

## Methodologies and Moderator-Mediating Factors of Integrated Reporting: A Systematic Review

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### *Abstract*

This systematic review paper aims to provide an overview of the content literature review of integrated reporting in the following categories: (1) the methodology approach used; (2) the mediating-mediator factors of integrated reporting. Using a systematic literature review design based on PRISMA guidelines, the data were collected from selected databases (google scholar). The study reviewed 52 papers. The timeframe of the study was from 2017 until 2023 (May). The findings of the reviewed articles showed that the majority of the papers were published in Emerald publisher journals (25). The highest number of articles were published in 2022 (25 articles). Most of the papers employed a quantitative research design and selected secondary data that was followed by a mixed-method research design. The moderator and mediating factors found in the reviewed articles were needs for external financing, corporate Social responsibility, earnings per share (EPS), firm complexity, financial leverage (low but significant), environmental, social and governance (ESG) performance reporting, board gender diversity and family firms, CEO integrity, and CEO power, while only two mediating factors were found: Integrated reporting, and firms' reputation. Based on the findings, the study suggests several implications and suggestions for delivering better knowledge of integrated reporting.

Keywords: Integrated reporting; IR, methodologies, secondary data, moderator, mediating, systematic review.

### **Introduction**

According to Buhr (2007), environmental and social reporting has a long history. These disclosures were initially made in the yearly financial

reports of corporations. Environmental and social disclosures, however, have been provided during the past 20 years in separate, reports or using websites (Cho et al., 2009). As they addressed various topics to satisfy the stated information requirement from managers, the reports are time-consuming and involved. These reports' complexity and length have highlighted the necessity of combining non-financial and financial data. According to this perspective, recent initiatives have tried to combine information on the governance, social, financial, and environmental aspects of a report (Dey & Burns, 2010). The so-called integrated reporting (IR) is a result of the amalgamation of this information. Since the creation of the International Integrated Reporting Committee (IIRC) in 2010, there has been significant interest in integrated reporting. Both academics and practitioners alike are becoming more interested in IR in recent years.

The financial crisis of 2008/2009 has caused most shareholders and other stakeholder groups to heavily criticize the idea of classical financial reporting. Again, financial reports have not been able to explain the widening value gap between Public Interest Entities' (PIEs') balanced equity and business value. Consequently, stakeholders are calling for efforts towards reporting non-financial PIEs aspects, such as environmental and social information (Kolk & van Tulder, 2010). Thus, in addition to conventional financial reports (such as balance statements), several PIEs have chosen to establish stand-alone Corporate Social Responsibility (CSR) reporting. CSR reports are referred to as a "best practice" by international PIEs in the Global Reporting Initiative (GRI) Standards (KPMG 2017). However, due to greenwashing policies and information saturation, the value of non-financial reporting for decision-making has been questioned (Huang & Watson, 2015). Typically, business reporting does not link financial and CSR data. As a result, the desire of stakeholders in tying these components together—ideally inside one (integrated) report—is frequently not realized.

For a variety of reasons, more businesses are developing an interest in IR implementation. Others understand the benefits derived from it, such as reputation, profit increases on a short- and long-term basis, effective decisions and capital allocation, future orientation, retaining customers and employees, and stakeholder engagement, while some practice accounting for IR and sustainability due to legislative pressure. Whether used voluntarily or not, integrated reporting techniques have several benefits, including improved reputation, a greater understanding of how a company affects the environment or society, and the ability to link financial and non-financial performance. All the components of an integrated report are disclosed and presented in a way that creates linkages between the financial and sustainability/CSR information.

