

Does financial materiality judgement matter in reporting intellectual capital? A systematic literature review and future research trends

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Abstract

Purpose – This paper aims to investigate materiality judgement providing insights, critiques and future research paths in light of the open debate on the role of materiality in corporate financial disclosure, highlighting potential connections and implications with sustainability and intellectual capital (IC) reporting.

Design/methodology/approach – The research presents an overview of the analysis of financial materiality, including new stimuli from recent studies and regulatory requirements for financial and non-financial reporting. Accordingly, this study used a systematic literature review (SLR) based on a combination of content, text and bibliometric analysis of materiality in accounting research studies, collecting data from the Scopus database as one of the most relevant repositories.

Findings – The SLR identified four relevant research trends, concerning: (1) the relevance of materiality principles in corporate disclosure; (2) financial reporting practices and materiality; (3) theories and approaches in defining financial materiality and (4) the existence of quantitative and qualitative thresholds in the materiality judgement.

Research limitations/implications – The results provide theoretical and practical implications when comprehending the development of the concept of financial materiality in financial statements and whether they can be appropriate in reporting IC as well. We identified future research paths.

Practical implications – From a practical perspective, this study is useful for companies implementing financial materiality based on stakeholder engagement and improving their transparency in financial and non-financial reporting practices.

Social implications – The research investigates if the process for assessing materiality is in line with the expectations of all stakeholders involved in financial and non-financial reporting.

Originality/value – This research is the first to investigate the scientific basis and applicability of the concept of financial materiality to sustainability and IC reporting.

Keywords Financial materiality, Sustainability reporting, Intellectual capital reporting, Systematic literature review

Paper type Research paper



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1. Introduction

Although the topic of materiality has recently been discussed among scholars, its concept has a long history and has been debated since the 1950s, as a complementary aspect to the reliability of financial statements.

In recent years, scholars, regulators and practitioners have been “obliged” to address the concept of materiality applied to sustainability reporting (Baumüller and Sopp, 2022; Raith, 2022). Currently, regulators are wondering if financial materiality should be the star guiding the identification of a “sole” concept of materiality or if, as suggested by the European Commission (2019) and the European Financial Reporting Advisory Group (EFRAG, 2021), impact materiality and financial materiality should co-exist in corporate reporting (Jørgensen *et al.*, 2022; Delgado-Ceballos *et al.*, 2023).

While the investigation of the concept of materiality in sustainability reporting has increased in recent years (Eccles *et al.*, 2012), there is a gap in the literature when considering if the development of the academic conceptualisation of materiality which is applied when preparing financial statements, is also appropriate in sustainability reporting as well (Bota-Avram, 2022; Khan, 2022). This issue appears to be critical when applied to intellectual capital (IC) reporting (Paoloni *et al.*, 2023).

This paper aims to investigate financial materiality judgements, providing insights, critiques and future research paths. We present an overview of materiality analysis, which has been developed from the new stimuli from recent studies on corporate reporting. To this end, we used a systematic literature review (SLR) based on a combination of content, text and bibliometric analysis of materiality in academic research studies, collecting data from the Scopus database (Garanina *et al.*, 2022; Massaro *et al.*, 2016). The Scopus database is widely applied to bibliometric analyses because it is suitable for exporting data, covers a wide set of papers in the field of business economics, and is generally recognised as a scientific reference by the academic community (Aksnes and Sivertsen, 2019; Dabić *et al.*, 2021; Gao *et al.*, 2021).

We retrieved a dataset of 102 documents. After two rounds of screening and reading of the (1) title, abstract and keywords, and (2) research aims, we compared our results, selecting 49 core articles to achieve our research aims covering the period 1977–2022. From our analysis, we identified the main thematic clusters, drafting four “Research Trends”.

The contribution of this paper is to provide the first comprehensive debate on materiality in academic research studies, proposing future research issues on its adoption for IC reporting.

We also offer theoretical and practical implications by the retrieved research paths guiding the application of judgements for financial materiality assessments. Theoretical implications offer insights that have never been carefully addressed by scholars before. The main implications are: (1) the relevance of materiality in financial statements and its under-investigated role in non-financial statements; (2) the existence of materiality’s facets about management processes; (3) adjusting the relationship between materiality and stakeholders’ informational needs and (4) the call for additional quantitative and qualitative thresholds to meet investors’ information needs on IC disclosure.

Our study can be useful for regulators and standard-setters, as they can take the opportunity to provide a more comprehensive framework of materiality implementation, providing financial disclosures to overcome the issues of ambiguity and low effectiveness for stakeholders, also converging towards satisfying the broader information needs arising from the recent sustainability stimuli (Street and Gordon, 2023). Contextually, it can support regulators in distinguishing the practical determination of financial materiality for financial and sustainability reports.

The literature review and theoretical framework are described in Section 2. The method and research protocols are provided in Section 3. Empirical results and the new proposed

framework are described in Sections 4 and 5, respectively. Finally, Section 6 concludes the paper by summarising the findings, limitations and future steps.

2. Research context and theoretical framework

The need for materiality judgements qualifies financial information and requires companies to make decisions about the magnitude and nature of item recognition, measurement, presentation and disclosure (DeZoort *et al.*, 2006; IASB, 2017; Green and Cheng, 2019). Research provides explanations of materiality judgements about the relevant information contained in financial statements (León and Salesa, 2024).

Recent literature on the subject has been dedicated to the definition and application of the concept of financial materiality in sustainability disclosure and the concept of sustainability materiality in sustainable disclosure (Mio and Fasan, 2013; Eccles and Krzus, 2014; Edgley *et al.*, 2015). The issue of a double level of materiality has recently involved much research activity (Whitehead, 2017; Fiandrino *et al.*, 2022).

According to Lai *et al.* (2017), different scholars have offered various definitions of the materiality principle, which shift over time and across financial and corporate sustainability reporting (Brennan and Gray, 2005; Messier *et al.*, 2005; Steenkamp, 2018; Cerbone and Maroun, 2020). Christensen *et al.* (2021) addressed materiality concepts by discussing single versus double materiality. In this perspective, they considered the alternative between providing financial and sustainability disclosures aimed at investors (single materiality) or providing more extensive information about the entity's impacts on the environment and society to multiple stakeholders (double materiality).

The European Commission (2019, p. 6) joined the debate by introducing the issue of "double materiality" (financial materiality and impact materiality), referring, on the one hand, "... to the company's development, performance [and] position" (financial materiality) and, on the other hand, to the "impact of [the company's] activities [which] indicates environmental and social materiality". A separate approach can determine a more specific and clearer framework, considering that the contexts (and, consequently, objectives and metrics) should be specifically determined (Delgado-Ceballos *et al.*, 2023). Some scholars have already provided evidence that the two concepts have naturally followed a naturally converging process, also considering that ESG aims to align social and environmental features with a financial perspective (Cerbone and Maroun, 2020; MacNeil and Esser, 2022).

The IC disclosure has been "formally" included in sustainability reporting under the perspective of a resource able to support the entity's financial performance, even if it is not recognised as a balance sheet item (IIRC, 2021; Xu and Li, 2022; EC, 2023). Even if materiality was originally considered to be a financially driven feature, some scholars tried to find a connection between financial reporting and IC measurement, particularly to provide some evidence of the relevance of human resources (Roslender, 2004; Brännström and Giuliani, 2009; Caputo *et al.*, 2016; Dumay *et al.*, 2020). This is crucial information for stakeholders, which should be put under the condition of comprehending corporate human capital and knowledge management (Rehman *et al.*, 2022; Del Giudice *et al.*, 2023a; Paolone *et al.*, 2024). It should be noted that some research has demonstrated the influence of all dimensions of IC on strategic orientation and firms' performances, specifically on supply chain learning and resilience (Mubarik *et al.*, 2022; Shaik *et al.*, 2024).

According to Bananuka *et al.* (2023, p. 1), IC is significantly associated with sustainability reporting practices. More specifically, the authors showed that human capital and relational capital have a positive impact on sustainability reporting practices, while the structural capital element does not have a significant effect. Parshakov and Shakina (2020) found that

US companies do not extensively disclose IC in their annual reports by using explorative content analysis.

Amendola *et al.* (2023, p. 1) confirmed the great ability of non-financial statements (NFS) to provide IC information which “appears significantly related to some firm characteristics considered here, such as capitalization, profitability, productivity, intangibility”. Under a management view, disclosures on intellectual capital can provide useful information on the entities’ ability to manage the available resources and provide a broader perspective on value creation. This stimulates a virtuous path toward a more conscious adoption of the multiple capitals that the enterprise can utilise (McNally and Maroun, 2018).

That said, IC reporting has always been oriented towards presenting the intangible value of firms by providing the “hidden” basis of the company, to produce value in the short and in the medium term (Abhayawansa, 2014; Wang *et al.*, 2021). Furthermore, IC has been strongly investigated in different research fields of knowledge management, such as: family and entrepreneurial aspects (Capolupo *et al.*, 2023), knowledge-intensive business service (Magni *et al.*, 2023), employee creativity (Liao *et al.*, 2024), internal organisational assets and environmental dynamics on employees’ orientation (Caputo *et al.*, 2021b; Vătămănescu *et al.*, 2023), risk management (Zieba *et al.*, 2022), corporate reputation and culture (Arduini *et al.*, 2023), corporate financial performance (Gangi *et al.*, 2018) and corporate ethics (Rossi *et al.*, 2021).

3. Methodology

We used a systematic literature review (SLR) based on a combination of content, text and bibliometric analysis, to investigate materiality judgements in a financial perspective, achieving research aims, providing insights, critiques and future research paths (Alvesson and Deetz, 2000). The content and text analyses are relevant when investigating documents and phenomena; bibliometric analysis represents a relevant method of information science, based on quantitative studies of bibliographic material (Merigó and Yang, 2017). The bibliometric method concerns data collection and involves the identification of a suitable source for a literature search (see Figure 1). Thus, we defined the research questions following the main literature on SRL (Garanina *et al.*, 2022; Massaro *et al.*, 2016; Petticrew and Roberts, 2006):

RQ1. What is the state of the art for investigating materiality judgements and what is its application in the light of new stimuli arising from sustainability reporting requirements?

