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A closer look at integrated reporting quality: a systematic review and agenda of future research

Ika Permatasari
Department of Accounting, Fakultas Ekonomi dan Bisnis, Universitas Airlangga, Surabaya, Indonesia and Department of Accounting, Universitas Negeri Surabaya, Surabaya, Indonesia, and

Bambang Tjahjadi
Department of Accounting, Faculty of Economic and Business, Airlangga University, Surabaya, Indonesia

Received 28 August 2022
Revised 22 January 2023
21 April 2023
30 May 2023
Accepted 3 June 2023

Abstract

Purpose – This paper aims to conduct a systematic review of the literature on the quality of integrated reports (IR) and highlight the gaps in the existing research to provide directions and suggestions for future research.

Design/methodology/approach – This study was conducted through a systematic literature review using content analysis based on 40 papers from the Scopus, Web of Science and EBSCOhost databases on IR quality. While reading the full-text papers, the authors found six additional papers referenced by the literature being reviewed that were relevant to IR quality. Thus, there were 46 papers in the final review. The analysis begins with the definition and dimension of IR quality and theoretical lenses. Furthermore, this study outlines constructs or variables used in the previous literature.

Findings – The authors found that most studies used the quantitative method (41 papers or 89%). Five papers in the literature used qualitative methods (11%). Most researchers (34 papers or 72%) defined IR quality as consistent with the International Integrated Reporting Council framework, specifically the eight content elements. In particular, with the constructs that make up the quality of the IR, variations between researchers were found. Furthermore, there were some gaps that could be the directions for future research.

Research limitations/implications – The literature that provides academic knowledge about IR quality is still limited, and research on IR is still growing. The literature review conducted by this study can provide an overview of the current research positions on the quality of IR and directions for future research in this area.

Practical implications – This study intends to show corporate executives a framework demonstrating the quality of corporate reporting. It can impact not only investors as a specific stakeholder group but also other stakeholder groups.

Originality/value – To the best of the authors' knowledge, this study is the first literature review to examine the quality of IR, thus providing a map of current research to suggest directions for future research. Most of the previous literature reviews have been focused on integrated reporting (IR) in general and not quality.

Keywords Systematic literature review, Integrated reporting, Integrated reporting quality, Sustainability, Corporate governance, SDGs

Paper type Literature review

This study was not funded by any party. The authors acknowledge the tremendous contributions made to this work by all of the anonymous reviewers and editors.

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2049-372X
DOI 10.1108/MEDAR-08-2022-1782

1. Introduction

The practice of integrated reporting (IR) has received much attention during much of the past decade, but the quality aspect of IR is still a critical point because research on this subject is still inadequate (de Villiers *et al.*, 2017; Liu *et al.*, 2019; Chouaibi and Hichri, 2021). This study aims to map and review the existing studies to assess the extensive and in-depth literature in this area and to find the gaps as opportunities for future research. It is well-known that IR represents the evolution of providing social, environmental and economic information in concise and distinct formats that reveal interrelated and future-oriented information. Successful implementation of IR depends on changing the mindset of managers to optimize the company's resources in creating value, limited to not only investors but also other stakeholder groups. In addition, IR also changes the mindset of managers to disclose long-term-oriented information. In her paper, Adams (2015) emphasized that professional accounting bodies provide surprising support for IR, giving rise to many research opportunities in this area.

There have been many studies that have reviewed the IR literature. Among them, de Villiers *et al.* (2014) synthesized developing IR research intending to propose a comprehensive agenda for future IR research. Their work benefits IR researchers to gain a solid foundation in IR and research opportunities in this area. However, the synthesis refers to the existing literature in the early stages of IR development, so there is still much room for further research and review. Similarly, Dumay *et al.* (2016) conducted a literature review on IR to describe the development of IR research, criticize existing research and describe future research opportunities. They emphasized that few studies investigate IR practices and that the majority of IR research gives normative reasons for IR. Furthermore, Dumay *et al.* (2016) identified four distinct stages of research. Intellectual capital research is still at the forefront of the first stage, which emphasizes awareness-building to convey the significance of recognizing and comprehending the potential to develop and maintain a sustainable competitive advantage. In the second stage, existing research identifies the implementation and impact of IR, which is still fragmented. However, there is still limited study looking at the diversity of IR practices globally. The fourth stage of IR research is contemporaneous with the second and third stages because performative research necessitates a unique point of view. The fourth phase of research focuses on longitudinal research on how IR is used to navigate value creation more broadly. Thus, to fully understand the advantages of IR, researchers must consider how they affect the economy, environment, society and stakeholder groups other than investors.

In response to the work of Dumay *et al.* (2016) in the fourth stage, this study has conducted a literature review on this subject regarding IR quality. In addition, a systematic review of the literature on IR quality has not yet been carried out. Therefore, this study synthesizes the previous literature in this field. Among the syntheses made, this study reviews the definitions and dimensions that comprise the quality of IR, the theories and research methods used in previous studies, as well as the variables pertaining to the quality of IR. Based on this systematic literature review (SLR), this study highlights research gaps and provides important directions for future research. Recently, Minutiello and Tettamanzi (2021) conducted a SLR on two main corporate reporting tools that pay great attention to sustainability issues, i.e. sustainability reports (SR) and integrated reports (IR). The authors emphasized the quality of both SR and IR disclosures. To extract quantitative data from the bibliographic network and identify developing issues, they used a systematic literature network analysis (SLNA), which combines SLR with bibliographic network analysis. In contrast to their study, this current one specifically looks at the development of research on IR. Given the decade-long journey of this new reporting tool, the authors felt it necessary to review this map of research on IR quality using content analysis on the SLR in this study.

From the literature review, the authors found that researchers use quantitative research methods more widely than qualitative ones, namely, 89% versus 11%. Concerning the definition of IR quality, the majority of researchers (34 articles or 72%) define it as consistent with the International Integrated Reporting Council (IIRC) framework, specifically the eight content elements. Each piece of research has its construct to determine the quality of corporate reporting, but it is still within the corridor of the IIRC framework. Next, the authors identified most of the studies in the literature that used agency, legitimacy and stakeholder theories as a basis for their research. Future studies are expected to elaborate on other theories that emerge. This study also identified several gaps that could provide directions for future research.

Based on the review conducted, this study makes several contributions. Firstly, this study provides a comprehensive understanding of the implementation of IR from a quality perspective. Secondly, a literature study on IR quality has never been conducted. The results of this study provide an important addition that complements the review of the literature on IR in general. Hopefully, future research will shift from IR adoption towards IR quality, meaning that this study can provide a comprehensive understanding for future researchers. Thirdly, this study highlights existing research gaps and provides a roadmap for future research, both theoretical and empirical.

This article is structured as follows: Section 2 presents the research methods used in the systematic literature review. Then Section 3 until Section 6 present the mapping results and literature review on IR quality. Finally, Section 7 provides suggestions for future research based on the gaps found in this literature review and Section 8 provides the conclusion.

2. Research method

To accomplish the objectives outlined previously, the authors conducted a systematic review of the literature. To reduce the likelihood of bias and error, a systematic review's value depends on rigorous methodology and reporting clarity. Ultimately, the review is replicable, which means that the other researchers might replicate the review procedure and reach the same set of supporting data and findings (Bellucci *et al.*, 2022; Linnenluecke *et al.*, 2020; Moher *et al.*, 2009; Paoloni *et al.*, 2020). The SLR used in this paper is based on the preferred reporting items for systematic reviews and meta-analyses diagram (Liberati *et al.*, 2009), which is shown in Figure 1.

Research questions that specify the topic, object and scope of the study serve as the driving force behind a systematic review process. As a result, our study addressed the following research questions as the first review protocol:

RQ1. What is the current academic state-of-the-art of integrated reporting quality research?

RQ2. What is the definition of IR quality?

RQ3. What are the dimensions that form IR quality?

RQ4. What are the theoretical lenses that could underlie the IR quality?

RQ5. What are the determinants of, the effect on, and contingent on IR quality?

RQ6. What is the potential research for IR quality in the future?