In the global context, it is already required, although sustainability reporting is regulated in "Denmark, Norway, and Sweden (Eccles &

Saltzman, 2011), and France's Grenelle II legislation mandates that non-listed firms publish environmental and social data and emphasize sustainable development challenges. Therefore, there is a trend for non-financial information that is provided voluntarily to become required. The Sustainable Stock Exchanges Initiative, which keeps up with the regulation setting, is highlighted by Eccles & Saltzman (2011). The IIRC will work with Australia, Italy, Japan, Korea, and New Zealand to establish national organizations for promoting integrated reports. Businesses that decide to implement integrated reporting will reap a number of advantages, both internal and external. Eccles & Saltzman (2011) claim that the external advantages relate to investors who rely on social, environmental, and governance disclosure and to stock exchange regulations, standards, frameworks, guidelines, and compliance with these criteria. The internal advantages relate to improvements in resource allocation, shareholder engagement, and reputation. As more businesses are prepared to apply for this system, integrated reporting is spreading and becoming more widely used. Diffusion theory, which was developed from institutional theory and the institutional elements that affect how companies behave (Berg & Jensen, 2012), is the source of the diffusion and adoption of reporting practices.

A preliminary version of the principle-based framework concept for integrated reporting (IR) was released by the International Integrated Reporting Council (IIRC) in 2013. "According to an integrated thinking approach and an emphasis on the materiality principle, IR requires a clear connection between financial, intellectual, manufactured, human, social, and relationship, as well as natural capital (IIRC, 2013). As a result, IR emphasizes two "classical" economic capital categories (financial & manufactured capitals), two social components (human, social, & relational capitals), intellectual capital, and one environmental component (natural capital). According to IIRC (2013), the integrated thinking paradigm presupposes that these six capitals are interconnected." The IIRC (2013) defines an integrated report as "concise information about how an organization's strategy, governance, performance and prospects, in the context of its external environment, lead to the creation of value over the short, medium and long term".

In empirical research, IR evolved significantly in prominence recently. However, there is still a lack of a systematic study of methodologies and moderating and mediating factors of IR reporting despite the existence of literature reviews on IR (de Villiers et al., 2017b; Velte & Stawinoga, 2017). Even though it is assumed that proper IR may result in a favourable firm valuation by the stakeholders and capital market, the study depends on the business case for IR in this literature review (Carroll and Shaban, 2010; Schaltegger et al., 2019).

The systematic review methodology is utilized in the paper to summarize the information already available on the research's

moderating and mediating variables, bridging this knowledge gap and enabling more general conclusions regarding the phenomena. It's critical to balance the number of studies, address the shortcomings of earlier assessments, and establish a research plan for the future (Paul and Criado, 2020). The review provides new insights on integrated reporting to practitioners, policymakers, and scholars. The existing literature review and the future research plan, in fact, can be useful to readers who are not academics. The focus of earlier evaluations on the analysis of the mediator and moderator of IR research was similarly lacking. However, moderators and mediators might be essential to our archival IR research since our business case argument might require additional firm-specific attributes to be strengthened or undermined.

The current study varies from other systematic reviews as it provides new insights into contingent variables (moderating and mediating) and methodologies conducted in the previous literature. In a different way to previous SLRs which have been criticised as individual concepts/constructs (Veltri and Silvestri, 2020), this SLR employs an integrated design and considers the variables mediating and moderating and the methodologies employed in the selected studies.

The techniques that may affect financial and governance, social, and environmental performance are moderately unidentified (Kannenberg and Schreck, 2019). The current systematic literature review includes studies published during the past seven years that are taken into account in this literature review (2017–2023). As a result, new insights on integrating reporting studies are provided. In addition, this study outlines a future research agenda, taking into account gaps in recently released studies. The study uses a systematic literature review approach in order to tackle this gap present in recent studies. It summarises the available information and material on various aspects like methods and mediating and moderating variables, utilized in IR research, enabling more general conclusions about the same (Nwachukwu, 2021). It is necessary to reconcile the number of studies, address the shortcomings of past assessments, and establish an agenda for future research (Paul and Criado, 2020). This analysis provides new information on integrated reporting for practitioners, policymakers, and scholars. In fact, the current literature evaluation and future research plan are useful even for non-academic readers.

