business strategy are critical for building investor trust and ensuring the effective deployment of green capital. As such, it adds depth and consistency to existing research, affirming that ESG reporting and audit best practices play an essential role in maximizing investor value and advancing the transition toward a sustainable financial system.

Lastly, the article "Does environmental, social and governance performance improve firm value? Evidence from panel data analysis" (García-Sánchez et al., 2023) provides strong empirical evidence linking ESG performance with firm value growth, directly supporting the notion of sustainable investment efficiency. Based on a large dataset of European firms, the authors show that strong ESG performance enhances firm value by reducing investor-perceived risk and improving corporate reputation. The study also notes that the positive impact of ESG is stronger in environmentally sensitive industries and among firms with robust corporate governance.

Therefore, responsible ESG integration is not only a moral or legal obligation but also an effective strategy for capital attraction and sustainable growth, consistent with the conclusions of Khan et al. (2023), Chen et al. (2023), and Zhang & Zhu (2023). The findings reinforce the idea that sustainable investments are more efficient when firms are transparent, accountable, and genuinely committed to sustainability, supported by strong systems of audit and reporting.

3. Research methodology

This research contains a qualitative analysis approach, focusing on the examination of multiple academic articles addressing internal control, audit, and the efficiency of sustainable investments from a global perspective. The articles were sourced from reputable databases such as Web of Science. Using such reputable databases ensures academic reliability and relevance of the selected materials.

In addition to peer-reviewed academic literature, the study also considered reports and publications from respected institutions in the field, including COSO, IAASB, and national audit institutions such as the Romanian Court of Accounts. The aim was not to limit the investigation to the European context but to provide a global perspective on the three pillars analyzed, enabling a broader understanding and the identification of internationally applicable best practices.

The decision to adopt a macro-level qualitative approach was made to lay the groundwork for future research directions. The selection of articles was based on a rigorous filtering process, structured around the three main thematic categories of the research: internal control, audit, and the efficiency of sustainable investments. The aim was to ensure that relevant and high-quality sources were identified for each dimension under analysis.

The filtering criteria included: articles published in English, primarily from the field of economics, and peer reviewed. While no regional restrictions were applied, given the objective of offering a global perspective, specific thematic filters were applied in successive stages. First, the focus was on literature addressing internal control systems and best practices. Next, the search was refined to include studies comparing internal versus external audit practices, emphasizing recognized standards and guidelines. Finally, the selection targeted articles discussing the efficiency of sustainable investments, with attention to ESG integration, transparency, and investor trust.

This stepwise filtering ensured thematic consistency and the relevance of each source to the respective research pillar.

Table no. 1: Best practices connecting internal control, audit, and sustainable investment efficiency

Domain	**Best Practice**	**Impact on the Efficiency of Sustainable Investments**
Internal control	COSO framework & SoD	Increased stakeholder trust Reduced fraud risks
External/internal audit	Documented audit taril AI- based monitoring Key audit matters	Improved transparency Reduced information asymmetry
IAASB Standards	ISSA 5000, ISAE 3000/3410/3402 ISA 315	Quality of ESG reporting ensured Governance strengthened
Sustainability assurance	External audit of ESG reports and their real integration into the strategy	Reduced cost of capital Increased market value
ESG performance	Quality ESG reporting Solid governance	Increased investment efficiency, especially in ESG-sensitive industries