2.1 Literature search

As an inclusion criterion, this study focused on integrated reporting quality. The authors only included studies written in English. The literature was searched using the keywords shown in Table 1 in the Scopus, Web of Science and EBSCOhost databases because most researchers often use them. Keywords were chosen according to our research interests related to integrated

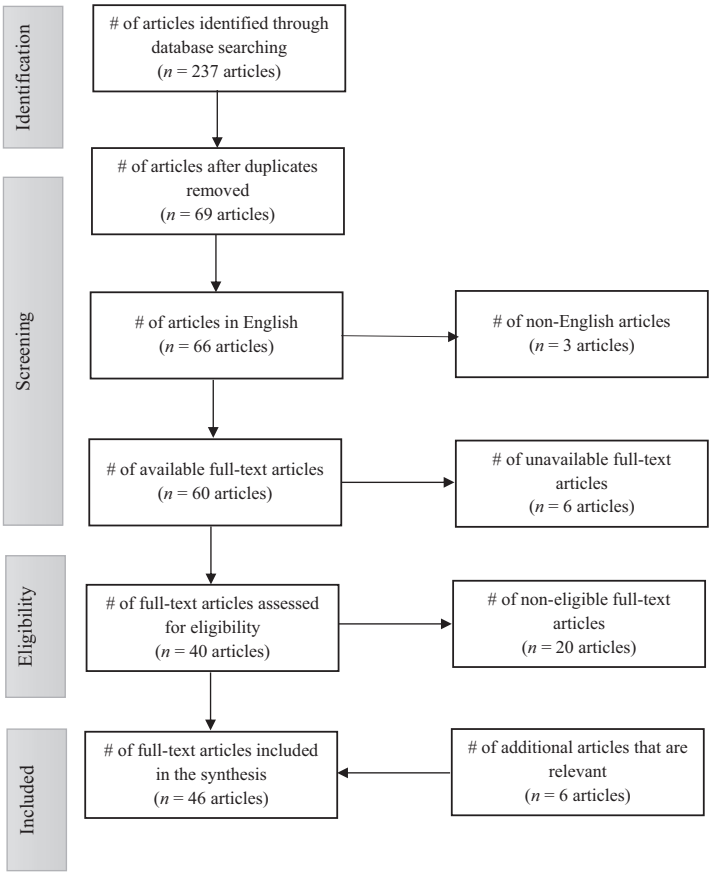


Figure 1.
PRISMA flow diagram

Source: Figure by authors based on Liberati *et al*. (2009)

reporting quality; thus, it is related to a combination of various keywords. To identify the population, this study began by searching the literature for words commonly used to describe integrated reporting quality and using combinations of these words. The article was searched using keywords as follows: "integrated reporting quality"; "integrated report quality"; "reporting quality" AND "integrated report"; "reporting quality" AND "integrated reporting"; "quality of integrated reporting"; and "quality of integrated report" as shown in Table 1. As a result of the search, a total of 237 articles were obtained. After that, the authors eliminated the duplicated articles and got 69 articles. There were three articles that were not in English, and we eliminated them, resulting in 66 articles. The relevance of each article based on title, abstract and content was then determined. The authors eliminated articles considered irrelevant to this study, so 46 articles remained. Next, the availability of full-text articles was checked, and six inaccessible articles were found, resulting in 40 articles being reviewed. The authors found six additional articles referenced by the reviewed literature relevant to the IR quality topic while reading the full-text articles. The six articles are (Ahmed Haji and Anifowose, 2016; Lee and Yeo, 2016;

No.	Keyword	Scopus	Web of Science	EBSCOhost	Total articles
1	"integrated reporting quality"	25	22	16	63
2	"integrated report quality"	4	3	3	10
3	"reporting quality" AND "integrated report"	18	6	5	29
4	"reporting quality" AND "integrated reporting"	34	31	30	95
5	"quality of integrated reporting"	12	12	4	28
6	"quality of integrated report"	10	0	2	12
	Total				237
	Duplicates				(168)
	Non-English				(3)
	Irrelevance				(20)
	Unavailable full-text				(6)
	Articles to be reviewed				40
	Additional articles				6
	Final articles to be reviewed				**46**

Source: Table by authors

Table 1. Result of articles search

Ahmed Haji and Hossain, 2016; Zhou *et al.*, 2017; Rivera-Arrubla *et al.*, 2017; Maroun, 2019). Thus, there are 46 articles reviewed by the authors, as listed in the Appendix.

Exploration and selection of identified article titles, abstracts and keywords are carried out based on eligibility criteria. The reading of articles that were not eliminated in the previous stage was carried out in full or in part to determine whether or not they deserved to be included in the study in accordance with the eligibility criteria. Article collection was done manually using a form consisting of the author(s), journal name, article title, theoretical framework(s), research context and research methodology. Potentially relevant articles were assessed by each author. The assessment consists of reading the full text and extracting key information. Discussion between the two authors assisted to settle any disagreements. We started with the International Integrated Reporting Framework (IIRF) developed by the IIRC and then boursed the IR quality dimensions from the studies reviewed to ascertain the validity of the IR quality dimensions. The key is to ensure that the IR quality dimensions truly reflect reporting quality.

2.2 Content analysis

Our SLR study uses content analysis to discover message meanings and patterns in the articles reviewed. Given the level of subjectivity involved in the content analysis process, we take several steps in this regard (Krippendorff, 2004). We referred to the IIRF developed by the IIRC as a starting point and then analysed the IR quality dimensions from the studies reviewed to ascertain the validity of the IR quality dimensions. The key is to ensure that the IR quality dimensions truly reflect reporting quality. Moreover, to increase the reliability of this study, coding was carried out by the two researchers and periodically confirmed during the ongoing content analysis process to lessen this subjectivity. During the assessment process, the two authors will discuss the problems that arise.

3. Definition and dimension of integrated reporting quality

The IR is intended to be a single document that offers both financial and non-financial information, the link between strategy and performance, and an explanation of how that link enhances value for stakeholders and shareholders. The objective of IR is to enlighten financial capital providers on the value creation process, which should be lucrative to all

relevant stakeholders, according to the IR framework developed by IIRC (International Integrated Reporting Council, 2013).

When discussing IR quality, the following questions arise. The general question is, what are the criteria for high-quality IR? The second question is how can we measure such quality (de Villiers *et al.*, 2017)? According to Vitolla *et al.* (2019c), the report quality is the quality of the disclosures contained in a report made by the company. They considered disclosure quality as an evaluator's subjective judgement of the reliability, comparability and usefulness of the information generated by the reporting entity. In other words, the meaning of disclosure quality is the relative usefulness of the data. Vitolla *et al.* (2019c) said that researchers frequently err by confusing the idea of disclosure quality with the volume of information revealed.

Table 2 shows the definitions and dimensions of IR quality used by previous researchers. Ahmed Haji and Anifowose (2016), Lee and Yeo (2016), Zhou *et al.* (2017) and Pistoni *et al.* (2018) defined IR quality as the alignment of IR with the pertinent framework. A high level of alignment can be interpreted as being high-quality IR and vice versa. However, Rivera-Arrubla *et al.* (2017) only used IR alignment on two IR principles (connectivity and materiality) and two content elements (business model and governance). Furthermore, Ahmed Haji and Hossain (2016) assessed the quality of IR from a linguistic point of view to determine whether IR has substance or is just mere rhetoric. They highlighted the disclosure of the six types of capital presented in IR concerning the value creation process.

Moreover, Malola and Maroun (2019) examined the IR quality of the volume of information reported to stakeholders, emphasizing content elements in relation to the overall volume of information presented to stakeholders. This included qualitative and quantitative disclosures, the essence of disclosure (symbolic or substantive) and the simplicity of information interpretation by stakeholders. However, Gerwanski *et al.* (2019) and Cooray *et al.* (2020) offered a different definition. Gerwanski *et al.* (2019) emphasized the consideration of materiality in compiling IR aligned with the relevant framework, while Cooray *et al.* (2020) focused more on qualitative characteristics in presenting the strategic aspects of IR that define the generation of corporate value. Based on the literature on the definition of IR quality, this study concludes that IR quality cannot be defined narrowly that only limited to the number of disclosures. More than that, IR quality is the degree to which a company's IR follows the guidelines contained in the relevant framework and has the substance required by the report users, thus presenting all material information regarding matters that could influence the company in creating value (Ahmed Haji and Anifowose, 2016; Lee and Yeo, 2016; Zhou *et al.*, 2017; Pistoni *et al.*, 2018). From Table 2, this study summarized the key dimensions of IR quality.

Based on the reviewed articles (Ahmed Haji and Anifowose, 2016; Lee and Yeo, 2016; Zhou *et al.*, 2017; Pistoni *et al.*, 2018), the dimensions that construct IR quality refer to the guiding principles and content elements of the IIRF as follows:

- *Strategic focus and future orientation*. IR is considered to be qualified if it provides useful information to support stakeholders in assessing organizational performance in the future. Any information disclosed in IR should maintain the principle of "strategic focus and future orientation", even though most of the available data refers to past activities and performance that have been achieved by the organization. Absolutely, this kind of information (past, present and future) will be useful for stakeholders who will make decisions about whether to be engaged or not with the organization. This principle can be presented in an integrated manner with the opportunities, risks and/or capital interdependence in the organization's business model (Busco *et al.*, 2013; Kunc *et al.*, 2021).