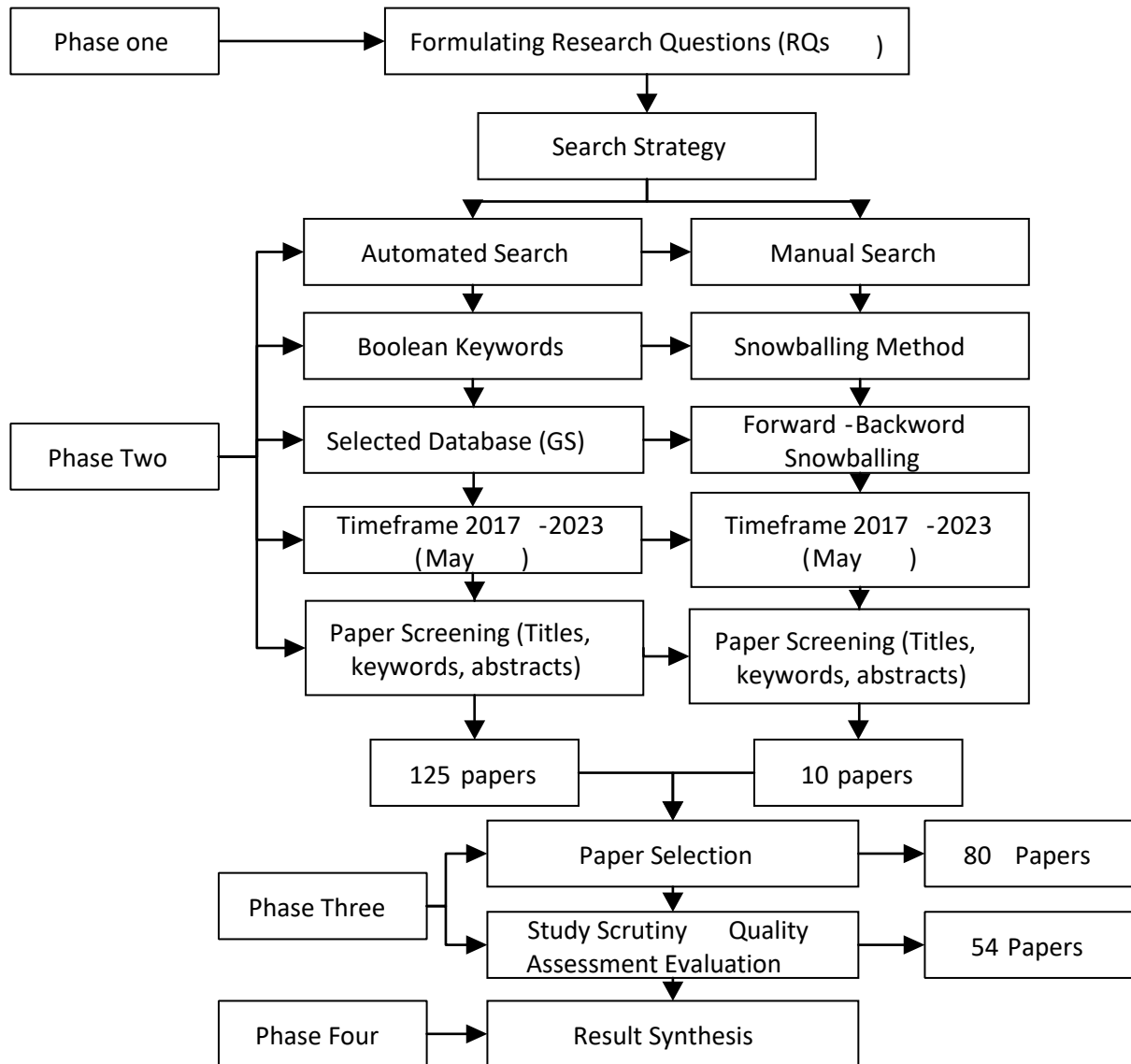
#### Research Question

1. What are the moderating and mediating variables of integrated reporting in the selected studies?
2. What are the different methods which are employed in order to measure Integrated reporting?