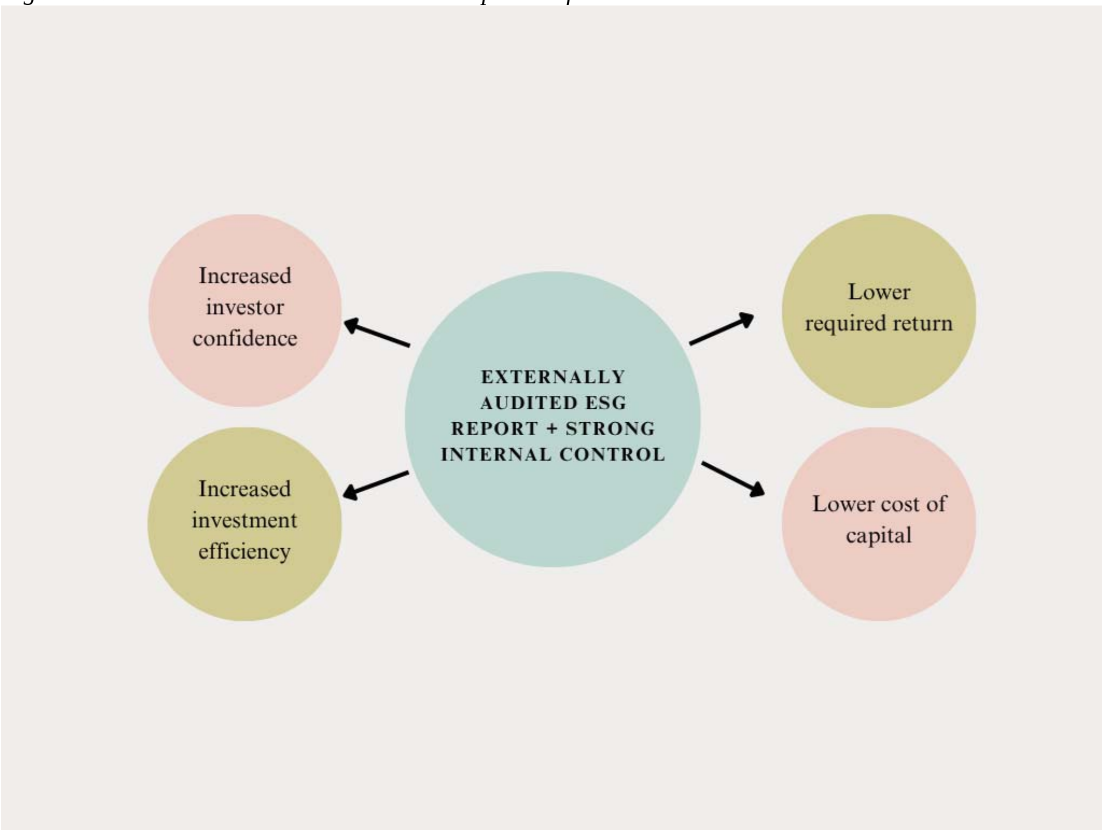
Source: Author's own research

4. Findings

Starting from the research question *RQ: Do best practices in internal control, along with rigorous auditing, increase the efficiency of sustainable investments?,* a qualitative analysis was performed based on carefully selected data of articles published on Web of Science.

In an economic landscape increasingly shaped by ESG criteria, companies' ability to attract efficient sustainable investments largely depends on the quality of internal control and audit. Robust internal control ensures the transparency and accuracy of both financial and non-financial reporting, while auditing provides independent validation of this information, which is essential for investor trust. Research by (Lisic, Myers, Seidel, and Zhou 2019) demonstrates that accounting expertise within audit committees plays a crucial role in supporting high-quality auditing, especially in identifying and reporting internal control deficiencies. An audit committee composed of members with strong accounting competencies creates an environment in which auditors can operate with greater independence and rigor, accurately reporting weaknesses in internal control systems. This dynamic not only strengthens corporate governance but also directly contributes to the efficiency of sustainable investments by reducing informational risks and enhancing firms' credibility in capital markets.

Figure no. 1. The connection between the three pillars of research



Source: Author's own research

A robust internal governance and internal control system, assessed and confirmed by external audit, including reports enriched with Key Audit Matters (according to ISA701) determines a significant reduction in reported risk elements (Fera et al., 2021). Thus, it gives investors a greater level of confidence in the reliability of ESG information. This increase in credibility reduces the perception of risk, decreases the required return, and implicitly lowers the cost of capital, essential conditions for increasing the efficiency of sustainable investments.

The implementation of ERP systems has a significant impact on internal control and audit practices. This is because these systems integrate workflows and databases, allowing for improved traceability and reducing the risks of human error. ERPs contribute to the automation of internal controls and can introduce new risks if not properly configured. For internal auditors, ERP systems offer opportunities to perform more efficient checks through access to real-time data but also require the development of new technical skills. Thus, the relationship between ERP, internal control and audit is one of interdependence, in which the quality of the audit depends on the maturity and governance of the ERP system (Grabski, Leech & Schmidt, 2011).

5. Conclusions

The research paper presents the results of a systematic literature review on the best practices in internal control, auditing and sustainable investments. Using a qualitative approach the analysis included articles from Web of Science database divided into 3 pillars: best practices in internal control, best practices in audit, and sustainable investment performance, using these keywords as filters in the selection of the articles.

Results suggest that when best practices in internal control are strong and well implemented and auditing is rigorous, sustainable investments become more efficient: the cost of capital decreases, the perceived risk is lower, and capital is optimally allocated. An externally audited ESG report according to ISAE 3000, supported by a solid internal control system, will be considered trustworthy by investors. They will demand a lower return, and the company will access capital at a lower cost. Ultimately, leading to increased efficiency of sustainable investment.

While the methodology used offers a comprehensive overview, it also comes with limitations. Notably, the study does not include quantitative analysis, nor does it incorporate sector-specific corporate reports or interviews methods that could have been helpful in identifying literature gaps and offering more targeted insights.