Authors	Definitions of IR quality	Dimensions of IR quality
Ahmed Haji and Anifowose (2016)	The normative understanding of the existing IR guidelines	• Strategic focus and future orientation • Connectivity of information • Stakeholder relationships • Materiality • Risk management practices • Conciseness • Reliability and completeness • Consistency, comparability and assurances
Lee and Yeo (2016) Zhou *et al.* (2017)	The level of alignment of an integrated report with the IIRF	• Organizational overview and external environment • Strategy and resource allocation • Business model • Governance • Risks and opportunities • Performance • Outlook • Basis of preparation and presentation
Ahmed Haji and Hossain (2016)	How companies link and integrate multiple types of capital within the context of material issues and the value creation/destruction process; how companies discuss organizational value creation/destruction discourses within the context of multiple capitals following the adoption of IR practice; the linguistic and semiotic decisions underlying six types of capital disclosures	• Rhetorical manipulation • Thematic manipulation • Selectivity • The emphasis on visual presentation • Performance comparisons
Rivera-Arrubla *et al.* (2017)	The application level of two IR principles (connectivity and materiality) and two content elements of IR (business model and governance) are described and analyzed in the documents that develop the IIRF	• Business model • Connectivity • Materiality • Corporate governance • Content of report
Pistoni *et al.* (2018) Vitolla *et al.* (2020a) Vitolla *et al.* (2020a, 2020b, 2020c) Vitolla *et al.* (2020c) Raimo *et al.* (2020) Raimo *et al.* (2021)	The agreement between the IR document's recommendations and the IR framework's requirements for eight aspects and two key concepts (capitals and value creation)	• Background • Assurance and reliability • Content • Form

Source: Table by authors

Table 2. Definitions and dimensions of IR quality

- *Connectivity of information*. IR must present a comprehensive picture of the elements influencing an organization's ability to create value over time. To be of quality, this principle is seen as important in presenting a comprehensive vision of a company's ability to create value. This can include the integration of financial and non-financial information describing the main drivers in the value-creation process.

In addition, information that presents the organization's past, present and future activities can also improve the quality of IR in terms of its usefulness in analyzing management capabilities and quality. Besides, the integration of qualitative and quantitative information is also required so that the IR quality is enhanced and demonstrates the ability of the organization to create value, for example, including key performance indicators as part of a narrative description can be a way of demonstrating information connectivity (International Integrated Reporting Council, 2013; Paternostro, 2013; Grassmann *et al.*, 2019).

- *Stakeholder relationships*. A high-quality IR shows how managers prioritize stakeholder needs and the extent to which IR is linked to the stakeholder relationship. IR that contains these disclosures enhances the fulfilment of transparency and accountability demands. According to stakeholder theory, stakeholder management is very important for organizational value creation, so managers' concern for their stakeholders can be reflected in a comprehensive reporting form such as IR. Meanwhile, according to IIRF, IR should provide insight into the nature and quality of the organization's relationship with its key stakeholders, including how and to what extent the organization understands, considers and responds to their needs and interests. This suggests that the more important the stakeholders, the more management will try to meet their expectations (Vitolla *et al.*, 2019c; Sciulli and Adhariani, 2022).
- *Materiality and conciseness*. The materiality principle requires IR to disclose information on matters that substantively affect an organization's ability to create value over time. IIRF offers the principle of materiality in the preparation of IR so that in developing the process of determining materiality and applying this principle, there is significant variation between organizations. A high-quality IR demonstrates the process of determining materiality and what is considered material issues therein. Through this principle, organizations are encouraged to disclose material information about strategy, governance, performance and future prospects by taking into account the social and environmental aspects in which the company operates (International Integrated Reporting Council, 2013; Fasan and Mio, 2017; Lai *et al.*, 2017; Green and Cheng, 2019). Meanwhile, the conciseness principle is still related to materiality in the sense that to achieve conciseness, and materiality plays an important role in determining what issues will be included in an IR (Lakshan *et al.*, 2022). According to Melloni *et al.* (2017), a high-quality IR is a report that concisely communicates how a company's strategy, governance, performance and prospects lead to sustainable value creation. At the same time, IR should be complete and balanced, covering all material, both positive and negative. In the early years of IR adoption, it was shown that it tended to be longer, less readable and more cheerful, resulting in less concise and less balanced. Furthermore, companies with poorer social-environmental performance provide reports that are less concise and less complete. A recent study conducted by Caglio *et al.* (2020) found evidence that conciseness is associated with higher stock liquidity. Although concise, IR certainly does not ignore aspects of readability and tone bias. Furthermore, Caglio *et al.* (2020) confirmed that readability is related to higher market valuations and a biased tone with dispersed analyst estimates. Their results showed that market participants value IR that is easy to read, concise and focused.
- *Reliability, completeness, consistency and comparability*. As previously discussed, IR should cover all material matters, both positive and negative, in a balanced manner. Fulfilment of the reliability principle can improve the quality of IR in the sense that there are mechanisms such as strong internal control, stakeholder involvement,

internal audit function and independent external assurance as well. The principle of completeness could improve the quality of IR in terms of the information disclosed containing both balanced positive and negative as well as financial and non-financial information. Nonetheless, Ahmed Haji and Anifowose (2016) found that compliance with this principle is still low because companies tend to exaggerate positive disclosures and obscure or ignore negative information. Their finding is also supported by Melloni *et al.* (2017) that early adopters of IR with weak financial performance tend to publish IR that are significantly longer and less readable as well as more optimistic. Furthermore, companies with poorer social performance provide more obscure and less information about sustainability performance. However, a recent study by Caglio *et al.* (2020) demonstrated that assurance on IR moderates the adverse effect of poor textual qualities, indicating that assurance serves as a means of improving credibility for external users. Meanwhile, to fulfil the principles of consistency and comparability, IIRF has provided guidelines for organizations in preparing IR. While variations between organizations may vary, this guide makes it easy for users to assess IR across organizations.

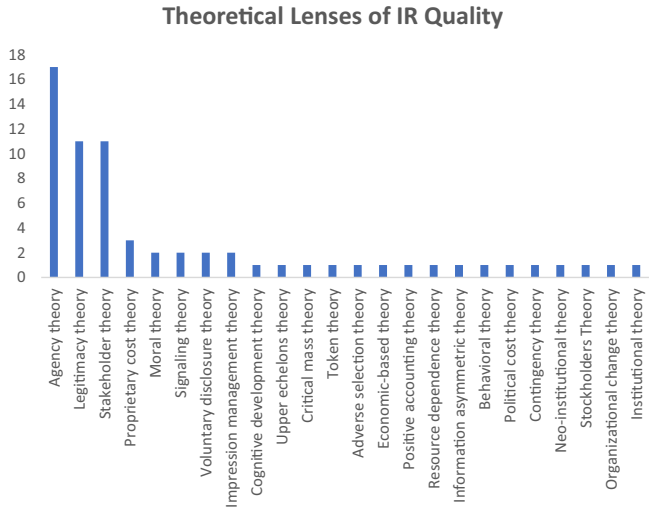
- *Organizational overview and business model*. A system for converting inputs into outputs and results that are intended to achieve an organization's strategic goals and add value over the short, medium and long terms is known as a business model. A clear and simple diagram that highlights key components, narrative flow, identification of key stakeholders, key factors affecting the external environment, connections to strategy, risks and opportunities and performance are all features that can enhance the effectiveness and readability of business model representations (Lee and Yeo, 2016; Zhou *et al.*, 2017; Barth *et al.*, 2017). The fact that traditional reports fall short of accurately describing how businesses deploy different capitals to create value is one of IIRC's primary motivations for delivering IIRF. Because it links an organization's strategy, governance, engaged stakeholders, performance and prospects to public reporting, IIRC uses the business model as a core concept within IR (Tweedie *et al.*, 2018). However, there is still insufficient research on the idea of a business model in IR, leaving space for further study.
- *Operating context*. The operating environment of the organization, including the external environment, should be described in integrated reports. The context in which an organization operates and how well it can generate value in the short, medium and long terms are defined by the external environment, which includes monetary conditions, technological advancements, social problems and environmental concerns. Integrated reports should emphasize perspectives and projected changes throughout time as well as provide information on the surrounding environment. The outlook also outlines the organization's current capability for responding to major challenges and unforeseen circumstances (International Integrated Reporting Council, 2013; Stent and Dowler, 2015).
- *Risk and opportunities*. This dimension identifies specific risks and opportunities that have an impact on an organization's capability to generate value over time, as well as the impact or likelihood of those risks or opportunities occurring, as well as the strategic actions the organization has taken to mitigate those risks or acquire those particular opportunities (International Integrated Reporting Council, 2013; Lee and Yeo, 2016).
- *Governance*. The governance dimension, which includes diversity and skills, generally represents the governing framework supporting an organization's capacity to generate

value. Moreover, the risk management system and the handling of integrity and ethical issues are two additional mechanisms that are described in this dimension that is used to make strategic decisions. The governance dimension also discusses the relationship between compensation and incentives for performance and value creation (International Integrated Reporting Council, 2013). According to Ahmed Haji and Anifowose (2016), the adoption of IR as a component of the governance reform of South African corporations is anticipated enhancing the nation's reputation and competitiveness in international financial markets. South African regulations require the establishment of a social and ethics committee board to oversee sustainability and good corporate citizenship practices. The role of this committee is important in monitoring the company's non-financial performance, thereby explicitly considering a wider group of stakeholders.