## **Methodology**

### **Research Method**

The study employed the SLR approach following the guidelines of PRISMA coding scheme. PRISMA is an internationally validated and accepted guideline utilised for doing SLR. Guidelines of PRISMA for the foundations of this study for validity, transparency, and adaptability. Figure 1 presents the flowchart of the research methodology. The first phase of the study formulated the research questions. Two research questions were formulated based on the gaps in the literature review. Phase 2 executed the search strategy which included a combination of 2 consequential search techniques: Manual and automated searching protocols. Formulating Boolean keyword terminologies and strings and searching google scholar which has access to various databases to established databases namely; Web of Science, IEEE, Routledge, Springer, EBSCO, ScienceDirect, ProQuest, Taylor and Francis, Wiley, Emerald, Sage, Springer, MDPI. Google Scholar was used as the majority of articles can be found on it re-directs the search to other databases. The time frame used in the article ranges from 2017 to 2023 as the intention is to include the latest articles. The paper search deadline was set for May 2023 since the paper selection procedure was completed in 2023, allowing other SLR operations to proceed in accordance with a predetermined schedule. The papers were then rigorously screened based on their abstracts, titles, and keywords. The second tactic was manual searching using the "snowballing method" methodology. Identified works from the same period were extended over references using both forward and backward snowballing search procedures. Then, a comparable procedure of paper screening based on abstracts, titles, and keywords was done. In Phase 3, a study examining a collection of potential papers was used to choose the papers. Phase 4 is the stage for data synthesis, in which the results of selected studies were compiled using a variety of data visualization methodologies.



The Boolean operator mixed all related keywords. The search included several keywords to widen the scope of the literature. The keywords searched for platforms for digital technology usage in language education include "IR," "systematic literature review," "empirical studies," "web of science," "2017," "2018," "2019," "2020," "2021," "2022," and "2023," were taken into account for this review. Manual searching was used to extend the search process.

#### Study Selection

A pool of 125 papers was generated from the initial collection of potential papers using an automated technique, and 10 more papers were obtained using a sequential manual search procedure. Duplicate

papers gathered from the various databases were removed from the pool of papers using an analysis of titles, abstracts, and keywords. Following that, these papers were categorized using previously established inclusion and exclusion criteria. The papers were screened using this method, and after that, the researchers carefully examined each manuscript in its entirety.

#### Inclusion Criteria

1. Studies written in English Language.
2. Articles must be related to integrated reporting.
3. Articles must focus clearly on methods or mediating-moderator factors.
4. Only empirical studies with real data.
5. Only conference papers and journal articles to maintain the quality of findings.
6. Articles published between 2017 and 2023.

#### Exclusion Criteria

1. non-empirical studies or studies that only focused on the description of the design of a learning environment.
2. Studies that focused only on IR.
3. Studies that the full texts are not accessible.
4. Articles that failed to address the research objectives (methods, mediating, mediator).
5. Book chapters are not included because they cannot be easily found on databases, and they are not always available as full texts. Furthermore, most books are not peer-reviewed as scientific articles.
6. Theses and dissertations are also not included in the study for similar reasons.

#### Study Scrutiny

The parameters were further refined to reduce the total of 135 papers gathered from the study-seeking methodologies to a total of 100 potential papers. Papers that did not meet one or more of the 6 criteria were excluded from this process. The authenticity of the chosen papers was also confirmed by checking that they were drawn from reliable publication sources, such as peer-reviewed journals, conference proceedings, book chapters, and articles. These 100 papers were thoroughly read and checked for quality (via coding) based on crucial questions that focused on their suitability for the study. Further quality assessment was made by responding to questions assessing the content of the articles. This method of coding was taken from (Achimugu,

Selamat, Ibrahim, & Mahrin, 2014), where the authors offered a reliable way of determining whether each manuscript was appropriate for this SLR. After performing the quality assessment evaluation, there were a total of 60 articles left for the study.

1. Does the paper clearly describe integrated reporting?
2. Does the paper identify the methods and mediating and moderator factors?
3. Does the paper add value to contributions towards academia and the education community in the financial and management context?