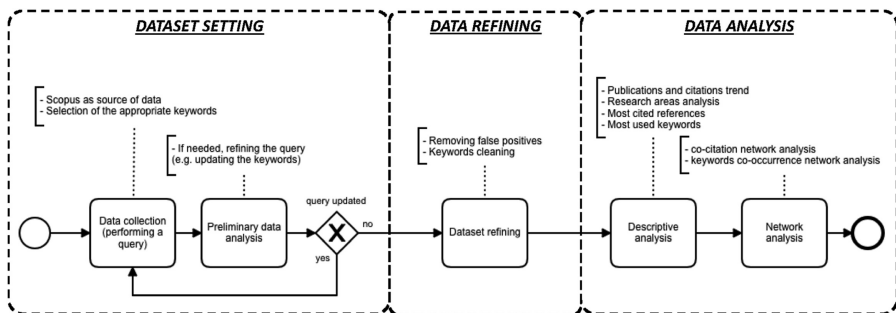


Figure 1.
Research protocol

Source(s): Adapted from Za and Braccini (2017)

RQ2. What is the focus and critique of the literature within the materiality judgements?

RQ3. What is the future research for materiality judgements, regarding the determination and disclosure of intellectual capital?

The presentation of the state of the art, insights and critiques in materiality judgements derive from RQ1 and RQ2, while the future research paths derive from RQ3. We used the Scopus database since it fully covers over 20,000 major journals, totalling approximately 70 million searchable records. In this way, we examined a broader collection of articles (captured in singular and plural forms), focusing on international research contributions.

The search for data in Scopus was carried out by selecting the following relevant keywords, established by the authors after reading seminal papers in the field: “financial”, “materialit*” and “accounting”. We used the Boolean operator “AND” in the search query. The search considered the title, abstract and keywords of the documents to ensure the comprehensive nature of our search in the subject area of Business Management and Accounting (BMA). We established the horizontal time without limitation, from the starting year of publication, and assumed 2022 as the last year of publication. We selected articles and review documents to better represent results avoiding a grey literature analysis. English was selected as the search language, to be consistent with the nature of our research and prior systematic review studies:

TITLE-ABS-KEY (“financial” AND “materialit” AND “accounting”) AND PUBYEAR > 1976 AND PUBYEAR < 2023 AND (LIMIT-TO (PUBSTAGE, “final”)) AND (LIMIT-TO (SUBJAREA, “BUSI”)) AND (LIMIT-TO (DOCTYPE, “ar”)) OR LIMIT-TO (DOCTYPE, “re”))*

We retrieved a dataset of 102 documents belonging to BMA and covering the period 1977–2022. A scale of the relevance of the articles was established for some criteria, such as the year of publication and the citation’s weight. Articles were content analysed by author, to delete irrelevant papers and determine a final core dataset. To do this, we qualitatively examined the content of the papers, verifying whether the selection was based on a “random combination of words” or whether financial materiality was central to the paper. We assumed 49 core articles, to achieve our research aims in the investigation of materiality judgements, assuming the financial perspective.

We used VOSviewer software to develop the bibliometric analysis (Van Eck and Waltman, 2009, 2017). To provide a comprehensive map of the knowledge structure of materiality, consistent with recent trends in bibliometric accounting research (Merigó and Yang, 2017; Zhong *et al.*, 2016), we used several complementary bibliometric metrics based on a database search that followed the systematic review protocol (Caputo *et al.*, 2021a; Tranfield *et al.*, 2003). To determine the research trends, we followed the following steps: (1) bibliometric citation analysis; (2) bibliometric co-occurrence and keywords analysis; (3) bibliographic coupling; (4) clusters content analysis (Khan, 2022). Thus, we carried out content, description and network analysis to provide results and were able to deeply review each paper to analyse how the authors debated the materiality. This analysis allowed the possibility of identifying a set of clusters based on how and what issues were addressed in each contribution.

4. Results and discussion

This section presents the results of the analyses to answer the research questions: RQ1. *What is the state of the art for investigating materiality judgements?* and RQ2. *What is the focus and critique of the literature within the materiality judgements?* We developed insights and critiques using the content, text and bibliometric analysis.

4.1 Insights and critiques

Firstly, the topicality of the materiality issue was declared by the following results of bibliometric analyses related to 49 selected contributions. Our analysis shows that materiality represents an under-explored research area, with 102 documents in the BMA subject area over the period 1977–2022. The results of all the descriptive statistical methods used in the bibliometric analysis are shown in Figures 2 and 3. The figures show that interest in materiality issues has increased over the last period, although the trend is discontinuous. A significant increase in publications on this topic started after 2003. The most productive authors highlight scholars with two publications: that is Street D.L., Mohammad J., Sallehuddin A., Talha M. and Jorge S.M.

We identified the most popular keywords used in the dataset, creating a graph based on their co-occurrences (Figure 2). The keywords represent the nodes and there is a tie between two of them if both are present in the same contribution (co-occurrence); the thickness shows the number of contributions in which the pair appears.

Figure 2 represents a network visualisation (cluster) of keyword publications on the topic of materiality to analyse keywords and obtain information about factors related to the materiality issue. It shows the most common keywords in the dataset, where “materiality” is the most used keyword with 17 occurrences, “financial reporting” is the second most common with 4 occurrences and “accounting”, “budgetary reporting”, “international financial reporting standards” and “national accounts” are the third most-used components with 3 occurrences each. Table 1 shows the occurrences and the total link strength, while Table 2 reports the total citations and the total link strength. The size of each node (and its label) represents the occurrence of keywords within the dataset (the

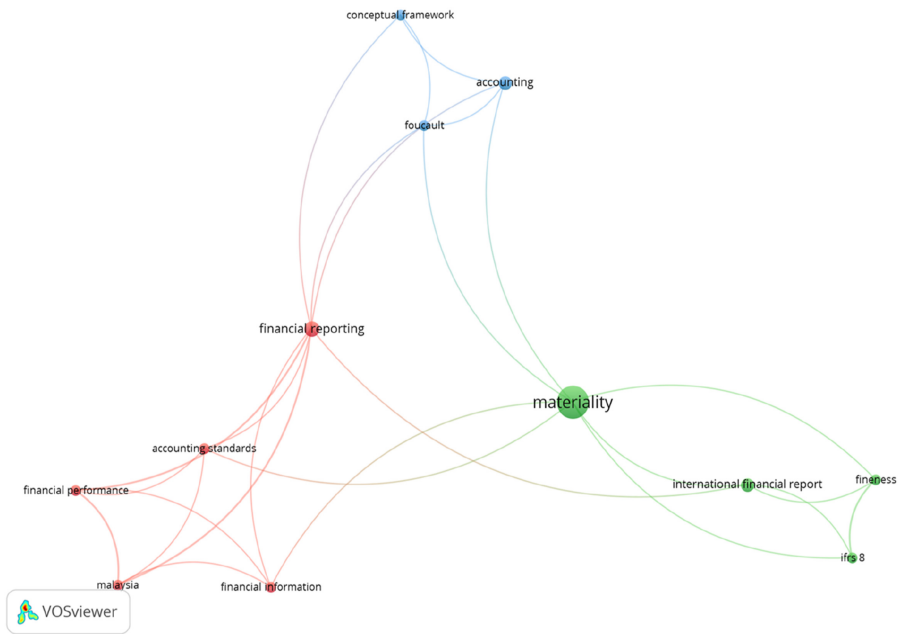


Figure 2.
Co-occurrence graph

Source(s): Authors’ work

| Keyword | Occurrences | Total link strength |
|---|-------------|---------------------|
| Materiality | 17 | 7 |
| Financial reporting | 4 | 10 |
| Accounting | 3 | 4 |
| Budgetary reporting | 3 | 7 |
| International financial reporting standards | 3 | 4 |
| National accounts | 3 | 7 |
| Accounting standards | 2 | 4 |
| Central government | 2 | 5 |
| Conceptual framework | 2 | 3 |
| Financial information | 2 | 4 |
| Financial performance | 2 | 6 |
| Fineness | 2 | 4 |
| Foucault | 2 | 4 |
| Governmental accounting | 2 | 5 |
| IFRS 8 | 2 | 4 |
| Malaysia | 2 | 6 |

Source(s): Authors' work

Table 1.
Keywords occurrences
and total link strength

| # | Contributions | Total citations | Total link strength |
|----|---|-----------------|---------------------|
| 1 | Edgley C. (2014) | 66 | 25 |
| 2 | Munro R. (1995) | 57 | 4 |
| 3 | Acito A.A., Burks J.J., Johnson W.B. (2009) | 45 | 27 |
| 4 | Nicholls A. (2018) | 37 | 11 |
| 5 | Woods M., Marginson D.E.W. (2004) | 28 | 1 |
| 6 | Firth M. (1979) | 27 | 0 |
| 7 | Hsu G.C. (2009) | 24 | 4 |
| 8 | Hodgdon C., Hughes S.B., Street D.L. (2011) | 21 | 0 |
| 9 | Keune M.B., Johnstone K.M. (2009) | 20 | 28 |
| 10 | Hashim N., Li W., O'Hanlon J. (2016) | 19 | 0 |
| 11 | Chalmers K., Godfrey J.M. (2005) | 17 | 0 |
| 12 | Ucieda Blanco J.L., Garcia Osma B. (2004) | 16 | 3 |
| 13 | Young C.-S., Tsai L.-C., Hsu H.W. (2008) | 15 | 9 |
| 14 | Mazay V., Wilkins T., Zimmer I. (1993) | 15 | 2 |

Source(s): Authors' work

Table 2.
Total citations (at least
15) and total link
strength

number of papers in which it appears). The colour of the circles determines the cluster to which the keyword belongs.