- *Performance.* A high-quality IR report on organizational performance achievements, both financial and non-financial. This quality can be improved by providing past and current performance information as well as future performance projections, either in the form of key performance indicators or the like. The performance information presented contains both quantitative and qualitative information and is linked to targets as well as risks and opportunities. This supports the information connectivity dimension in the IR.

4. Theoretical lenses

The most prominent result seen in Figure 2 was that agency theory is the most widely used, with about 25.76% of the total hits. This is followed by legitimacy and stakeholder theory, each with 16.67%. Meanwhile, several other theories were used to describe IR quality, together amounting to 5% of the total hits. The following explanations show how numerous



Source: Figure by authors

Figure 2.
Theoretical lenses of IR quality

theories have been synthesized to comprehend the theoretical applications in IR quality research.

4.1 Agency, legitimacy and stakeholder theory

The three most widely used theoretical frameworks in the field of IR quality are agency, legitimacy and stakeholder theories. According to agency theory, the board has a role as a controlling mechanism that weighs managers' and shareholders' interests with regard to both financial and non-financial information. In the context of IR, this reporting can be a tool for taking responsibility that includes financial and non-financial information so that asymmetric information can be suppressed because uninformed investors can obtain complete and publicly available information. Here the board's role is to encourage managers to provide such information through IR, which can have minimal impact on agency problems and costs (Sriani and Agustia, 2020; Chouaibi and Hichri, 2021; Raimo *et al.*, 2021).

According to the legitimacy theory, a company uses IR to boost its reputation while maintaining its existence (Mans-Kemp and van der Lugt, 2020; Chouaibi and Hichri, 2021). Companies frequently aim to increase and preserve their legitimacy, particularly through disclosing corporate social and environmental information (Erin and Adegboye, 2022). When companies face a situation in which their operations have a significant social and environmental impact, they tend to present IR in more detail to legitimize their business than companies with a small impact do. Thus, to communicate changes in company behaviour to improve poor legitimacy, IR can be used as a disclosure medium (Mans-Kemp and van der Lugt, 2020).

Furthermore, from the standpoint of stakeholder theory, IR aims to promote an integrated method of corporate reporting and enhance the high level of the information provided to stakeholders (Cucari and Mugova, 2017; Vitolla *et al.*, 2019c; Chouaibi and Hichri, 2021). According to this theory, and as promoted by the IIRC, this form of reporting ought to shed light on the character and level of the organization's interactions with its principal stakeholders. In addition, organizations are encouraged to express how well they comprehend, take into account and address broader stakeholder demands and interests (International Integrated Reporting Council, 2013; Wang *et al.*, 2020). According to this notion, managers must appease a wide range of stakeholders who may have an impact on the results of the organization. Otherwise, if the company's emphasis is more narrowly on maximizing shareholder value, these non-financial stakeholders may quit backing it (Freundlieb *et al.*, 2014; Gerwanski *et al.*, 2019; Pavlopoulos *et al.*, 2019; Wang *et al.*, 2020). According to this theory, and as promoted by the IIRC, this kind of reporting should provide insight into the nature and degree of interactions between the organization and its key stakeholders.

4.2 Proprietary cost theory

The IIRC framework is structured according to a principles-based approach. This framework has wide flexibility depending on the different circumstances of the individual organization, although one of its principles is to allow for an adequate level of comparability to suit the needs of pertinent information. Key performance indicators, measuring techniques or disclosures of particular organizational concerns are not included in this framework. As a result, personnel in charge of IR preparation and presentation must exercise adequate discretion in deciding what information has to be revealed and how. In South Africa itself, although IR is mandatory, managers still have considerable flexibility and discretion over corporate disclosure policies. From the perspective of proprietary cost theory, by assessing the benefits and costs of a broad openness strategy, companies will

decide on the proper level of transparency. Of course, they do not disclose information of a sensitive nature that competitors could benefit from. According to this theory, if IR forces companies to disclose proprietary information, the company's value will decrease because IR disclosures become expensive. Companies will limit voluntary disclosure because the dissemination of strategic information can provide advantages for competitors (Lee and Yeo, 2016; Pistoni *et al.*, 2018; Agustia *et al.*, 2020).

4.3 Signalling theory

Organizational reporting quality can also be explained by signalling theory. According to this notion, signals are communicated to the market through information disclosure to alleviate information asymmetry, lower funding costs and improve company worth. More profitable companies will voluntarily publish information to differentiate themselves from less profitable organizations (Dilling and Caykoylu, 2019). In addition, signalling theory also shows that there is value in disclosing information which could indicate an encouraging sign for investors when making economic decisions. Thus, the disclosure of information in IR is used by managers as a signalling tool when companies are trying to manage the perceptions of their constituents (Chouaibi *et al.*, 2022a).

4.4 Voluntary disclosure theory

Voluntary disclosure theory asserts that voluntary disclosure helps increase the availability of company information by enhancing analysts' comprehension of the business's prospects. Research on IR quality expands the extent of evaluating voluntary disclosure theory, which until now has been limited to only financial information or only non-financial information. IR introduces a brand-new sphere of corporate voluntary reporting that transcends existing corporate reporting practices and becomes a new norm for corporate reporting. Furthermore, voluntary disclosure is made by the company because it is based on the motivation to contribute to decreasing uncertainty towards the company's future. This is contained in the IR principles, which emphasize the disclosure of strategies, business models and forward-looking information so that it is expected to reduce uncertainty over the long-term performance of the company. In addition, for companies that are less well-known, to increase the wider range of investors, voluntary disclosure could inform them of their presence (Zhou *et al.*, 2017).

4.5 Impression management theory

Organizational reporting practices can also be explained by impression management theory. This theory has its origins in the social psychology literature, where individuals or organizations seek to control the perceptions of others to obtain certain benefits. Accounting research uses this theory to explain organizational reporting practices, for example, through syntactic, rhetorical or thematic manipulations. Companies may choose to use rhetorical language and linguistics to exaggerate advantageous information and conceal poor outcomes or to correlate managerial decisions with favourable results and external variables with unsuccessful outcomes. In short, with this theoretical lens, organizations use symbolic disclosures that build positive corporate framing to gain and maintain legitimacy and reputation. Impression management theory was used by Ahmed Haji and Hossain (2016), who found that companies constantly use various impression management techniques to exaggerate positive results and ignore negative trends. They conclude that the practice of IR still lacks substance.

4.6 Other theories

Other theories that have been identified in the IR quality literature are moral theory, signalling theory, voluntary disclosure theory, impression management theory, cognitive development theory, institutional theory, organizational change theory, behavioural theory and so on (Figure 1). These theories require further investigation concerning IR practice, which opens up opportunities for future research.

5. Methodological application

The research method used in the reviewed literature varies. The authors found that the research method used was primarily quantitative, with 41 articles (89%). In contrast, the literature that uses qualitative methods is only five articles (11%).

5.1 Trend analysis

In assessing the quality of IR, Ahmed Haji and Hossain (2016), Rivera-Arrubla *et al.* (2017) and Pistoni *et al.* (2018) used content analysis to observe trends in testing whether the level and quality of reporting has increased or not. They developed their definition and construct to assess IR quality using IIRF. Each of them concluded that the quality of companies' published IR has improved.

5.2 Discourse analysis

Using a discourse-based qualitative case study methodology, Ahmed Haji and Hossain (2016) examined how IR adoption has affected organizational reporting practices. Specifically, they examined how companies report and integrate multiple capitals across an organization's various reporting channels, including IR, SR, websites and other online materials. The discourse analysis was framed by using impression management theory to explain the disclosure and integration of numerous capitals through five techniques, which are rhetorical manipulation, thematic manipulation, selectivity, emphasis on the visual display and performance comparison. The research is unique in that it uses linguistic and semiotic analysis, examining specific grammatical and emerging themes in the expression of multiple types of capital. Their findings demonstrated that, despite requests in IR guidelines to balance "positive" and "negative" disclosures, businesses still overstate positive information while ignoring unfavourable results.

5.3 Archival study

Most studies used the archival method to test the hypotheses they had developed. They based these hypotheses on certain constructs that posit IR quality as the dependent variable or as an independent variable. The relationships between these variables are presented in Figure 2. The authors synthesized those measurements, as shown in Table 3. The majority of researchers used content analysis to measure IR quality. Some of them developed their

Measurement	Authors
Self-constructed measurement based on content analysis	Lee and Yeo (2016), Zhou *et al.* (2017); Pistoni *et al.* (2018), Ghani *et al.* (2018); Gerwanski *et al.* (2019), Pavlopoulos *et al.* (2019)
Integrated reporting award	Barth *et al.* (2017), Cosma *et al.* (2018)
Index from an external provider	Zúñiga *et al.* (2020)

Source: Table by authors

Table 3. IR quality measurement

own dimensions that construct the quality of IR, such as what was conducted by Lee and Yeo (2016), Pozzoli and Gesuele (2016), Zhou *et al.* (2017), Pistoni *et al.* (2018), Ghani *et al.* (2018), Gerwanski *et al.* (2019), Pavlopoulos *et al.* (2019), Pratama *et al.* (2019), Amirrudin *et al.* (2021), Piesiewicz *et al.* (2021). Furthermore, Barth *et al.* (2017) and Cosma *et al.* (2018) used award categories such as the EY Excellence in Integrated Reporting Awards. They used an ordinal scale based on these award categories, which are the excellent, good, average and progress needed categories. In contrast to the other researchers, Zúñiga *et al.* (2020) measured the quality of information disclosed in the IR according to the sustainability data transparency index because it reflects the company's commitment to include environmental, social and governance (ESG) information. The integrated reporting and assurance services (IRAS), which assesses the quality, consistency, completeness and trustworthiness of quantitative data based on the elements of IR and global reporting initiatives, provides this index. The most thorough annual assessment of ESG reporting in South Africa is provided by IRAS.