### Findings and Results

Each of the 52 sampled papers has been published in either an accounting journal (such as the European accounting review) or an ESG journal (such as the corporate social responsibility and environmental management journals). Other management journals have also published some of the studies (e.g. International Journal of Productivity and performance management). The majority of the articles (25) on the topic were published in the year 2022, providing up-to-date information. The table below presents the distribution of the article to the publisher. Most articles were published by Emerald Publishing Limited i.e., thirty in number. There are a total of nine studies from John Wiley and Sons Inc. six from MDPI, two from Taylor and Francis, and one from Asociacion Internacional de Economia Aplicada, Cogent OA, Elsevier, Kasetsart University and Springer in Table 1.

<b>Journal</b>	<b>Publisher</b>	<b>Frequency</b>
Asian Journal of Accounting Research	Emerald	1
Asian Review of Accounting	Emerald	1
Business Strategy and the Environment	Wiley	4
Cogent Economics and Finance	Cogent OA	1
Corporate Governance (Bingley)	Emerald	2
Corporate Social Responsibility and Environmental Management	Wiley	4
Economic Research–Ekonomiska Istraživanja	Taylor and Francis	1
Estudios de Economia Aplicada	Asociacion Internacional de Economia Aplicada	1



EuroMed Journal of Business	Emerald	2
European Accounting Review	Taylor and Francis	1
International Journal of Emerging Markets	Emerald	3
International Journal of Productivity and Performance Management	Emerald	1
Journal of Accounting in Emerging Economies	Emerald	
Journal of Applied Accounting Research	Emerald	1
Journal of Business Research	Elsevier	1
Journal of Financial Reporting and Accounting	Emerald	5
Journal of Global Responsibility	Emerald	1
Journal of Intellectual Capital	Emerald	2
Journal of Management and Governance	Springer	1
Journal of Risk and Financial Management	MDPI	1
Kasetsart Journal of Social Sciences	Kasetsart University	1
Management Decision	Emerald	1
Meditari Accountancy Research	Emerald	6
Social Responsibility Journal	Emerald	1
Sustainability	MDPI	2
Sustainability (Switzerland)	MDPI	3
Sustainability Accounting, Management and Policy Journal	Emerald	3
Sustainable Development	Wiley	1
<b>N</b>		<b>54</b>
<b>Source: Authors Compilation</b>		

#### Methods Employed in Integrated Reporting

Methods illustrate how empirical evidence is generated (Paul et al., 2017). The 52 articles reviewed in this paper focus on “Research Approach” and “Data” which are the two major areas of methods. In IR

research, three research approaches were used: mixed methods; quantitative, and qualitative (Table 2). A quantitative method was utilized by approximately 73% of the papers in the review which consists of 38 articles. Because of the wide variety of quantitative data that could be analysed with the method, all thirty-eight of the articles took a regression-based approach to their research. Qualitative approaches were used in eight papers that took, with case studies being the most common method.

Seven articles used a mixed method research design to analyze qualitative and quantitative data, with regression analysis and content analysis respectively. When it comes to the data that were collected for the research, secondary data is the favoured option (Table 2). In total, 94 percent of the papers i.e., 49 articles, relied on secondary sources of data in the review. Secondary data have been increasingly popular among researchers as a result of the accessibility, relevance, and nature of IR research. To investigate IR, just three pieces of research (Bridges et al., 2022, Kezaabu et al., 2023) utilized primary data in the form of individual discussions, group discussions, questionnaire surveys, and group interviews.