4.1.1 Clusters and emerging research trends. Figure 3 illustrates the bibliographic coupling of the investigated articles. According to the previous literature (Caputo *et al.*, 2021a), bibliographic coupling occurs when two documents are quoted by a third document; this should assume that the cited documents debate a common topic (Kessler, 1963; Caputo *et al.*, 2021a). Bibliographic coupling is the opposite of co-citation. Two publications are bibliographically coupled if there is a third publication that is cited by both publications (Kessler, 1963). Bibliographic coupling concerns the overlapping of reference lists of publications. The larger the number of references which two publications have in common, the stronger the bibliographic coupling relationship between them. Although bibliographic coupling was introduced earlier than co-citation, it initially received less attention in the

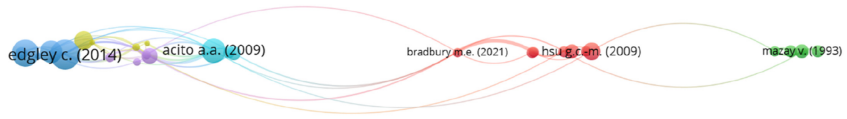


Figure 3.
Bibliographic coupling



Source(s): Authors' work

literature on visualising bibliometric networks. In recent years, the popularity of bibliographic coupling has increased considerably (Boyack and Klavans, 2010; Small, 1997).

Moving on from the bibliographic coupling analysis, we content-analysed the documents attributed to the single clusters. The bibliometric analysis traced six clusters back to wider research trends (RT). We then examined the VOSviewer grouping, opting to re-categorise the papers into four research areas according to their content and focus, and not automatically by basing our classification on the bibliographic coupling (Lombardi and Secundo, 2021). According to this investigation, we specifically represented the orientation of the research on materiality judgements by adjusting the six retrieved clusters into four relevant clusters, identifying four main RTs as follows (Table 3):

- (1) Research Trend 1 – The relevance of materiality principles in corporate disclosure
- (2) Research Trend 2 – Financial reporting practices and materiality
- (3) Research Trend 3 – Theories and Approaches to define financial materiality
- (4) Research Trend 4 – The existence of quantitative and qualitative thresholds in the materiality judgement

4.1.1.1 Research Trend 1 – The relevance of materiality principles in corporate disclosure. RT1 is based on disclosure issues and the effects that material information has on stakeholders, such as investors. From a wider analysis, Bradbury and Scott (2021) documented that the interpretation of the materiality principle is different from a public enforcement to an auditor's perspective.

Elkins and Entwistle (2018) explored the content of the notes, observing how the practice has also revealed the presence of too much irrelevant information that can create confusion from the stakeholders' perspective and damage the effectiveness of financial statement disclosures. The research concludes that standards setters could benefit from having guiding principles finalised to assist the development and evaluation of the disclosure of the adopted standards. At the same time, Li *et al.* (2019) exposed the concept of materiality in the specific context of climate-related risk information.

According to Thornton (1986), firms which are subject to different political pressures (utilities) are more strongly influenced by the materiality of the disclosures on current cost information by clients. Other studies stress the relevance of disclosures from the managerial perspective and the value relevance of providing material disclosures. Hsu (2009) showed the relation between corporate disclosures and accounting earnings, demonstrating that disclosure frequency and magnitude of earnings are positively correlated. The study

| Research trends | Documents | Citations |
|--|--|-----------|
| Research trend 1 – The relevance of materiality principles in the corporate disclosure | Bradbury, M.E., Scott, T. (2021). What accounting standards were the cause of enforcement actions following IFRS adoption?, <i>Accounting and Finance</i> | 7 |
| | Elkins H., Entwistle G. (2018). A commentary on accounting standards and the disclosure problem: Exploring a way forward. <i>Journal of International Accounting, Auditing and Taxation</i> | 10 |
| | Hsu G.C. (2009). Impact of earnings performance on price-sensitive disclosures under the Australian continuous disclosure regime, <i>Accounting and Finance</i> | 24 |
| | Iatridis G.E.(2012). Voluntary IFRS disclosures: Evidence from the transition from UK GAAP to IFRSs, <i>Managerial Auditing Journal</i> | 10 |
| | Li, A., Michaelides, M., Rose, M., Garg, M. (2019). Climate-related Risk and Financial Statements: Implications for Regulators, Preparers, Auditors and Users, <i>Australian Accounting Review</i> | 8 |
| | Thornton D.B. (1986). Current cost disclosers and nondisclosers: Theory and Canadian evidence, <i>Contemporary Accounting Research</i> | 11 |
| | Ucieda Blanco J.L., Garcia Osma B. (2004). The comparability of international accounting standards and US GAAP: an empirical study of Form 20-F reconciliations, <i>International Journal of Accounting, Auditing and Performance Evaluation</i> | 16 |
| | Acito A.A., Burks J.J., Johnson W.B. (2009). Materiality decisions and the correction of accounting errors, <i>The Accounting Review</i> | 45 |
| | Cereola S.J., Nichols N.B., Street D.L. (2017). Geographic segment disclosures under IFRS 8: Changes in materiality and fineness by European, Australian and New Zealand blue chip companies, <i>Research in Accounting Regulation</i> | 11 |
| | Keune M.B., Johnstone K.M. (2009). Staff accounting bulletin no. 108 disclosures: Descriptive evidence from the revelation of accounting misstatements, <i>Accounting Horizons</i> | 20 |
| Research trend 2 – Financial reporting practices and materiality | Kobbi-Fakhfakh, S. (2017). Geographical disclosure quality under IFRS 8: A European Union analysis, <i>International Journal of Banking, Accounting and Finance</i> | 5 |
| | Talha M., Sallehuddin A., Mohammad J. (2006). Changing pattern of competitive disadvantage from disclosing financial information. A case study of segmental reporting practice in Malaysia, <i>Managerial Auditing Journal</i> | 11 |
| | Talha, M., Sallehuddin, A., Mohammad, J. (2008). Competitive disadvantage and segment disclosure: Evidence from Malaysian listed companies, <i>International Journal of Commerce and Management</i> | 9 |
| | Young C.-S., Tsai L.-C., Hsu H.W. (2008). The effect of controlling shareholders' excess board seats control on financial restatements: Evidence from Taiwan, <i>Review of Quantitative Finance and Accounting</i> | 15 |
| | Woods M., Marginson D.E.W. (2004). Accounting for derivatives: An evaluation of reporting practice by UK banks, <i>European Accounting Review</i> | 28 |

*(continued)***Table 3.**
Research trends

| Research trends | Documents | Citations | |
|---|--|--|----|
| Research trend 3 – Theories and approaches in defining financial materiality | Chen, H., Pany, K., Zhang, J. (2008). An analysis of the relationship between accounting restatements and quantitative benchmarks of audit planning materiality, <i>Review of Accounting and Finance</i> | 6 | |
| | Edgley C. (2014). A genealogy of accounting materiality, <i>Critical Perspectives on Accounting</i> | 66 | |
| | Munro R. (1995). Managing by Ambiguity: An Archaeology of the Social in the Absence of Management Accounting, <i>Critical Perspectives on Accounting</i> | 57 | |
| | Nicholls A. (2018). A General Theory of Social Impact Accounting: Materiality, Uncertainty and Empowerment, <i>Journal of Social Entrepreneurship</i> | 37 | |
| | Ro, B.T. (1982). AN ANALYTICAL APPROACH TO ACCOUNTING MATERIALITY, <i>Journal of Business Finance and Accounting</i> | 4 | |
| | Shaub, M.K. (2005). Materialism and Materiality, <i>International Journal of Accounting, Auditing and Performance Evaluation</i> | 5 | |
| | Research trend 4 – The existence of quantitative and qualitative thresholds in the materiality judgment | Chung, P.K., Geiger, M.A., Paik, G.H.D., Rabe, C. (2021). Materiality thresholds: Empirical evidence from change in accounting estimate disclosures, <i>Accounting Horizons</i> | 3 |
| | | Doxey, M.M., Hatfield, R.C., Rippey, J.A., Peel, R.K. (2020). Asymmetric investor materiality and the effects of disclosure, <i>Auditing</i> | 5 |
| | | Eilifsen, A., Hamilton, E.L., Messier, W.F., Jr. (2021). The importance of quantifying uncertainty: Examining the effects of quantitative sensitivity analysis and audit materiality disclosures on investors' judgments and decisions, <i>Accounting, Organizations and Society</i> | 3 |
| | | Martinez D.E., Cooper D.J. (2019). Assembling performance measurement through engagement, <i>Accounting, Organizations and Society</i> | 11 |
| Mazay V., Wilkins T., Zimmer I. (1993). Determinants of the Choice of Accounting for Investments in Associated Companies, <i>Contemporary Accounting Research</i> | | 15 | |
| Qualitative financial statement disclosures: Legal and ethical considerations, <i>Business Ethics Quarterly</i> | 7 | | |

Table 3. Source(s): Authors' work

introduced the concept that the frequency and the timing of materiality for bad news and good news are asymmetric. According to the positive accounting theory, [Iatridis \(2012\)](#) illustrated how material voluntary IFRS disclosures, providing higher quality accounting information in the specific cases of IFRSs first-time adoptions, determine a greater positive change in equity and earnings. In this context, the materiality is functional to the identification of the operations that qualify to determine an accounting or a managerial decision. The author revealed that the adoption of voluntary financial disclosures is related to obtaining a managerial benefit.

It can be seen that the application of the principle of corporate disclosure has deserved particular attention in research studies because qualitative information presents a high level of attention to support stakeholders in their decision-making process and the identification of material information can often be discretionary and ambiguous.