6. Antecedents, consequences and contingencies of IR quality

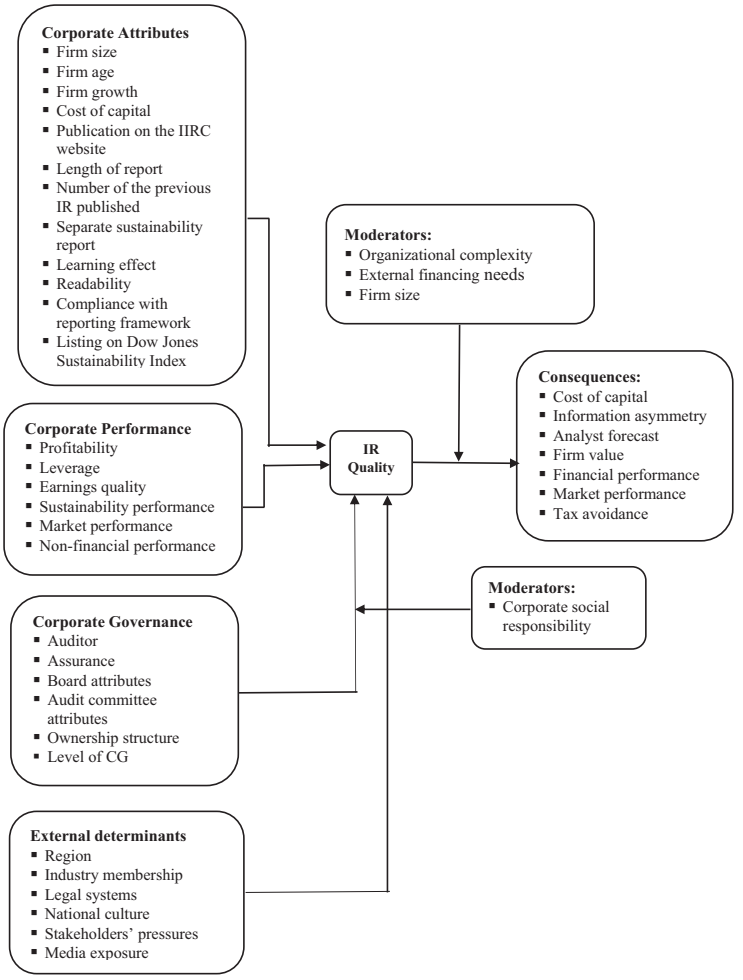
Having discussed the definition of IR quality, theoretical lenses and methodological applications, this study synthesizes the empirical evidence reviewed concerning the factors influencing IR quality and its impact. In addition, this study discusses the contingent variables that influence the mechanisms and contexts in which IR quality affects outcomes. Prior to the discussion, the outline in Figure 3 provides an overview of the findings.

6.1 Antecedents

6.1.1 Internal determinants. The literature review results have identified several relevant antecedents to explain the factors that influence IR quality.

6.1.2 Corporate attributes. Iredele (2019), Vitolla *et al.* (2020a) and Erin and Adegboye (2022) found that profitability, firm size, firm age and leverage determine the quality of IR. Companies that are dedicated to CSR are encouraged to share more non-financial information to legitimize their initiatives. As a result of increased profitability, top management is persuaded to release more information illustrating the company's capacity to maximize shareholder value. According to Vitolla *et al.* (2020a), firm size positively correlates with IR quality. The size of the company directly correlates with the size of the investment, revenue and profit, which, in turn, shows a commitment to CSR activities. The majority of shareholders and employees are attracted by large corporations. Their ability to meet the enormous demand for information is becoming increasingly dependent on their ability to provide high-quality IR. Large businesses also face more pressure from stakeholders and the government because of their greater social impacts. Additionally, businesses with greater financial leverage will pay more for monitoring. By proving to creditors their capacity, good disclosures help businesses fulfil their financial commitments. Additionally, as leverage rises, so does the likelihood of bankruptcy. To lower this risk, businesses should give more thorough information of adequate quality.

6.1.3 Corporate governance. In general, the corporate governance level affects the IR quality. Chouaibi *et al.* (2022b, 2022a) confirmed that corporate governance enhances the quality and trustworthiness of IR. Regarding one of the components of governance, Chariri and Januarti (2017), Erin and Adegboye (2022) and Raimo *et al.* (2021) investigated the effect of audit committee characteristics (size, expertise, meeting frequency and independence) on IR quality and found a positive relationship between them. Larger groups could benefit from each member's ideas, experience and expertise, which, in turn, increases the group's control and supervision capabilities. From this perspective, the audit committee's effectiveness in



Source: Figure by authors

Figure 3.
Antecedent, consequences and contingents

the oversight function is closely related to the available human resources; in other words, it depends on the number of its members. A larger audit committee is more likely to identify and address possible issues with the reporting process due to the possibility of having diversity, expertise and opinions that can enhance the oversight function. It demonstrated that one aspect affecting the superior quality of corporate reporting disclosures is the size of the audit committee. Additionally, the audit committee's competence and expertise, particularly its financial expertise, may improve the efficacy of supervision. Their financial know-how can lessen internal control flaws, ease tensions between managers and external auditors and ensure a favourable response from the capital market. The findings from Abad and Bravo (2018) support that the quality of forward-looking disclosures is correlated with the audit committee members' competency in accounting. Furthermore, a crucial evaluation

of the audit committee's operations and procedures is the frequency of meetings because it often leads to an increase in the supervisory function, which also impacts the quality of reporting. Last but not least, independent audit committees frequently exert influence over management and the board to promote the disclosure of relevant information in the IR. However, the audit committees may not have the necessary expertise to address the new risks associated with a volatile business environment, as found by Cooray *et al.* (2020). A technique to improve the standard of risk-related information sharing is the establishment of a separate risk management committee. Overall, the audit committee is essential to a solid corporate governance system and high-quality financial reporting. Since IR is a component of corporate reporting that encourages more transparent and integrated information, the audit committee's role is to oversee and review this type of report.

Meanwhile, the board of directors – an essential component of governance – also influences the quality of the IR because it is responsible for representing the interests of different stakeholders and has a central role in the IR. Gender diversity and board size have been essential components in empirical research because they can influence board decisions, determining how high the level of non-financial reporting is. Women's representation on the board can enhance board decisions by bringing new perspectives, abilities, values and beliefs that may enhance the effectiveness of IR. Gerwanski *et al.* (2019), Iredele (2019); Vitolla *et al.* (2020b); Wang *et al.* (2020); Chouaibi *et al.* (2022b); Erin and Adegboye (2022); and Chouaibi *et al.* (2022a) identified a relationship between gender diversity and superior IR. This implies that gender diversity not only serves as a positive CSR signal but is also linked to a considerable increase in reporting disclosures. Implicitly, findings from Gordini and Rancati (2017) suggested that greater gender diversity can generate economic benefits that do not reduce shareholder value. Nonetheless, Songini *et al.* (2022) found different results: that the presence of women was negatively associated with IR quality. Songini *et al.* (2022) not only look at the diversity of the board in terms of gender but also the diversity of ages and levels of education. Their findings showed that education level is positively associated with IR quality.

The effectiveness of corporate governance is also highly dependent on the board's composition. A larger non-executive membership on the board can supervise management effectively because non-executive members hold no position within the corporation and are not actively engaged in commercial activity. They can provide more objective feedback concerning management and company performance. Vitolla *et al.* (2020b); Wang *et al.* (2020); Chouaibi *et al.* (2022b); Erin and Adegboye (2022); and Chouaibi *et al.* (2022a) discovered that having more non-executive members makes the board's oversight more effective which promotes the revelation of high-quality information to guarantee the accomplishment of business goals and proper behaviour. Different orientations between the executive and non-executive members allow a balance between the needs of the business and stakeholders, thus improving the quality of the information delivered.