Nevertheless, this exploratory phase provides a valuable foundation for establishing future research objectives and can serve as a reference for other researchers seeking to explore which are the best practices connecting internal control, audit, and sustainable investment efficiency from a global standpoint.

6. References

- Alabdullah, T.T.Y., 2023. How do sustainability assurance, internal control, audit failures influence auditing practices? *Journal of Management, Accounting, General Finance and International Economic Issues,* 2(3), pp. 671–688. https://doi.org/10.55047/marginal.v2i3.705
- Asante Appiah, B. and Lambert, T.A., 2023. The role of the external auditor in managing environmental, social, and governance (ESG) reputation risk. *Review of Accounting Studies*, 28(4), pp. 2589–2641. [online] Available at: https://doi.org/10.1007/s11142-022-09706-z.
- Chen, Y., Liu, Q. and Wang, Y., 2023. Does sustainability reporting quality improve firm value? Evidence from ESG disclosure and assurance practices. *Journal of Environmental Management*, 349, p. 119341. https://doi.org/10.1016/j.jenvman.2023.119341
- Committee of Sponsoring Organizations of the Treadway Commission (COSO), 2013. Internal control—Integrated framework. [online] Available at: https://assets.kpmg.com/content/dam/kpmg/pdf/2016/05/2750-New-COSO-2013-Framework-WHITEPAPER-V4.pdf. [Accessed 4 May 2025]
- Curtea de Conturi, 2012. Manual de audit IT. [online] Available at: https://www.curteadeconturi.ro/uploads/25529564/77241a13/330b7f07/6c1123fc/16ba70a5/2eeb2cdf/0fbfb694/38bf227f/MANUAL_AUDIT_IT.pdf [Accessed 4 May 2025]
- Fera, P., Leonardi, L. and Mongiello, M., 2021. Corporate governance and audit committee effectiveness: Evidence from EU listed companies. Corporate Governance: The International Journal of Business in Society, 21(5), pp. 889–912. https://doi.org/10.1108/CG-09-2020-0427
- García-Sánchez, I.M., Raimo, N., Rubino, M. and Vitolla, F., 2023. Does environmental, social and governance performance improve firm value? Evidence from panel data analysis. Journal of Cleaner Production, 388, p. 136024. https://doi.org/10.1016/j.jclepro.2022.136024

- Grabski, S.V., Leech, S.A. and Schmidt, P.J. (2011) 'A review of ERP research: A future agenda for accounting information systems', *Managerial Auditing Journal*, 26(4), pp. 257–278. https://doi.org/10.1108/maj-11-2012-0775.
- International Auditing and Assurance Standards Board (IAASB), n.d. *International Standard on Sustainability Assurance 5000 – General Requirements for Sustainability Assurance Engagements*. [online] Available at: https://www.iaasb.org/publications/international-standard-sustainability-assurance-5000-general-requirements-sustainability-assurance. [Accessed 5 May 2025]
- Khan, A.A., Khan, S., Alrashidi, M.N. and Zaman, R., 2023. Sustainable finance and investment efficiency: A bibliometric and thematic review. *Procedia Computer Science*, 228, pp. 3222–3229. https://doi.org/10.1016/j.procs.2023.07.275
- Li, H., Hay, D. and Lau, D., 2019. Assessing the impact of the new auditor's report. *Pacific Accounting Review,* 31(1), pp. 110–132. https://doi.org/10.1108/PAR-02-2018-0011
- Lisic, L.L., Myers, L.A., Seidel, T.A. and Zhou, J., 2019. Does audit committee accounting expertise help to promote audit quality? Evidence fro m auditor reporting of internal control weaknesses. *Contemporary Accounting Research*, 36(4), pp.2521–2553. https://doi.org/10.1111/1911-3846.12517
- Liyanarachchi, G.A. and Lee, G., 2022. Sustainability assurance and the market cost of capital. *Australian Journal of Management*, 47(4), pp. 586–604. https://doi.org/10.1177/03128962221093090
- Rainsbury, E.A., Bradbury, M.E. and Cahan, S.F., 2008. Firm characteristics and audit committees complying with 'best practice' membership guidelines. *Accounting and Business Research*, 38(5), pp. 393–408. https://doi.org/10.1080/00014788.2008.9665773
- Rodgers, B.L. and Cowles, K.V., 2018. Reflections and review on the audit procedure: Guidelines for more transparency. *Qualitative Health Research*, 28(5), pp. 758–766. https://doi.org/10.1177/1609406918763214.
- Zhang, R. and Zhu, Y., 2023. Does ESG performance affect firm value? Evidence from global firms. *Tourism Management*, 98, p. 104776. https://doi.org/10.1016/j.tourman.2023.104776