4.1.1.2 Research Trend 2 – Financial reporting practices and materiality. RT2 is focused on specific and technical accounting issues. Scholars have especially examined IFRS studies. The most investigated topics concern segmental reporting and adjustments. The interest in segmental reporting derives from the selection and identification of disclosed sectors based on the information's usefulness to the readers of financial statements. Some research examined the application of IFRS 8, operating segments and the qualitative informational differences arising concerning the previously applied IAS 14. These studies are corroborated by empirical analysis based on local companies and [Cereola et al. \(2017\)](#) found that IFRS 8 presents a lower level of aggregation. It can be contextually observed that the lack of a predetermined numerical threshold allows a higher level of discretion. [Talha et al. \(2006, 2008\)](#) investigated the competitive disadvantage that listed Malaysian companies have by disclosing segmental information in compliance with the local GAAPs. The idea underlining the paper is that IFRS 8 requires additional information that can produce a better comprehension of an entity's operations resulting, therefore, in a competitive disadvantage. [Kobbi-Fakhfakh \(2017\)](#) particularly addressed, among the other elements that characterise financial reporting quality, the quantitative materiality thresholds that have been used to determine the materiality of revenues in individual countries. The author found a variety of applied thresholds that corroborate the hypothesis that IFRS 8 has been differently interpreted by users.

[Young et al. \(2008\)](#) proposed an investigation into the diverse perception that the proportion of controlling shareholders' board seats can have on financial restatements and the determination of materiality. [Woods and Marginson \(2004\)](#) found that materiality is not transparently applied to the disclosure of financial derivatives, determining a low level of usefulness for users. In this perspective, the usefulness of the information is determined in terms of materiality, relevance, reliability and comparability, emphasising that materiality is the only "threshold characteristic", while the other principles are subsidiary qualities.

4.1.1.3 Research Trend 3 – Theories and approaches in defining financial materiality. Research Trend 3 is based on the investigation of the materiality concept and its approaches. RT3 deals with the financial materiality issue by taking into consideration different scientific and sociological theories. [Edgley \(2014\)](#) provided research on the historical dimension of the materiality concept by proposing a qualitative interpretation of the principle development, based on the perspectives and the underlying circumstances as "conditions, events, traces of power and expert discourses" that have shaped its definition. The author concluded that, based on the Foucauldian method, the concept has been constructed on the basis of specific factors, leading to a non-specific interpretation by the actors involved. [Nicholls \(2018\)](#) argued that financial accounting practice can be affected by the determination of uncertain material data, concluding that social impact accounting can provide more useful information to stakeholders.

[Ro \(1982\)](#) underlined the need for an analytical framework exploring the conceptual issues of materiality within the decision theory. He concluded that materiality judgement is not feasible if the standard is set at the item's particular magnitude.

[Chen et al. \(2008\)](#) discussed the legal concept and the perspective from which materiality should be determined, observing that the preparer's judgement on materiality is to be identified in the user's view. The results provide an inconsistent approach applied by users and suggest that practitioners would be likely to revise their identification and selection of benchmarks and thresholds.

[Shaub \(2005\)](#) referred to the concept of materiality by focusing its attention on users addressing disclosures "declared" as material, implying opportunistic professional behaviour. [Munro \(1995\)](#) discussed how "accounting centrality" can impact a firm's management and the decision-making process. Whereas management accounting is absent,

the management ethos and other “primitive” forms of control become relevant. From this point of view, the author relates the concept of materiality to the whole financial data environment, which is opposed to the other levels of control, including ethos and social rules.

By reading the papers included in this trend, the idea arises that the concept of materiality belongs, not only to the accounting field, but is also affected by other disciplines that create a perception of the idea of materiality in a financial context.

4.1.1.4 Research Trend 4 – The existence of quantitative and qualitative thresholds in the materiality judgement. Research Trend 4 examines the methodology used to determine the applied thresholds when preparing financial statements. Specifically, [Chung et al. \(2021\)](#) provided empirical evidence on the materiality thresholds adopted in a change in accounting estimate disclosures. This study revealed that the quantitative thresholds adopted in changes in accounting estimates are lower than conventionally applied thresholds. At the same time, they pointed out that the preparers of reports do not only consider quantitative thresholds, but also qualitative thresholds, when disclosing changes in accounting estimates. [Doxey et al. \(2020\)](#) showed how non-professional investors identify lower materiality thresholds than typical auditor limits, and that disclosure reduces the distance between the user and auditor materiality and eliminates the asymmetry in investors’ stated materiality levels.

[Eilifsen et al. \(2021\)](#) discussed the impact that the disclosure of thresholds can have on investors. The scholars comprehend materiality thresholds as being the benchmarks for evaluating the “severity of imprecision communicated” within a quantitative sensitivity analysis. Based on an empirical investigation, the study concludes that investors are more confident when financial statements inform about materiality thresholds and present a quantitative sensitivity analysis. The above-illustrated point of view is substantially shared by [Shafer \(2004\)](#) as well. The author suggested that quantitatively immaterial information relating to unlawful transactions or regulatory non-compliance should be considered for disclosure.

There is another field of research examining the effects arising from the determination of the thresholds. [Mazay et al. \(1993\)](#) examined behaviour when accounting for investments in associates. They found that firms voluntarily adopted either cost or equity methods in their primary financial statements, contributing to the positive accounting literature by analysing the accounting policy choice of listed Australian companies in the first year in which the standard took effect. According to [Martinez and Cooper \(2019\)](#), material judgement has also been investigated by taking into consideration the performance and management systems of funding agencies and non-governmental organisations seeking to assemble a performance and management system out of accountability requirements. This paper outlines that financial materiality is only one element that can contribute to expressing a judgement about the use of resources in the context of NGOs.

4.1.2 Main critiques and implications.

Implication 1 – The relevance of materiality in financial statements and its under-investigated role in non-financial statements

The adoption of the materiality principle in corporate disclosures raises some issues ([Elkins and Entwistle, 2018](#)). The application of the materiality principle is discretionary and the effective (or lack of) information on the methodology adopted to select material issues can influence stakeholders ([Aprile et al., 2023](#); [Street and Gordon, 2023](#)). Thus, a deeper examination of the methodology applied to address materiality seems to be required.

It would be interesting to comprehend whether the determination of materiality in sustainability reporting and IC disclosure can impact the determination of materiality in primary financial statements. Some researchers conclude that financial materiality can be an appropriate indicator to inform stakeholders, especially capital providers, about the impact that non-financial features have on a firm's value (Van der Zahn, 2023). Integrated reports have already adopted this approach, even if there is no clear connection and evidence between the concept applied to financial statements and its impact on sustainability reports. In relation to this, scholars should deeply investigate the role of financial materiality in sustainability reporting. In this perspective, EFRAG (2021) states that: “*Financial materiality for sustainability reporting cannot be extrapolated from financial materiality for financial reporting*”, even if there is no empirical evidence on the correlation (or non-correlation) between financial materiality in financial and sustainability reports to date (De Cristofaro and Gulluscio, 2023). This debate raises the idea that there are three materiality concepts: (1) financial materiality for financial reports; (2) financial materiality for sustainability and IC reports and (3) “sustainability materiality” for “sustainability and IC reports”. The investigation of the selected papers stressed that there is an applicative confusion about the adoption of the materiality principle. Academia could support the definition of a conceptual theory, basing the discussion on empirical data and information.

Implication 2 – The existence of materiality's facets of accounting policies and practices, and management processes

Various approaches concerning the adoption of the materiality principle exist (Cereola *et al.*, 2017). Companies have been shown to produce different orientations and solutions based on accounting policies and corporate governance composition. Therefore, a multitude of materiality concepts could potentially be found. In this perspective, the determination of materiality is extremely diverse from one item to another (Acito *et al.*, 2009; Keune and Johnstone, 2009). This should make scholars and practitioners reflect on whether the meaning of the principle is unique or if (1) it has to be formally included in the different standards, with reference not only to financial reporting but, also, to sustainability and IC reporting. It has been stressed that materiality can be influenced by a set of factors belonging to internal factors, such as the ongoing firm's governance (Young *et al.*, 2008), to external elements, such as the consolidated practice (Talha *et al.*, 2006, 2008). The illustrated patchy implementation of the provided requirements seems to be significant from a scientific point of view, as it demonstrates the perception of a (voluntary or involuntary) uncertain application of financial materiality to specific standards. This feature could refer to financial and non-financial statements. According to this, the interaction between the adoption of the concept of financial materiality could be investigated with regard to one issue in financial reporting and non-financial reporting.

Implication 3 – Adjusting the relationship between materiality and stakeholder's information needs

Studies contribute to the reflection on the concept of financial materiality moving from a wider background (Ro, 1982). The concept and definition of materiality in financial reporting, in order to provide useful information to stakeholders, need to be related to (1) the current period and (2) the context in which it is used (Reinstein *et al.*, 2023).

The perception of “useful information” is meaningfully affected by sustainability reporting (Fiandrino *et al.*, 2022; Khan, 2022). At the same time, some research demonstrates that integrated reports have got a different perception of materiality and preparers develop different materiality determination processes to establish when information is material (Steenkamp, 2018).

There is a gap in the literature concerning the evidence about the capacity that financial materiality can have on satisfying stakeholders' information needs. There are no studies concerning the measurement of the level of appreciation of the materiality concept by readers. It would be feasible to comprehend how to calibrate the determination of financial materiality to provide disclosures which are able to move the economic decisions of primary stakeholders, also in the form of IC reporting. By conducting this kind of study, academia could provide significant support to the determination of the materiality definition or the practical identification of reasonable material parameters, that can be jointly appropriate to financial and sustainability reports. Moving on from these results, the determination and the disclosures related to the principle could be better identified because, today, the main groups involved in the process of analysing materiality applications are companies and auditors.