Furthermore, Vitolla *et al.* (2020b) and Wang *et al.* (2020) found that board activity determines the quality of IR. A board that organizes more meetings will put more effort and will more effectively address the needs of stakeholders. A more engaged board will involve providing shareholders and stakeholders with a higher volume of information. In relation to the core principle of IR, information connectivity needs the board to monitor more closely, necessitating more meetings. A company's IR quality may undoubtedly improve as a result of the board's heightened oversight and scrutiny. Meanwhile, Erin and Adegboye (2022) found a positive relationship between board financial expertise and IR quality. Another board characteristic that can also affect the quality of IR is CEO duality which can hinder the ability of the board to monitor management. Chouaibi *et al.* (2022a) provide evidence that

the separation function of the CEO and chairman of the board is expected to be a primary factor of higher-quality IR disclosures as it becomes a mechanism for controlling executives. The separation between these functions allows leaders to demonstrate reliable transparency because conflicts of interest and asymmetric information are problems that hinder the company's success.

Another governance system that affects IR quality is the ownership structure. It affects disclosure policies in terms of the extent to which information is disclosed, the level of monitoring, as well as the quality of disclosure. According to Raimo *et al.* (2020), institutional ownership has a positive impact, while ownership, managerial, government concentration and IR quality have a negative impact. Therefore, companies must disclose high-quality information that is able to capture the full portrait of the company's management as well as the company's ability to generate value over time. Additionally, asymmetric information levels within a firm can be impacted by differing ownership structures, which might change disclosure practices, particularly IR. In this situation, disclosure is a technique that can lessen information asymmetry and align the interests of owners and management. Concerning the reliability of the report, Rivera-Arrubla *et al.* (2017), Malola and Maroun (2019); Gerwanski *et al.* (2019), Maroun (2019); Chouaibi *et al.* (2022b); and Hoang and Phang (2021) discovered that external assurance affects IR quality because it helps organizations show key stakeholders how reliable IR is. The assurance engagements that contribute most significantly to the quality of the report include disclosure of social and environmental sustainability and compliance with the principles of materiality, inclusivity and responsiveness. The findings of Chouaibi *et al.* (2022b) provide evidence that auditor specialization and ethical factors positively impact IR quality. They recommend that audit firms adopt an ethical approach and invest in CSR. The audit committee coordinates the functions of management assurance, internal assurance and external assurance in contrast to the single assurance model (that is, financial statement audit and ESG assurance) and comes to conclusions about the efficacy of risk management, internal control and reporting quality. The findings of Donkor *et al.* (2021) and Hoang and Phang (2021) suggest that combined assurance could effectively increase the credibility of reporting practices.

6.1.4 External determinants. Concerning external determinants, Vitolla *et al.* (2019a) analysed the connection between IR quality and stakeholder pressure. Their findings supported this relationship and demonstrated, using stakeholder theory, how pressure from the government, employees, shareholders, environmental protection groups and customers affects the quality of IR. Companies are encouraged to share information with stakeholders to assist them make decisions and to ensure that their behaviour is appropriate. Stakeholders play a crucial role, which makes it feasible to put pressure on the corporation to provide additional information. Furthermore, with regard to external determinants, Vitolla *et al.* (2019b) also investigated the national culture's effect on the level of IR from the same theoretical perspective. They showed that IR quality is related to Hofstede's five dimensions, which are power distance, individualism, masculinity, indulgence negatively and uncertainty positively. The characteristics of a nation's culture describe the general similarities and variations among all cultures, imply special linkages and influence the preferences and behaviour of stakeholders.

The legislative framework of a nation is also an external factor that affects the quality of IR. According to Vitolla *et al.* (2020a), a well-developed legal system designed to protect stakeholders is the reason for the high degree of legislation and coercive pressure. Because the firm is viewed as an independent economic entity that incorporates a number of stakeholders, including shareholders, managers, customers, suppliers and employees, the

civil law system is more stakeholder-oriented than the common law. This situation causes companies operating in civil law countries to provide high-quality information that is able to meet the needs of stakeholders. Companies that operate in civil law nations are forced by this circumstance to offer high-quality information that can satisfy stakeholders' needs. Moreover, Rivera-Arrubla *et al.* (2017) found that region and industry are determinants of IR quality. Reporting variations are empirically proven to be influenced by the region in which the company operates, such as political conditions, reporting culture, regulations, as well as sensitivity to environmental and social responsibilities. The industry also has a significant influence on reporting quality. In industries that are sensitive to the environment, the attention is more on environmental information. Therefore, companies in industries that are more sensitive to the environment tend to develop more environmental initiatives and report them.

6.2 Consequences

A total of 13 articles analysed the consequences of IR quality. Lee and Yeo (2016) and Moloi and Iredele (2020) investigated the relationship between IR quality and firm value and found a positive relationship. The results showed that, on average, the benefits of IR could outweigh the costs. Furthermore, García-Sánchez and Noguera-Gámez (2017) and Zúñiga *et al.* (2020) analysed the possible relationship between IR quality and asymmetric information and found a negative relationship. It implies that IR may be a tool for reducing agency issues, assisting business decision-making and increasing the information that investors have. The existence of asymmetric information can create uncertainty in the stock market as well as costs due to the adverse selection problem because better-informed investors will use their private information in trading.

Concerning the two objectives of IR identified in the IIRF – that is, enhanced information for external financial capital providers and improved internal decision-making – Barth *et al.* (2017) found a positive association between IR quality, stock liquidity and expected future cash flows, but not for the cost of capital. Along with analyst forecast error and dispersion, Zhou *et al.* (2017) discovered that the cost of capital was adversely correlated with IR quality. Their findings demonstrate that IR is increasingly able to deliver meaningful information to the capital market beyond existing reporting systems which supports the two aims of IR, namely, enhancing external information and better internal decisions. In addition, the information contained in the IR is also useful for analysts in assessing the company's financial performance in the future, and investors are willing to accept lower rates of return as a result of reducing information risk. This finding is also in line with the findings of Zúñiga *et al.* (2020). The different results shown by Leukhardt *et al.* (2022) that there is no significant relationship between IR quality and the accuracy of analysts' forecast earnings, especially in a voluntary setting. According to them, current high-quality integrated reports do not appear to improve a company's information environment and do not provide additional relevant information to capital markets in a voluntary setting.

Cosmulese *et al.* (2019), Matemane and Wentzel (2019) and Ciubotariu *et al.* (2021) examined the relationship between IR quality and financial performance and found that only earnings per share were positively related, while firm value and profitability were not associated. Future research needs to reexamine this issue, considering that short-term earnings represented by EPS are as important as long-term values represented by Tobin's Q and economic value added. Meanwhile, Pavlopoulos *et al.* (2019) examined the level of information offered by businesses that include an IR component in their annual reports. They discovered that companies with high IR quality typically exhibit high market values per share, and greater market values are seen in companies with significant levels of

leverage and liquidity. This finding supports IR; that is, the level of IR disclosure could determine the effectiveness of IR in the context of the capital market. Companies are motivated to adopt IR solely so that the available information becomes simpler and more integrated and related to the company's business, thus enabling them to communicate their ability to create value at the moment and in the future in a complete and transparent manner. Therefore, the results of the analysis by Pavlopoulos *et al.* (2019) confirmed that the adoption of IR will mark a new reporting era, supported and accompanied by integrated thinking.

A high-quality IR can also result in a lower cost of capital. According to Vitolla *et al.* (2020c), high-quality IR can lower the cost of equity capital by lowering estimation risk, asymmetries in information, investor monitoring costs and investor preference changes. As a result, increased information and a high level of transparency allow for lower shareholder returns. In addition, greater levels of disclosure increase investor recognition and broaden the investor base, thereby encouraging risk sharing. As for the cost of debt, Raimo *et al.* (2022) discovered a negative correlation between it and IR quality. This implies that businesses offering high-quality IR gain by having easier access to outside financial resources.

Recently, Donkor *et al.* (2022) examined the relationship between IR quality and corporate tax avoidance and found they had a negative relationship. Although legal, tax avoidance has attracted great attention because of its potential role as a means of obtaining tax benefits. There are two schools of thought about tax avoidance. The first thought is in line with the shareholder perspective, where the primary responsibility of management is to maximize shareholder wealth. It means that management needs efforts to reduce taxes. The second thought asserts that the companies should pay their fair share of taxes. Tax avoidance is unethical and cannot be justified because it will reduce government revenue and its ability to provide for the needs of citizens. Improvements in accountability, service, trust, information flow openness, decision-making and tax risk management systems have all been linked to the IR. It provides management and tax authorities with better and more information about the company to all interested parties. The IR's transparency should make tax avoidance techniques more obvious and discourage such behaviour. The findings of Donkor *et al.* (2022) are in line with the hypothesis that tax avoidance techniques can be exposed through IR and the practice reduced. Although the IR can create tax planning opportunities for companies, they use IR to align with stakeholders because companies avoid legitimacy issues that endanger reputational risk by reducing tax avoidance practices.

6.3 Moderating effects

The literature that has been reviewed identified several effects of moderator variables. On the association between IR quality and consequences, two moderator variables were proposed by Lee and Yeo (2016); that is, the association between IR quality and firm value is moderated by organizational complexity and the necessity for outside financing. They discovered that companies with more organizational complexity had a stronger positive relationship between IR quality and company. In addition, they discovered that organizations with more external financing needs have a stronger link between IR quality and firm value.