<b>Table 2. Methodologies used in the selected studies</b>						
	<b>Authors</b>	<b>Date</b>	<b>Methods</b>	<b>data collection</b>	<b>Data analyses</b>	<b>tests</b>
1	Abogazia et al.	(2022)	Quantitative	secondary data from EGX and EGX100	Content, Panel regression and descriptive statistics	Pearson correlations, multicollinearity diagnostics, correlation matrix, Hausman, robustness, two-stage least squares regressions models
2	Ackers & Adebayo	(2021)	Qualitative	uses a disclosure index purposive sampling	content analysis coded	
3	Adhikariparajul et al.	(2019)	Mix method	secondary data based on annual reports,	Content analysis	statistics t-test and chi-square tests, logistic regression
4	Ahmed	(2023)	mixed methods	Database containing 33 articles	content analysis descriptive statistics	Multiple regression analysis Correlation matrix, Robustness tests.

5	Amosh et al.	(2022)	Quantitative		content analysis, observation, descriptive statistics	Hausman test, correlation matrix, the multicollinearity test, Regression Analysis, Robustness tests,
6	Anifowose et al.	(2020)	Mix method	secondary data from annual integrated reports	content analysis, descriptive and panel data	regression analysis,
7	Aras & Williams	(2022)	content analysis,			value creation process
8	Barnabè and Nazir	(2020)	qualitative study,	secondary data from IIRC database	textual content analysis	
9	Botha et al.	(2022)	Mixed method approach,	Selected companies are listed on ASX, JSE and DJSI indices	content analysis	regression analysis
10	Bridges et al.	(2022)	Mixed method approach	Data from interviews	thematic	uses NVivo software,
11	Casonato et al.	(2019)	Qualitative approach	secondary data, document analysis		post facto analysis
12	Chouaibi et al.	(2022a)	Quantitative Approach	data from a sample of 185 European firms. Secondary data from Thomson Reuters DataStream ASSET4,	descriptive statistics	Multiple regression analysis  correlation analysis.
13	Chouaibi et al.	(2022c)	the quantitative approach uses the method,	ordinary least on square panel data	descriptive statistics,	multiple regression model correlation analysis
14	Chouaibi et al. (2022b)		Quantitative Approach, database	data collected from the Thomson Reuters (ASSET4)	Descriptive, correlation analysis	linear regressions
15	Cooray et al.	(2020a)	Quantitative research,	Colombo Stock Exchange (CSE) was taken as the secondary data	descriptive statistics content analysis,	regression analysis correlation analysis

16	Cooray et al.	(2020b)	Quantitative	132 annual reports shaped the secondary data from	content analysis, descriptive statistics,	Pearson correlation and panel regression analysis
17	Cooray et al.	(2022)	quantitative approach		content analysis, descriptive statistical analysis,	one-way repeated measures ANOVA and paired sample t-test
18	Cosmulese et al.	(2019)	Mixed-method	secondary data (NASDAQ) and (NYSE)	Dynamic analysis descriptive statistics, patrimonial analysis.	correlation and
19	Dameri & Ferrando	(2022)	qualitative	data is collected from Meeting minutes, Semi-structured interviews,	Content	NVivo software
20	Donkor et al.	(2022)	quantitative approach	annual reports of firms on Johannesburg Stock Exchange (JSE)	content analysis data	Correlation analysis Ordinary least square, Quantile regressions
21	Elshandidy et al.	(2022)	The quantitative approach	archival data are collected using a time-series difference design and difference-in-differences design	descriptive statistics,	correlation analysis ordinary least square regression
22	Erin & Adegboye	(2022)	Quantitative approach	annual reports of firms on Johannesburg Stock Exchange (JSE)	content analysis,	ordered probit regression, logistic regression method,
23	Fayad et al.	(2022)	Quantitative approach	secondary data, content analysis, panel regression analysis, Hausman test; Pesaran CD Wooldridge test and Breusch–Pagan/Cook–Weisberg test		Correlation analysis
24	García-Sánchez and Noguera Gámez	(2017)	quantitative research approach	Secondary data from four databases: Spencer & Stuart Board Index, (EIRIS), AMADEUS,	panel regression data, analysis, descriptive statistics,	