Implication 4 – The call for additional quantitative and qualitative thresholds

The issue regarding the determination of thresholds is widely connected to the debate on the adoption of the materiality principle (Chung *et al.*, 2021; DeZoort *et al.*, 2023). Standard setters provide a holistic definition of financial materiality, generally recognised for financial statements and sustainability reports, even if the research until now has been essentially focused on the determination of quantitative parameters. It seems that there are only limited studies on the qualitative nature of the parameter (Shafer, 2004; Eilifsen *et al.*, 2021). It would be useful if some issues could be defined as being “material” because of their nature, e.g. illegal acts or behaviours that are identified as being non-sustainable; in this case, the materiality would be automatically achieved. The impact itself can be different for different users, concerning their interest, use and approach (Doxey *et al.*, 2020; Eilifsen *et al.*, 2021). This orientation seems to have already produced a differentiation in what is financially “material” in sustainability reports and in financial reports (EFRAG, 2023). This arises from the analysis of the selected papers which academia should address, that is whether it is feasible to simplify the process and the determination of the quantitative and qualitative thresholds. In terms of IC management and disclosure, it could be a central point of interest for investors and other capital providers, as it is often addressed as a performance driver indicator (Del Giudice *et al.*, 2023b; Fischer *et al.*, 2022).

5. Conclusions, limitations and transformative future research paths

This study attempts to identify the fields of materiality in scientific research, using bibliometric tools, to present the current status and different research trends, and to investigate whether this approach can be applied to disclose potential areas of improvement in the adoption of the materiality principle in financial and sustainability reporting.

Our research offers the following contributions. From a theoretical perspective, this research is the first comprehensive and up-to-date systematic literature review on financial materiality contributing to the literature on other similar conceptual issues (Khan, 2022). It synthesises the current state of knowledge, drafts several research trends and derives four academic themes of research.

We also offer theoretical and practical implications of the retrieved research paths, guiding the application of judgements for financial materiality assessment. Theoretical implications offer renewed insights that have never previously been carefully addressed by scholars. This evidence is also corroborated by our qualitative investigation, based on a systematic literature review, and suggests that these studies can be useful in the new direction of double materiality. In this way, the main implications affect: (1) the relevance of materiality in financial statements and its under-investigated role in non-financial statements; (2) the existence of materiality's facets about accounting policies, practices and

management processes; (3) adjusting the relationship between materiality and stakeholder's information needs and (4) the call for additional quantitative and qualitative thresholds.

It has been confirmed that the process for assessing materiality must be in line with the stakeholders' expectations. From a practical perspective, this study is useful for companies implementing financial materiality based on stakeholder engagement and improving their transparency in financial and non-financial reporting practices (Torelli *et al.*, 2020).

Our findings provide practical and theoretical implications. Regulators and standards setters should clarify the process used to implement the materiality principle because too many doubts and misunderstandings remain. Lastly, it is observed that this renewed "clusterisation" provides the foundation to shift from potentially reconsidering the principle in the light of new research into the identification of financial materiality, in the context of corporate reporting, where IC disclosure maintains a crucial place due to its potential capacity to orient stakeholders' decisions (Serenko, 2024). In general, there is a need for research to be more directly linked to policy-making and changing the behaviours of firms: a greater focus on encouraging all firms to adopt best practice is the best way to go.

According to this, managers may improve the legitimacy of their activities by improving financial materiality and strengthening IC disclosure to support a higher level of reporting. Regarding theoretical implications, scholars may find the opportunity to better focus on the research trends identified in our work (RT1-RT2-RT3-RT4): (1) the relevance of materiality principles, (2) the financial reporting practices, (3) the theories in the definition of financial materiality and (4) the existence of quantitative and qualitative thresholds in the materiality judgement, combining different methods and approaches.

This paper has several limitations related to the methodology and data collection: although we have covered a consistent period, the bibliometric analysis induces constraints. Since publications need time to show a relevant impact on the community, we make comments on past trends without making predictions about articles that will be the most influential in the future. The consideration of further databases, such as ISI Web of Science, is useful for future research developments. It would be interesting for future research to address the development of corporate reporting, to produce a different perception of the financial materiality concept.

In addition to continued empirical archival research we also need to achieve greater integration between the different types of IC disclosure and financial materiality. In addition to our bibliometric analysis and SLR, we need to encourage empirical archival work, high-quality surveys and more interview studies. It is extremely important to shift research resources away from archival research and towards other research methods.

We also think that there is space for more laboratory-based research; it is extremely important to facilitate the discussions between investors and preparers about the content and format of financial reports, in terms of materiality. It is important to open a laboratory setting where academics, auditors, finance directors, investors and analysts can share opinions about financial materiality and disclosure choices in general, and IC in particular. More generally, we need stronger research links between academics, analysts, standard setters, professional bodies, company accountants, company auditors and institutional investors. We may need to pay more attention to the tales of IC reporting.

In light of the previous analysis, we present the answer to *RQ3. What is the future research for materiality judgements?* Regarding research trends, we propose the following set of research questions for investigating future research paths:

| Research TREEND | Research questions |
|---|--|
| RT1 – The relevance of materiality principles in corporate disclosure | <p><i>RQ1. Is there a separate determination of financial materiality referred to in disclosure?</i></p> <p><i>RQ2. Are there mandatory or voluntary disclosures about the determination of materiality in primary financial statements?</i></p> <p><i>RQ3. Is the concept of financial materiality equally perceived when applied to sustainable reporting?</i></p> <p><i>RQ4. Do we have a different perception of materiality in the financial statements after the introduction of generally accepted requirements on sustainability and intellectual capital reporting?</i></p> |
| RT2 – Financial reporting practices and materiality | <p><i>RQ1. What are the main consequences arising from the adoption of the materiality principle and guidance on reporting issues?</i></p> <p><i>RQ2. Is there a “sole” determination of financial materiality for all the specific accounting and sustainability issues?</i></p> <p><i>RQ3. What are the main consequences arising from the adoption of the accounting and sustainability materiality principles on managerial issues?</i></p> <p><i>RQ3. How can managers make appropriate decisions to ensure an efficient financial materiality process?</i></p> |
| RT3 – Theories and approaches in defining financial materiality | <p><i>RQ1. What are the main evolutionary elements suggesting a review of the accounting materiality definition in light of the enactment of sustainability reporting standards?</i></p> <p><i>RQ2. What is the evidence that financial materiality satisfies stakeholders’ information needs?</i></p> <p><i>RQ3. How can financial materiality enhance the stakeholders’ interest in corporate reporting?</i></p> |
| RT4 – The existence of quantitative and qualitative thresholds in the materiality judgement | <p><i>RQ1. What is a common threshold for all the involved users?</i></p> <p><i>RQ2. Is the financial materiality threshold only a quantitative parameter?</i></p> <p><i>RQ3. Is there also a qualitative threshold to address in the determination of financial materiality?</i></p> |
| Source(s): Authors’ work | |

References

- Abhayawansa, A.S. (2014), “A review of guidelines and frameworks on external reporting of intellectual capital”, *Journal of Intellectual Capital*, Vol. 15 No. 2, pp. 100-141, doi: [10.1108/jic-04-2013-0046](https://doi.org/10.1108/jic-04-2013-0046).
- Acito, A.A., Burks, J.J. and Johnson, W.B. (2009), “Materiality decisions and the correction of accounting errors”, *The Accounting Review*, Vol. 84 No. 3, pp. 659-688, doi: [10.2308/accr-2009-84.3.659](https://doi.org/10.2308/accr-2009-84.3.659).
- Aksnes, D.W. and Sivertsen, G. (2019), “A criteria-based assessment of the coverage of Scopus and Web of Science”, *Journal of Data and Information Science*, Vol. 4, pp. 1-21, doi: [10.2478/jdis-2019-0001](https://doi.org/10.2478/jdis-2019-0001).
- Alvesson, M. and Deetz, S. (2000), *Doing Critical Management Research*, Sage, London.
- Amendola, C., Gennaro, A., Labella, S., Vito, P. and Savastano, M. (2023), “The evolution of intellectual capital disclosure driven by European regulatory change: evidence from the Italian stock market”, *Journal of Intellectual Capital*, Vol. 24 No. 5, pp. 1136-1163, doi: [10.1108/jic-10-2022-0195](https://doi.org/10.1108/jic-10-2022-0195).
- Aprile, R., Alexander, D. and Doni, F. (2023), “Enhancing the materiality principle in integrated reporting by adopting the General Systems Theory”, *Corporate Social Responsibility and Environmental Management*, Vol. 30 No. 5, pp. 2219-2233, doi: [10.1002/csr.2479](https://doi.org/10.1002/csr.2479).