Chouaibi and Hichri (2021) found that corporate social responsibility was able to moderate the relationship between board characteristics and IR quality. Implementing CSR can urge organizations to conduct their business operations in a more responsible manner so that they do not negatively impact the environment and society. It is impossible to separate the roles played by a company's internal and external stakeholders from the successful

implementation of CSR. If they are to be applied to the operational activities of a business, strong corporate governance concepts must be thoroughly understood by every manager. Companies' commitment to CSR requires them to be more transparent and encourages companies to be more concerned about the environmental and social impacts of their activities. This form of transparency manifests itself in high-quality IR.

7. Future research directions

7.1 Future theoretical directions

According to the review conducted for this study, the theories most frequently used by researchers to underlie the practice and quality of IR are agency, legitimacy and stakeholder theories. Other theories that are still limited in their use, such as institutional, organizational change, behavioural, resource dependence and positive accounting theories, require further investigation. Therefore, future research is expected to be able to use these other limited theories to understand their relationship with IR quality.

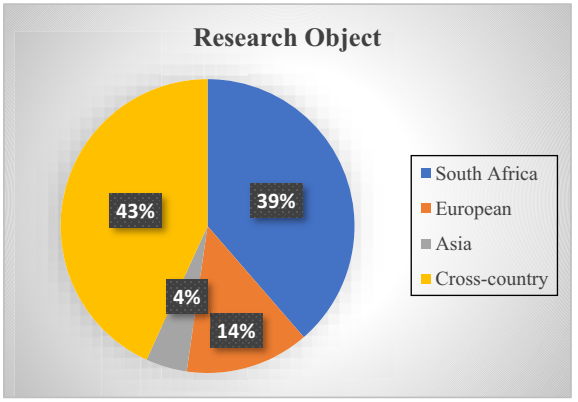
7.2 Future empirical directions

Firstly, there are different dimensions in forming the definition of IR quality, although the most widely used and examined are the measurements proposed by Ahmed Haji and Anifowose (2016), Lee and Yeo (2016), Zhou *et al.* (2017) and Pistoni *et al.* (2018). Future research could redevelop the dimensions that comprise the quality of IR, for example, by combining one or more dimensions from one definition of IR with another definition of IR because there is still plenty of room to develop measurements for IR quality. Secondly, future research could re-confirm the findings of Ahmed Haji and Hossain (2016), considering that the study was conducted in the early stages of the IR adoption period – 2011 to 2014 – and was limited to highly regarded companies and award-winning reports in South Africa. Thirdly, future studies could include non-financial performance measures as a consequent variable to determine the extent to which IR has helped the companies to create value broadly for all stakeholders and not only shareholders. Hopefully, after nearly a decade of IR implementation, companies have internalized the values that the IIRF brings.

The following could be used to convey the fourth idea for additional investigation. Companies are progressively aligning their reports with IR requirements as IR practices take shape. The level and quality of IR have significantly improved over time, according to the findings of Ahmed Haji and Anifowose (2016), Pistoni *et al.* (2018) and Agustia *et al.* (2020), while some concepts still need to be established. Therefore, future research could explore IR practice longitudinally, considering there has been a decade of IR implementation.

Regarding the research object, Figure 4 illustrates the distribution of the sample used by the researchers. Most of them used cross-country studies and South Africa. This cross-country study involved Africa, Europe, America, Asia and Australasia (Rivera-Arrubla *et al.*, 2017; Pistoni *et al.*, 2018; Songini *et al.*, 2022). Specifically, there are studies in the European and South African regions (Gerwanski *et al.*, 2019) and Europe and Asia (Sriani and Agustia, 2020). In addition, several studies took samples in South Africa as a country that has the mandatory implementation of IR based on the "apply or explain" principle (Maroun, 2019; Zhou *et al.*, 2017; Ahmed Haji and Hossain, 2016; Lee and Yeo, 2016; Ahmed Haji and Anifowose, 2016; Barth *et al.*, 2017; Malola and Maroun, 2019; Wang *et al.*, 2020).

The European region has also attracted the attention of researchers because European companies are the biggest voluntary adopters of IR in the world (Agustia *et al.*, 2020). However, only limited researchers have conducted studies in Asia (Cooray *et al.*, 2020; Pratama *et al.*, 2021), which can be a research gap for future studies on integrated reporting practices in Asia, considering that many companies in Asia have already adopted IR



Source: Figure by authors

Figure 4.
Research object

practices voluntarily. Another gap that future researchers can fill is in the area of comparative studies between mandatory and voluntary adopters, which are still limited.

Finally, this study identified contingent variables as moderator variables, which are organizational complexity, external financing needs, firm size and corporate social responsibility. However, no studies that used IR quality as a contingent variable nor that examined mediating variables' role were identified. It could be a research opportunity in the future.

8. Conclusion

This study adds to the body of knowledge on integrated reporting by conducting a systematic review of the quality of IR. The quantitative method was the most widely used, and it was primarily archival. The IR quality defined by most studies is consistent with the IIRC framework. This review summarized and analysed information about the theories, methods, determinants, effects and moderating variables that researchers have used in previous studies. In terms of theory, the authors identified the agency, legitimacy and stakeholder theories as the most widely used by researchers.

Meanwhile, the theories related to proprietary cost, morality, signalling, voluntary disclosure, impression management, cognitive development, upper echelon, critical mass and others still need to be investigated further. Regarding the determinants, the authors identified internal factors (corporate attributes, corporate performance and corporate governance) and external factors (region, legal systems, national culture, stakeholders' pressures and media exposure). As for the consequent variables, this study identified the following: cost of capital, information asymmetry, analyst forecast, firm value, financial performance, market performance and tax avoidance. Meanwhile, this study also identified contingency variables used as moderators, which are organizational complexity, external financing needs, firm size and corporate social responsibility.

This study makes a significant contribution to research on IR quality by presenting a map of previous research, identifying gaps and providing suggestions for future research. We present a map of previous research in a structured manner in the form of a list of variables such as determinants, consequences and contingents. By constructing such a relationship map, we provide suggestions for IR quality topics that are still under investigation.

The implications of this study are not only for researchers but also for practitioners and regulators. For managers, this study can provide a snapshot of the factors that determine

the quality of reporting and the effects of the reporting quality so that they can continue to make quality improvements to their reports. In particular, the results of our study provide implications for report preparers to continuously incorporate the dimensions of reporting quality identified in this study as a guide in preparing high-quality reports.

Similar implications also apply to regulators in their efforts to regulate reporting quality, particularly for public companies. Recently, the IIRF was administered under the IFRS Foundation with a view to developing high-quality sustainability accounting and disclosure standards. IIRF is also used to connect financial statements and financial disclosures with sustainability-related information. Therefore, the International Accounting Standards Board and International Sustainability Standards Board are jointly responsible for IIRF. This study has limitations, as is the case with other interpretive studies; these findings are limited to the researcher's interpretation of the literature review results. Other researchers conducting the same literature review may have different interpretations.

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Corresponding author
Bambang Tjahjadi can be contacted at: bambang.tjahjadi@feb.unair.ac.id

Appendix

Table A1. Summary of the studies analysed

No.	Authors/ year	*Journal title*	Article title	Theoretical frameworks	Research context	Method
1	Donkor *et al.* (2022)	*Sustainability Accounting, Management and Policy Journal*	Integrated reporting quality and corporate tax avoidance practices in South Africa's listed companies	Legitimacy theory	South Africa	Archival
2	Minutiello and Tettamanzi (2021)	*Corporate Social Responsibility and Environmental Management*	The quality of nonfinancial voluntary disclosure: a systematic literature network analysis on sustainability reporting and integrated reporting	Stakeholder theory, impression management theory, legitimacy theory	Articles from Web of Science, Google Scholar and Scopus database	Systematic literature review
3	Ciubotariu *et al.* (2021)	*Journal of Business Economics and Management*	Modeling the relationship between integrated reporting quality and sustainable business development	Not specified	IR examples database (South America, North America and Europe)	Archival
4	Chouaibi and Hichri (2021)	*International Journal of Law and Management*	Effect of the auditor's behavioral and individual characteristics on integrated reporting quality: evidence from European companies	Theory of moral and cognitive development, theory of legitimacy	European industrial companies	Archival
5	Chouaibi *et al.* (2022b)	*EuroMed Journal of Business*	Do board directors and good corporate governance improve integrated reporting quality? The moderating effect of CSR: an empirical analysis	The agency theory, the theory of legitimacy and the theory of stakeholders	European firms selected from STOXX 600 index	Archival
6	Raimo *et al.* (2022)	*Journal of Applied Accounting Research*	Integrated reporting quality and cost of debt financing	Not specified	European listed firms	Archival
7	Erin and Adegboye (2022)	*Journal of Financial Reporting and Accounting*	Do corporate attributes impact integrated reporting quality? An empirical evidence	Legitimacy theory and stakeholder theory	Top 100 listed firms in South Africa	Archival
8	Chouaibi *et al.* (2022a)	*EuroMed Journal of Business*	Board characteristics and integrated reporting quality: evidence from ESG European companies	The theory of the moralist current and legitimacy, the signal theory and the agency theory	European companies selected from the environmental, social and governance (ESG) index	Archival

(*continued*)

Table A1.