25	Grassmann et al.	(2022)	Quantitative approach	secondary data	content analysis, descriptive statistics	regression analyzez
26	Haladu & Bin-Nashwan	(2023)	Quantitative approach	secondary data, data collected from the Nigerian Stock Exchange (NSE),	correlation analyses descriptive statistics	linear regression line graphs
27	Hichri	(2022)	hypothetico-deductive approach, quantitative approach		descriptive analysis, correlation relevant analysis, sensitivity analysis	multiple regressions linear panel regression analysis,
28	Islam	(2020)	Quantitative approach manual	purposive sampling descriptive statistics	content analysis,	pooled-OLS regression analysis
29	Kezaabu et al.	(2023)	Quantitative approach,	questionnaire survey	multiple regression analysis	correlation analysis,
30	Landau et al.	(2020)	Quantitative approach	Thomson Reuters DataStream was the source of secondary data	multivariate regression analysis, descriptive statistics,	Pearson correlation
31	Le Roux and Pretorius	(2019)	Qualitative approach	primary data; individual, group discussion, group interviews. Available reports literature, Website content	Content analyses	NVivo
32	Leukhardt et al.	(2022)	Quantitative approach	data is collected from <IR> Example database provided by the IIRC (IIRC, 2021)	panel data analysis descriptive statistics	IRQ scoring model, linear regression model,
33	Lok & Phua	(2021)	Qualitative approach	data collected from annual reports provided on Bursa Malaysia website,	Content analysis	
34	Maama & Marimuthu	(2022)	Quantitative approach		descriptive statistics, panel data analysis	dynamic estimation technique

35	Mervelskemper & Streit	(2017)	Quantitative approach	Thomson Reuters' ASSET4 ESG database, Thomson Reuters Datastream. Global Equity Indices, Datastream Worldscope	Ohlson model descriptive statistics,	ordinary least squares (OLS) technique
36	Nguyen et al.	(2022)	quantitative approach	disclosure index constructed based on the content of the International Integrated Reporting Committee (IIRC)	content analysis,	Framework, ordinary least squares (OLS) regression,
37	Nicolò et al.	(2022)	Quantitative Approach	IIRC website	descriptive analysis	uses regression model, correlation statistics
38	Omran et al.	(2020)	Quantitative research	Refinitiv Eikon platform, Thomson Reuters' financial and risk (F&R)	Panel-data analysis descriptive statistics	Pearson and Spearman correlations, two-stage least-squares 2SLS regression
39	Pham & Tran	(2020)	quantitative	sample sourced from Most Admired (FWMA) list of the Fortune World	descriptive statistics,	structural equation modelling (SEM) approach, hierarchical regression procedure
40	Pinto et al.	(2023)	quantitative approach		empirical analysis, descriptive statistics,	logistic regression model,
41	Raimo et al.	(2020)	Quantitative	Data collected from IIRC Website,	descriptive statistics	correlation analysis and linear multiple regression
42	Ribeiro et al.	(2022)	qualitative	Used databases like Scopus, Web of Science, and Google Scholar	interpretivist approach	
43	Shirabe & Nakano	(2022)	quantitative approach	score matching, data collected from the NEEDS-Financial QUEST database, NEEDS CGES	descriptive statistics, difference-in-differences approach	Panel data regression analysis
44	Songini et al.	(2021)	quantitative approach	content disclosure score index, reports sourced from IR Example website,	panel analysis, descriptive statistics,	

45	Terblanche and De Villiers	(2019)	Quantitative and qualitative	INET BFA database and annual report were sources of secondary data.	content analysis Descriptive statistics,	Non-parametric Kruskal–Wallis tests, Spearman and Pearson correlation, and multivariate analysis
46	Velte	(2022)	quantitative approach		correlation analysis, descriptive statistics,	regression analysis,
47	Vitolla et al.	(2020)	quantitative research	Secondary data from sections “IR Reporters” and “Leading Practices” of the IIRC Website. Specifically,	descriptive statistics,	linear multiple regression
48	Wahl et al.	(2020)	Quantitative research approach	Data from fixed effects (FE) estimation, FactSet and IIRC database,	descriptive statistics	panel regression analysis,
49	Wang et al.	(2020)	Quantitative	Annual Excellence Awards of EY, S&P Capital and IQ Global CompStat, TR ASSET4	Descriptive statistics,	Pearson and Spearman correlation and regression analyses.
50	Yanto & Hajawiyah	(2022)	quantitative research	secondary data gathered from annual firms reports of IDX	, content analysis  descriptive statistics	multiple regression analysis
51	Zaro et al.	(2022)	quantitative approach	Thomson Reuters database	research design based on difference-in-differences,	linear regression analysis
<b>Source: Author’s Compilation</b>						