- Arduini, S., Manzo, M. and Beck, T. (2023), "Corporate reputation and culture: the link between knowledge management and sustainability", *Journal of Knowledge Management*, Vol. 28 No. 4, pp. 1020-1041, doi: [10.1108/jkm-02-2023-0139](https://doi.org/10.1108/jkm-02-2023-0139).
- Bananuka, J., Tauringana, V. and Tumwebaze, Z. (2023), "Intellectual capital and sustainability reporting practices in Uganda", *Journal of Intellectual Capital*, Vol. 24 No. 2, pp. 487-508, doi: [10.1108/jic-01-2021-0019](https://doi.org/10.1108/jic-01-2021-0019).
- Baumüller, J. and Sopp, K. (2022), "Double materiality and the shift from non-financial to European sustainability reporting: review, outlook and implications", *Journal of Applied Accounting Research*, Vol. 23 No. 1, pp. 8-28, doi: [10.1108/jaar-04-2021-0114](https://doi.org/10.1108/jaar-04-2021-0114).
- Bota-Avram, C. (2022), "Bibliometric analysis of sustainable business performance: where are we going? A science map of the field", *Economic Research-Ekonomska Istraživanja*, Vol. 36, pp. 1-40, doi: [10.1080/1331677x.2022.2096094](https://doi.org/10.1080/1331677x.2022.2096094).
- Boyack, K.W. and Klavans, R. (2010), "Co-citation analysis, bibliographic coupling, and direct citation: which citation approach represents the research front most accurately?", *Journal of the American Society for Information Science and Technology*, Vol. 61 No. 12, pp. 2389-2404, doi: [10.1002/asi.21419](https://doi.org/10.1002/asi.21419).
- Bradbury, M.E. and Scott, T. (2021), "What accounting standards were the cause of enforcement actions following IFRS adoption?", *Accounting and Finance*, Vol. 61 No. S1, pp. 2247-2268, doi: [10.1111/acfi.12661](https://doi.org/10.1111/acfi.12661).
- Brännström, D. and Giuliani, M. (2009), "Accounting for intellectual capital: a comparative analysis", *VINE*, Vol. 39 No. 1, pp. 68-79, doi: [10.1108/03055720910962452](https://doi.org/10.1108/03055720910962452).
- Brennan, N. and Gray, S. (2005), "The impact of materiality: accounting's best kept secret", *Asian Academy of Management Journal of Accounting and Finance*, Vol. 1, pp. 1-31.
- Capulopo, P., Messeni Petruzzelli, A. and Ardito, L. (2023), "A knowledge-based perspective on transgenerational entrepreneurship: unveiling knowledge dynamics across generations in family firms", *Journal of Knowledge Management*, Vol. 28 No. 5, pp. 1444-1467, doi: [10.1108/jkm-05-2023-0451](https://doi.org/10.1108/jkm-05-2023-0451).
- Caputo, F., Giudice, M.D., Evangelista, F. and Russo, G. (2016), "Corporate disclosure and intellectual capital: the light side of information asymmetry", *International Journal of Managerial and Financial Accounting*, Vol. 8 No. 1, pp. 75-96, doi: [10.1504/ijmfa.2016.076668](https://doi.org/10.1504/ijmfa.2016.076668).
- Caputo, A., Pizzi, S., Pellegrini, M.M. and Dabić, M. (2021a), "Digitalization and business models: where are we going? A science map of the field", *Journal of Business Research*, Vol. 123, pp. 489-501, doi: [10.1016/j.jbusres.2020.09.053](https://doi.org/10.1016/j.jbusres.2020.09.053).
- Caputo, F., Magni, D., Papa, A. and Corsi, C. (2021b), "Knowledge hiding in socioeconomic settings: matching organizational and environmental antecedents", *Journal of Business Research*, Vol. 135, pp. 19-27, doi: [10.1016/j.jbusres.2021.06.012](https://doi.org/10.1016/j.jbusres.2021.06.012).
- Cerbone, D. and Maroun, W. (2020), "Materiality in an integrated reporting setting: insights using an institutional logics framework", *The British Accounting Review*, Vol. 52 No. 3, 100876, doi: [10.1016/j.bar.2019.100876](https://doi.org/10.1016/j.bar.2019.100876).
- Cereola, S.J., Nichols, N.B. and Street, D.L. (2017), "Geographic segment disclosures under IFRS 8: changes in materiality and fineness by European, Australian and New Zealand blue chip companies", *Research in Accounting Regulation*, Vol. 29 No. 2, pp. 119-128, doi: [10.1016/j.racreg.2017.09.003](https://doi.org/10.1016/j.racreg.2017.09.003).
- Chen, H., Pany, K. and Zhang, J. (2008), "An analysis of the relationship between accounting restatements and quantitative benchmarks of audit planning materiality", *Review of Accounting and Finance*, Vol. 7 No. 3, pp. 236-251, doi: [10.1108/14757700810898230](https://doi.org/10.1108/14757700810898230).
- Christensen, H.B., Hail, L. and Leuz, C. (2021), "Mandatory CSR and sustainability reporting: economic analysis and literature review", *Review of Accounting Studies*, Vol. 26 No. 3, pp. 1176-1248, doi: [10.1007/s11142-021-09609-5](https://doi.org/10.1007/s11142-021-09609-5).
- Chung, P.K., Geiger, M.A., Paik, G.H. and Rabe, C. (2021), "Materiality thresholds: empirical evidence from change in accounting estimate disclosures", *Accounting Horizons*, Vol. 35 No. 3, pp. 113-141, doi: [10.2308/horizons-19-114](https://doi.org/10.2308/horizons-19-114).

- Dabić, M., Vlačić, B., Scuotto, V. and Warkentin, M. (2021), "Two decades of the Journal of Intellectual Capital: a bibliometric overview and an agenda for future research", *Journal of Intellectual Capital*, Vol. 22 No. 3, pp. 458-477, doi: [10.1108/jic-02-2020-0052](https://doi.org/10.1108/jic-02-2020-0052).
- De Cristofaro, T. and Gulluscio, C. (2023), "In search of double materiality in non-financial reports: first empirical evidence", *Sustainability*, Vol. 15 No. 2, pp. 924-954, doi: [10.3390/su15020924](https://doi.org/10.3390/su15020924).
- Del Giudice, M., Scuotto, V. and Papa, A. (2023a), *Knowledge Management and AI in Society 5.0*, Routledge, London.
- Del Giudice, M., Scuotto, V., Papa, A. and Singh, S.K. (2023b), "The 'bright' side of innovation management for international new ventures", *Technovation*, Vol. 125, 102789, doi: [10.1016/j.technovation.2023.102789](https://doi.org/10.1016/j.technovation.2023.102789).
- Delgado-Ceballos, J., Ortiz-De-Mandojana, N., Antolín-López, R. and Montiel, I. (2023), "Connecting the sustainable development goals to firm-level sustainability and ESG factors: the need for double materiality", *BRQ Business Research Quarterly*, Vol. 26 No. 1, pp. 2-10, doi: [10.1177/23409444221140919](https://doi.org/10.1177/23409444221140919).
- DeZoort, T., Harrison, P. and Taylor, M. (2006), "Accountability and auditors' materiality judgments: the effects of differential pressure strength on conservatism, variability, and effort", *Accounting, Organizations and Society*, Vol. 31 Nos 4-5, pp. 373-390, doi: [10.1016/j.aos.2005.09.001](https://doi.org/10.1016/j.aos.2005.09.001).
- DeZoort, F.T., Holt, T.P. and Stanley, J.D. (2023), "How do investor and auditor materiality judgments compare?", *Current Issues in Auditing*, Vol. 17, pp. 1-10, doi: [10.2308/cia-2022-016](https://doi.org/10.2308/cia-2022-016).
- Doxey, M.M., Hatfield, R.C., Rippey, J.A. and Peel, R.K. (2020), "Asymmetric investor materiality and the effects of disclosure", *Auditing: A Journal of Practice and Theory*, Vol. 39 No. 2, pp. 27-50, doi: [10.2308/ajpt-18-032](https://doi.org/10.2308/ajpt-18-032).
- Dumay, J., Guthrie, J. and Rooney, J. (2020), "Being critical about intellectual capital accounting in 2020: an overview", *Critical Perspectives on Accounting*, Vol. 70, 102185, doi: [10.1016/j.cpa.2020.102185](https://doi.org/10.1016/j.cpa.2020.102185).
- Eccles, R.G. and Krzus, M.P. (2014), *The Integrated Reporting Movement: Meaning, Momentum, Motives, and Materiality*, John Wiley and Sons, NJ.
- Eccles, R.G., Krzus, M.P., Rogers, J. and Serafeim, G. (2012), "The need for sector-specific materiality and sustainability reporting standards", *Journal of Applied Corporate Finance*, Vol. 24 No. 2, pp. 65-71, doi: [10.1111/j.1745-6622.2012.00380.x](https://doi.org/10.1111/j.1745-6622.2012.00380.x).
- Edgley (2014), "A genealogy of accounting materiality", *Critical Perspectives on Accounting*, Vol. 25 No. 3, pp. 255-271, doi: [10.1016/j.cpa.2013.06.001](https://doi.org/10.1016/j.cpa.2013.06.001).
- Edgley, C., Jones, M.J. and Atkins, J.F. (2015), "The adoption of the materiality concept in social and environmental reporting assurance: a field study approach", *The British Accounting Review*, Vol. 47 No. 1, pp. 1e18-18, doi: [10.1016/j.bar.2014.11.001](https://doi.org/10.1016/j.bar.2014.11.001).
- Eilifsen, A., Hamilton, E.L. and Messier Jr, W.F. (2021), "The importance of quantifying uncertainty: examining the effects of quantitative sensitivity analysis and audit materiality disclosures on investors' judgments and decisions", *Accounting, Organizations and Society*, Vol. 90, 101169, doi: [10.1016/j.aos.2020.101169](https://doi.org/10.1016/j.aos.2020.101169).
- Elkins, H. and Entwistle, G. (2018), "A commentary on accounting standards and the disclosure problem: exploring a way forward", *Journal of International Accounting, Auditing and Taxation*, Vol. 33, pp. 79-89, doi: [10.1016/j.intaccudtax.2018.11.003](https://doi.org/10.1016/j.intaccudtax.2018.11.003).
- European Commission (2019), Guidelines on non-financial reporting: supplement on reporting climate-related information.
- European Commission (2023), ESRS 1, general requirements.
- European Financial Reporting Advisory Group (2021), "Proposals for a relevant and dynamic EU sustainability reporting standard-setting", Final report.
- European Financial Reporting Advisory Group (2023), "[Draft] EFRAG IG 1: materiality assessment implementation guidance", Final report.