No.	Authors/ year	*Journal title*	Article title	Theoretical frameworks	Research context	Method
9	Songini *et al.* (2022)	*Journal of Management and Governance*	Integrated reporting quality and BoD characteristics: an empirical analysis	Stakeholder theory, agency theory, upper echelons theory, critical mass theory and token theory	Companies' integrated reports from "Getting Started" of IIRC website (Anglo–Saxon countries, Europe and other countries)	Archival
10	Raimo *et al.* (2021)	*Business Strategy and the Environment*	Do audit committee attributes influence integrated reporting quality? An agency theory viewpoint	Agency theory	125 International firms	Archival
11	Piesiewicz *et al.* (2021)	*Energies*	Differences in disclosure of integrated reports at energy and non-energy companies	Not specified	Listed companies in Poland	Archival
12	Amirrudin *et al.* (2021)	*Journal of Emerging Economies and Islamic Research*	Voluntary and compulsory integrated reporting: evidence on reporting quality	Not specified	International companies listed on the International Integrated Reporting Council (IIRC) websites	Archival
13	Donkor *et al.* (2021)	*International Journal of Auditing*	Impacts of combined assurance on integrated, sustainability and financial reporting qualities: evidence from listed companies in South Africa	Agency theory	Top 100 firms on Johannesburg Stock Exchange	Archival
14	Pratama *et al.* (2021)	*Academic Journal of Interdisciplinary Studies*	Integrated reporting in Southeast Asia: Does value creation work?	Legitimacy theory, political cost theory	All listed companies in Indonesia, Malaysia, Singapore, Thailand and Philippines	Archival
15	Sriani and Agustia (2020)	*Heliyon*	Does voluntary integrated reporting reduce information asymmetry? Evidence from Europe and Asia	Agency theory, adverse selection theory	Europe and Asia	Archival
16	Zúñiga *et al.* (2020)	*Accounting Research Journal*	The effect of integrated reporting quality on market liquidity and analyst forecast error	Economic-based theory	South Africa	Archival
17	Agustia *et al.* (2020)	*Journal of Security and Sustainability Issues*	Integrated reporting quality assessment	Proprietary cost theory and agency theory	European	Archival

(*continued*)

Table A1.

No.	Authors/ year	*Journal title*	Article title	Theoretical frameworks	Research context	Method
18	Cooray *et al.* (2020)	*Sustainability*	Does corporate governance affect the quality of integrated reporting?	Agency theory	Sri Lanka	Archival
19	Vitolla *et al.* (2020a, 2020b, 2020c)	*Corporate Governance*	The determinants of integrated reporting quality in financial institutions	Stakeholder theory	Financial institutions in 20 different countries	Archival
20	Vitolla *et al.* (2020a)	*Corporate Social Responsibility and Environmental Management*	Board characteristics and integrated reporting quality: an agency theory perspective	Agency theory	International firms in five continents and 26 countries	Archival
21	Moloi and Iredele (2020)	*Academy of Strategic Management Journal*	Firm value and integrated reporting quality of South African listed firms	Agency theory and voluntary disclosure theory	South Africa	Archival
22	Vitolla *et al.* (2020c)	*Business Strategy and the Environment*	The impact on the cost of equity capital in the effects of integrated reporting quality	Not specified	Africa, America, Asia, Europe and Oceania	Archival
23	Mans-Kemp and van der Lugt (2020)	*South African Journal of Economic and Management Sciences*	Linking integrated reporting quality with sustainability performance and financial performance in South Africa	Legitimacy theory	South Africa	Archival
24	Wang *et al.* (2020)	*European Accounting Review*	Corporate governance, integrated reporting and the use of credibility-enhancing mechanisms on integrated reports	Agency theory, stakeholder theory, legitimacy theory and resource dependence theory	South Africa	Archival
25	Raimo *et al.* (2020)	*Business Strategy and the Environment*	The role of ownership structure in integrated reporting policies	Agency theory	International companies	Archival
26	Vitolla *et al.* (2019a, 2019b, 2019c)	*Business Strategy and the Environment*	The impact of national culture on integrated reporting quality. A stakeholder theory approach	Stakeholder theory	International companies from the "Leading Practices" and "<IR> Reporters" sections of the IIRC website	Archival

(*continued*)

Table A1.

No.	Authors/ year	*Journal title*	Article title	Theoretical frameworks	Research context	Method
27	Vitolla *et al.* (2019a)	*Corporate Social Responsibility and Environmental Management*	How pressure from stakeholders affects integrated reporting quality	Stakeholder theory	International companies from the IIRC website (Europe, Asia, America, Africa and Oceania)	Archival
28	Dilling and Caykoylu (2019)	*Sustainability*	Determinants of companies that disclose high-quality integrated reports	Agency theory and signalling theory	International companies	Archival
29	Cosmulese *et al.* (2019)	*Economic Research-Ekonomska Istraživanja*	An empirical analysis of stakeholders' expectations and integrated reporting quality	Not specified	Not specified	Archival
30	Matemane and Wentzel (2019)	*Banks and Bank Systems*	Integrated reporting and financial performance of South African listed banks	Legitimacy theory	South African banks	Archival
31	Malola and Maroun (2019)	*South African Journal of Accounting Research*	The measurement and potential drivers of integrated report quality: evidence from a pioneer in integrated reporting	Not specified	South Africa	Archival
32	Pratama *et al.* (2019)	*Utopía Y Praxis Latinoamericana*	Designing an integrated reporting guidance: an initiative to improve environmental and social reporting quality	Not specified	Not specified	Qualitative
33	Pavlopoulos *et al.* (2019)	*Research in International Business and Finance*	Integrated reporting: an accounting disclosure tool for high quality financial reporting	Stakeholder theory	Listed firms from 25 countries	Archival
34	Gerwanski *et al.* (2019)	*Business Strategy and the Environment*	Determinants of materiality disclosure quality in integrated reporting: empirical evidence from an international setting	Stakeholder theory	European and South African firms	Archival
35	Iredele (2019)	*Heliyon*	Examining the association between quality of integrated reports and corporate characteristics	Contingency theory and agency theory	South Africa	Archival

(*continued*)

Table A1.

No.	Authors/ year	*Journal title*	Article title	Theoretical frameworks	Research context	Method
36	Pistoni *et al.* (2018)	*Corporate Social Responsibility and Environmental Management*	Integrated reporting quality: an empirical analysis	Proprietary cost theory, agency theory and positive accounting theory	Europe, Asia, Africa, South America, Australasia and North America	Content analysis
37	Barth *et al.* (2017)	*Accounting, Organizations and Society*	The economic consequences associated with integrated report quality: capital market and real effects	Agency theory and behavioural theory	South Africa	Archival
38	García-Sánchez and Noguera-Gámez (2017)	*Corporate Social Responsibility and Environmental Management*	Integrated reporting and stakeholder engagement: the effect on information asymmetry	Agency theory and information asymmetric theory	Companies from 27 countries	Archival
39	Cucari and Mugova (2017)	*Proceedings of the European Conference on Management, Leadership and Governance*	Corporate sustainability in the tourism sector: Is "Integrated Reporting" an appropriate strategy?	Stakeholder theory	South Africa	Qualitative
40	Pozzoli and Gesuele (2016)	*Lecture Notes in Information Systems and Organisation*	From theory to practice: first adoption of integrated reporting by the Italian public utilities	Neo-institutional theory	Selected public utilities companies from ten countries	Content analysis
41	Ahmed Haji and Anifowose (2016)	*Sustainability Accounting, Management and Policy Journal*	The trend of integrated reporting practice in South Africa: ceremonial or substantive?	Legitimacy theory	South African	Content analysis
42	Lee and Yeo (2016)	*Review of Quantitative Finance and Accounting*	The association between integrated reporting and firm valuation	Stockholder theory and proprietary disclosure costs theory	South Africa	Archival
43	Ahmed Haji and Hossain (2016)	*Qualitative Research in Accounting and Management*	Exploring the implications of integrated reporting on organisational reporting practice: evidence from highly regarded integrated reporters	Impression management theory	South Africa	Qualitative

(*continued*)

Table A1.

No.	Authors/ year	*Journal title*	Article title	Theoretical frameworks	Research context	Method
44	Zhou *et al.* (2017)	*Abacus*	Does integrated reporting matter to the capital market?	Voluntary disclosure theory	South Africa	Archival
45	Rivera-Arrubla *et al.* (2017)	*Social Responsibility Journal*	Integrated reports: disclosure level and explanatory factors	Institutional theory	Africa, America, Asia and Australia	Archival
46	Maroun (2019)	*Journal of Accounting and Public Policy*	Does external assurance contribute to higher quality integrated reports?	Organizational change theory	South Africa	Archival