- Fiandrino, S., Tonelli, A. and Devalle, A. (2022), "Sustainability materiality research: a systematic literature review of methods, theories and academic themes", *Qualitative Research in Accounting and Management*, Vol. 19 No. 5, pp. 665-695, doi: [10.1108/qram-07-2021-0141](https://doi.org/10.1108/qram-07-2021-0141).
- Fischer, B., Salles-Filho, S., Zeitoum, C. and Colugnati, F. (2022), "Performance drivers in knowledge-intensive entrepreneurial firms: a multidimensional perspective", *Journal of Knowledge Management*, Vol. 26 No. 5, pp. 1342-1367, doi: [10.1108/jkm-03-2021-0264](https://doi.org/10.1108/jkm-03-2021-0264).
- Gangi, F., Mustilli, M. and Varrone, N. (2018), "The impact of corporate social responsibility (CSR) knowledge on corporate financial performance: evidence from the European banking industry", *Journal of Knowledge Management*, Vol. 23 No. 1, pp. 110-134, doi: [10.1108/jkm-04-2018-0267](https://doi.org/10.1108/jkm-04-2018-0267).
- Gao, S., Meng, F., Gu, Z., Liu, Z. and Farrukh, M. (2021), "Mapping and clustering analysis on environmental, social and governance field a bibliometric analysis using Scopus", *Sustainability*, Vol. 13 No. 13, p. 7304, doi: [10.3390/su13137304](https://doi.org/10.3390/su13137304).
- Garanina, T., Ranta, M. and Dumay, J. (2022), "Blockchain in accounting research: current trends and emerging topics", *Accounting Auditing and Accountability*, Vol. 35 No. 7, pp. 1507-1533, doi: [10.1108/aaaj-10-2020-4991](https://doi.org/10.1108/aaaj-10-2020-4991).
- Green, W.J. and Cheng, M.M. (2019), "Materiality judgments in an integrated reporting setting: the effect of strategic relevance and strategy map", *Accounting, Organizations and Society*, Vol. 73, pp. 1-14, doi: [10.1016/j.aos.2018.07.001](https://doi.org/10.1016/j.aos.2018.07.001).
- Hsu, G.C.M. (2009), "Impact of earnings performance on price-sensitive disclosures under the Australian continuous disclosure regime", *Accounting and Finance*, Vol. 49 No. 2, pp. 317-339, doi: [10.1111/j.1467-629x.2008.00288.x](https://doi.org/10.1111/j.1467-629x.2008.00288.x).
- Iatridis, E.G. (2012), "Voluntary IFRS disclosures: evidence from the transition from UK GAAP to IFRSs", *Managerial Auditing Journal*, Vol. 27 No. 6, pp. 573-597, doi: [10.1108/02686901211236409](https://doi.org/10.1108/02686901211236409).
- International Accounting Standards Board (IASB) (2017), "Making materiality judgments, practice statement 2".
- International Integrated Reporting Council (2021), IR framework.
- Jørgensen, S., Mjøs, A. and Pedersen, L.J.T. (2022), "Sustainability reporting and approaches to materiality: tensions and potential resolutions", *Sustainability Accounting, Management and Policy Journal*, Vol. 13 No. 2, pp. 341-361, doi: [10.1108/sampj-01-2021-0009](https://doi.org/10.1108/sampj-01-2021-0009).
- Kessler, M.M. (1963), "Bibliographic coupling between scientific papers", *American Documentation*, Vol. 14 No. 1, pp. 10-25, doi: [10.1002/asi.5090140103](https://doi.org/10.1002/asi.5090140103).
- Keune, M.B. and Johnstone, K.M. (2009), "Staff Accounting Bulletin No. 108 disclosures: descriptive evidence from the revelation of accounting misstatements", *Accounting Horizons*, Vol. 23 No. 1, pp. 19-53, doi: [10.2308/acch.2009.23.1.19](https://doi.org/10.2308/acch.2009.23.1.19).
- Khan, M.A. (2022), "ESG disclosure and firm performance: a bibliometric and meta analysis", *Research in International Business and Finance*, Vol. 61, 101668, doi: [10.1016/j.ribaf.2022.101668](https://doi.org/10.1016/j.ribaf.2022.101668).
- Kobbi-Fakhfakh, S. (2017), "Geographical disclosure quality under IFRS 8: a European Union analysis", *International Journal of Banking, Accounting and Finance*, Vol. 8 No. 2, pp. 217-242, doi: [10.1504/ijbaaf.2017.087084](https://doi.org/10.1504/ijbaaf.2017.087084).
- Lai, A., Melloni, G. and Stacchezzini, R. (2017), "What does materiality mean to integrated reporting preparers? An empirical exploration", *Meditari Accountancy Research*, Vol. 25 No. 4, pp. 533-552, doi: [10.1108/medar-02-2017-0113](https://doi.org/10.1108/medar-02-2017-0113).
- León, R. and Salesa, A. (2024), "Is sustainability reporting disclosing what is relevant? Assessing materiality accuracy in the Spanish telecommunication industry", *Environment, Development and Sustainability*, Vol. 26, pp. 21433-21460, doi: [10.1007/s10668-023-03537-x](https://doi.org/10.1007/s10668-023-03537-x).
- Li, A., Michaelides, M., Rose, M. and Garg, M. (2019), "Climate-related risk and financial statements: implications for regulators, preparers, auditors and users", *Australian Accounting Review*, Vol. 29 No. 3, pp. 599-605, doi: [10.1111/auar.12296](https://doi.org/10.1111/auar.12296).

- Liao, G., Li, M., Li, Y. and Yin, J. (2024), "How does knowledge hiding play a role in the relationship between leader-member exchange differentiation and employee creativity? A cross-level model", *Journal of Knowledge Management*, Vol. 28 No. 1, pp. 69-84, doi: [10.1108/jkm-01-2023-0046](https://doi.org/10.1108/jkm-01-2023-0046).
- Lombardi, R. and Secundo, G. (2021), "The digital transformation of corporate reporting—a systematic literature review and avenues for future research", *Meditari Accountancy Research*, Vol. 29 No. 5, pp. 1179-1208, doi: [10.1108/medar-04-2020-0870](https://doi.org/10.1108/medar-04-2020-0870).
- MacNeil, I. and Esser, I.M. (2022), "From a financial to an entity model of ESG", *European Business Organization Law Review*, Vol. 23 No. 1, pp. 9-45, doi: [10.1007/s40804-021-00234-y](https://doi.org/10.1007/s40804-021-00234-y).
- Magni, D., Papa, A., Scuotto, V. and Del Giudice, M. (2023), "Internationalized knowledge-intensive business service (KIBS) for servitization: a microfoundation perspective", *International Marketing Review*, Vol. 40 No. 4, pp. 798-826, doi: [10.1108/imr-12-2021-0366](https://doi.org/10.1108/imr-12-2021-0366).
- Martinez, D.E. and Cooper, D.J. (2019), "Assembling performance measurement through engagement", *Accounting, Organizations and Society*, Vol. 78, pp. 1-22, doi: [10.1016/j.aos.2019.04.002](https://doi.org/10.1016/j.aos.2019.04.002).
- Massaro, M., Dumay, J. and Guthrie, J. (2016), "On the shoulders of giants: undertaking a structured literature review in accounting", *Accounting, Auditing and Accountability Journal*, Vol. 29 No. 5, pp. 767-801, doi: [10.1108/aaaj-01-2015-1939](https://doi.org/10.1108/aaaj-01-2015-1939).
- Mazay, V., Wilkins, T. and Zimmer, I. (1993), "Determinants of the choice of accounting for investments in associated companies", *Contemporary Accounting Research*, Vol. 10 No. 1, pp. 31-59, doi: [10.1111/j.1911-3846.1993.tb00381.x](https://doi.org/10.1111/j.1911-3846.1993.tb00381.x).
- McNally, M.-A. and Maroun, W. (2018), "It is not always bad news: illustrating the potential of integrated reporting using a case study in the eco-tourism industry", *Accounting, Auditing and Accountability Journal*, Vol. 31 No. 5, pp. 1319e1348-1348, doi: [10.1108/aaaj-05-2016-2577](https://doi.org/10.1108/aaaj-05-2016-2577).
- Merigó, J.M. and Yang, J.B. (2017), "Accounting research: a bibliometric analysis", *Australian Accounting Review*, Vol. 27 No. 1, pp. 71-100, doi: [10.1111/auar.12109](https://doi.org/10.1111/auar.12109).
- Messier, W.F., Jr, Martinov-Bennie, N. and Eilifsen, A. (2005), "A review and integration of empirical research on materiality: two decades later", *Auditing a Journal of Practice and Theory*, Vol. 24 No. 2, pp. 153-204, doi: [10.2308/aud.2005.24.2.153](https://doi.org/10.2308/aud.2005.24.2.153).
- Mio, C. and Fasan, M. (2013), "Materiality from financial towards non-financial reporting", Vol. 19, Department of Management, Università Ca'Foscari Venezia Working Paper.
- Mubarik, M.S., Bontis, N., Mubarik, M. and Mahmood, T. (2022), "Intellectual capital and supply chain resilience", *Journal of Intellectual Capital*, Vol. 23 No. 3, pp. 713-738, doi: [10.1108/jic-06-2020-0206](https://doi.org/10.1108/jic-06-2020-0206).
- Munro, R. (1995), "Managing by ambiguity: an archaeology of the social in the absence of management accounting", *Critical Perspectives on Accounting*, Vol. 6 No. 5, pp. 433-482, doi: [10.1006/cpac.1995.1042](https://doi.org/10.1006/cpac.1995.1042).
- Nicholls, A. (2018), "A general theory of social impact accounting: materiality, uncertainty and empowerment", *Journal of Social Entrepreneurship*, Vol. 9 No. 2, pp. 132-153, doi: [10.1080/19420676.2018.1452785](https://doi.org/10.1080/19420676.2018.1452785).
- Paolone, F., Pozzoli, M., Chhabra, M. and Di Vaio, A. (2024), "Cultural and gender diversity for ESG performance towards knowledge sharing: empirical evidence from European banks", *Journal of Knowledge Management*, Vol. 28 No. 11, pp. 106-131, doi: [10.1108/jkm-05-2023-0445](https://doi.org/10.1108/jkm-05-2023-0445).
- Paoloni, P., Modaffari, G., Ricci, F. and Della Corte, G. (2023), "Intellectual capital between measurement and reporting: a structured literature review", *Journal of Intellectual Capital*, Vol. 24 No. 1, pp. 115-176, doi: [10.1108/jic-07-2021-0195](https://doi.org/10.1108/jic-07-2021-0195).
- Parshakov, P. and Shakina, E. (2020), "Do companies disclose intellectual capital in their annual reports? New evidence from explorative content analysis", *Journal of Intellectual Capital*, Vol. 21 No. 6, pp. 853-871, doi: [10.1108/jic-03-2019-0040](https://doi.org/10.1108/jic-03-2019-0040).
- Petticrew, M. and Roberts, H. (2006), *Systematic Reviews in the Social Sciences: A Practical Guide*, Blackwell Publishing, Oxford.

- Raith, D. (2022), "The contest for materiality. What counts as CSR?", *Journal of Applied Accounting Research*, Vol. 24 No. 1, pp. 134-148, doi: [10.1108/jaar-04-2022-0093](https://doi.org/10.1108/jaar-04-2022-0093).
- Rehman, S.U., Bresciani, S., Ashfaq, K. and Alam, G.M. (2022), "Intellectual capital, knowledge management and competitive advantage: a resource orchestration perspective", *Journal of Knowledge Management*, Vol. 26 No. 7, pp. 1705-1731, doi: [10.1108/jkm-06-2021-0453](https://doi.org/10.1108/jkm-06-2021-0453).
- Reinstein, A., Taylor, E.Z. and Miller, C.L. (2023), "A Judaic approach to applying materiality concepts", *Research on Professional Responsibility and Ethics in Accounting*, pp. 173-190, doi: [10.1108/s1574-07652023008](https://doi.org/10.1108/s1574-07652023008).
- Ro, B.T. (1982), "An analytical approach to accounting materiality", *Journal of Business Finance and Accounting*, Vol. 9 No. 3, pp. 397-412, doi: [10.1111/j.1468-5957.1982.tb01003.x](https://doi.org/10.1111/j.1468-5957.1982.tb01003.x).
- Roslender, R. (2004), "Accounting for intellectual capital: rethinking its theoretical underpinnings", *Measuring Business Excellence*, Vol. 8 No. 1, pp. 38-45, doi: [10.1108/13683040410524720](https://doi.org/10.1108/13683040410524720).
- Rossi, M., Festa, G., Chouaibi, S., Fait, M. and Papa, A. (2021), "The effects of business ethics and corporate social responsibility on intellectual capital voluntary disclosure", *Journal of Intellectual Capital*, Vol. 22 No. 7, pp. 1-23, doi: [10.1108/jic-08-2020-0287](https://doi.org/10.1108/jic-08-2020-0287).
- Serenko, A. (2024), "The human capital management perspective on quiet quitting: recommendations for employees, managers, and national policymakers", *Journal of Knowledge Management*, Vol. 28 No. 1, pp. 27-43, doi: [10.1108/jkm-10-2022-0792](https://doi.org/10.1108/jkm-10-2022-0792).
- Shafer, W.E. (2004), "Qualitative financial statement disclosures: legal and ethical considerations", *Business Ethics Quarterly*, Vol. 14 No. 3, pp. 433-451, doi: [10.5840/beq200414328](https://doi.org/10.5840/beq200414328).
- Shaik, A.S., Jain, M., Mendiratta, A., Alarifi, G. and Arrigo, E. (2024), "Role of strategic knowledge management practices in enhancing strategic perspectives of an organisation to improve entrepreneurial performance", *Journal of Knowledge Management*, Vol. 28 No. 6, pp. 1648-1675, doi: [10.1108/jkm-04-2023-0300](https://doi.org/10.1108/jkm-04-2023-0300).
- Shaub, M.K. (2005), "Materialism and materiality", *International Journal of Accounting, Auditing and Performance Evaluation*, Vol. 2 No. 4, pp. 347-355, doi: [10.1504/ijaape.2005.009591](https://doi.org/10.1504/ijaape.2005.009591).
- Small, H. (1997), "Update on science mapping: creating large document spaces", *Scientometrics*, Vol. 38 No. 2, pp. 275-293, doi: [10.1007/bf02457414](https://doi.org/10.1007/bf02457414).
- Steenkamp, N. (2018), "Top ten South African companies' disclosure of materiality determination process and material issues in integrated reports", *Journal of Intellectual Capital*, Vol. 19 No. 2, pp. 230-247, doi: [10.1108/jic-01-2017-0002](https://doi.org/10.1108/jic-01-2017-0002).
- Street, D.L. and Gordon, E.A. (2023), "An interview with IASB Chair Dr. Andreas Barckow", *Journal of International Financial Management and Accounting*, Vol. 34 No. 2, pp. 358-377, doi: [10.1111/jifm.12171](https://doi.org/10.1111/jifm.12171).
- Talha, M., Sallehuddin, A. and Mohammad, J. (2006), "Changing pattern of competitive disadvantage from disclosing financial information: a case study of segmental reporting practice in Malaysia", *Managerial Auditing Journal*, Vol. 21 No. 3, pp. 265-274, doi: [10.1108/02686900610653008](https://doi.org/10.1108/02686900610653008).
- Talha, M., Sallehuddin, A. and Mohammad, J. (2008), "Competitive disadvantage and segment disclosure: evidence from Malaysian listed companies", *International Journal of Commerce and Management*, Vol. 17 Nos 1/2, pp. 105-124, doi: [10.1108/10569210710776495](https://doi.org/10.1108/10569210710776495).
- Thornton, D.B. (1986), "Current cost disclosers and nondisclosers: theory and Canadian evidence", *Contemporary Accounting Research*, Vol. 3 No. 1, pp. 1-34, doi: [10.1111/j.1911-3846.1986.tb00623.x](https://doi.org/10.1111/j.1911-3846.1986.tb00623.x).
- Torelli, R., Balluchi, F. and Furlotti, K. (2020), "The materiality assessment and stakeholder engagement: a content analysis of sustainability reports", *Corporate Social Responsibility and Environmental Management*, Vol. 27 No. 2, pp. 470-484, doi: [10.1002/csr.1813](https://doi.org/10.1002/csr.1813).
- Tranfield, D., Denyer, D. and Smart, P. (2003), "Towards a methodology for developing evidence-informed management knowledge by means of systematic review", *British Journal of Management*, Vol. 14 No. 3, pp. 207-222, doi: [10.1111/1467-8551.00375](https://doi.org/10.1111/1467-8551.00375).

- Van der Zahn, J.-L.W.M. (2023), "Sustainability reporting regime transition and the impact on intellectual capital reporting", *Journal of Applied Accounting Research*, Vol. 24 No. 3, pp. 544-582, doi: [10.1108/jaar-06-2021-0143](https://doi.org/10.1108/jaar-06-2021-0143).
- Van Eck, N.J.V. and Waltman, L. (2009), "How to normalize cooccurrence data? An analysis of some well-known similarity measures", *Journal of the American Society for Information Science and Technology*, Vol. 60 No. 8, pp. 1635-1651, doi: [10.1002/asi.21075](https://doi.org/10.1002/asi.21075).
- Van Eck, N.J. and Waltman, L. (2017), "Citation-based clustering of publications using CitNetExplorer and VOSviewer", *Scientometrics*, Vol. 111 No. 2, pp. 1053-1070, doi: [10.1007/s11192-017-2300-7](https://doi.org/10.1007/s11192-017-2300-7).
- Vătămănescu, E.M., Bratianu, C., Dabija, D.C. and Popa, S. (2023), "Capitalizing online knowledge networks: from individual knowledge acquisition towards organizational achievements", *Journal of Knowledge Management*, Vol. 27 No. 5, pp. 1366-1389, doi: [10.1108/jkm-04-2022-0273](https://doi.org/10.1108/jkm-04-2022-0273).
- Wang, Z., Cai, S., Liang, H., Wang, N. and Xiang, E. (2021), "Intellectual capital and firm performance: the mediating role of innovation speed and quality", *The International Journal of Human Resource Management*, Vol. 32 No. 6, pp. 1222-1250, doi: [10.1080/09585192.2018.1511611](https://doi.org/10.1080/09585192.2018.1511611).
- Whitehead, J. (2017), "Prioritizing sustainability indicators: using materiality analysis to guide sustainability assessment and strategy", *Business Strategy and the Environment*, Vol. 26 No. 3, pp. 399-412, doi: [10.1002/bse.1928](https://doi.org/10.1002/bse.1928).
- Woods, M. and Marginson, D.E. (2004), "Accounting for derivatives: an evaluation of reporting practice by UK banks", *European Accounting Review*, Vol. 13 No. 2, pp. 373-390, doi: [10.1080/0963818032000138215](https://doi.org/10.1080/0963818032000138215).
- Xu, J. and Li, J. (2022), "The interrelationship between intellectual capital and firm performance: evidence from China's manufacturing sector", *Journal of Intellectual Capital*, Vol. 23 No. 2, pp. 313-341, doi: [10.1108/jic-08-2019-0189](https://doi.org/10.1108/jic-08-2019-0189).
- Young, C.S., Tsai, L.C. and Hsu, H.W. (2008), "The effect of controlling shareholders' excess board seats control on financial restatements: evidence from Taiwan", *Review of Quantitative Finance and Accounting*, Vol. 30 No. 3, pp. 297-314, doi: [10.1007/s11156-007-0054-7](https://doi.org/10.1007/s11156-007-0054-7).
- Zhong, S., Geng, Y., Liu, W., Gao, C. and Chen, W. (2016), "A bibliometric review on natural resource accounting during 1995-2014", *Journal of Cleaner Production*, Vol. 139, pp. 122-132, doi: [10.1016/j.jclepro.2016.08.039](https://doi.org/10.1016/j.jclepro.2016.08.039).
- Zieba, M., Durst, S. and Hinteregger, C. (2022), "The impact of knowledge risk management on sustainability", *Journal of Knowledge Management*, Vol. 26 No. 11, pp. 234-258, doi: [10.1108/jkm-09-2021-0691](https://doi.org/10.1108/jkm-09-2021-0691).

Further reading

- Za, S. and Braccini, A.M. (2017), "Tracing the roots of the organizational benefits of IT services", in Za, S., Drăgoicea, M. and Cavallari, M. (Eds), *LNBIP – Exploring Services Science*, Springer International Publishing, Berlin, Vol. 279, pp. 3-11, doi: [10.1007/978-3-319-56925-3_1](https://doi.org/10.1007/978-3-319-56925-3_1).

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