#### Moderating and mediating Variables

Nine studies focus on the contingent factors which interrelate with IR (Abogazia et al., 2022; Chouaibi et al., 2022a; Cooray et al., 2020a; Donkor et al., 2022; Haladu & Bin-Nashwan, 2023; Landau et al., 2020; Lok & Phua, 2021; and Omran et al., 2020). This represents 17% of the sample studies. On the other hand, two studies (Pham & Tran, 2020; Velte, 2022) showcase the factors that affect CSR and corporate disclosure (Table 5). This forms 4% of the reviewed papers.

**Table 5. Effects of Mediating/Moderating**

<b>Authors</b>	<b>Year</b>	<b>Mediating / Moderating effects</b>
Abogazia et al.	(2022)	Needs for External Financing moderate the relationship between firm Value and IR
Chouaibi et al.	(2022a)	Corporate Social Responsibility moderates the relationship between IR quality, Good corporate governance, board characteristics,
Cooray et al.	(2020a)	EPS moderates the effect of Integrated reporting on the value of the firm
Donkor et al.	(2022)	Firm complexity plays a moderating role in the relationship between CTA and Integrated reporting
Haladu & Bin-Nashwan	(2023)	financial leverage (low but significant) moderates the interaction of integrated reporting on the funds of shareholder
Landau et al.	(2020)	reporting of ESG moderates the effect of IR on the value of the market
Lok & Phua	(2021)	board gender diversity and family firms moderate the relationship between the performance of the firm and disclosures of integrated reporting
Omran et al.	(2020)	Integrated reporting mediates the effect of sustainability committees on corporate environmental performance
Pham & Tran	(2020)	CEO integrity moderates the relationship between CSR disclosure and corporate disclosure; the reputation of the firm mediates the relationship between the firm's financial performance and the CSR disclosure.
Velte	(2022)	CEO power moderates the relationship between sustainable corporate governance and Materiality and Disclosure Quality (MDQ)
<b>Source: Author's Compilation</b>		

## Discussion

In addition, the review found eight moderating variables and one mediating factor in response to (RQ4). In addition to this, we found two moderating variables and one mediating variable in response to CEO integrity and the reputation of the firm. According to Abogazia et al. (2022), the need for External Financing moderates the relationship between firm Value and integrated reporting. According to Chouaibi et al. (2022a), corporate social responsibility moderates the relationship between integrated reporting quality (IRQ), good corporate governance and board characteristics. According to Cooray et al. (2020a), EPS moderates the impact of integrated reporting on firm value. As per Donkor et al. (2022), firm complexity plays a moderating role in the relationship between IR and CTA. In the report of Haladu & Bin-Nashwan (2023), financial leverage (low but significant) moderates the interaction of integrated reporting on the funds of shareholders. According to Landau et al. (2020), IR's impact on market value is moderated by ESG reporting. As per Lok & Phua (2021), board gender diversity and family firms moderate the relationship between integrated reporting



disclosures and firm performance. In addition to this, as per Omran et al. (2020), the effect of sustainability committees on the environmental performance of corporations is mediated by IR. On the other hand, according to Pham & Tran (2020), CEO integrity moderates the relationship between CSR disclosure and Corporate disclosure; A firm's reputation mediates the relationship between CSR disclosure and the firm's financial performance and as per Velte (2022), CEO power moderates the relationship between sustainable corporate governance and Materiality and Disclosure Quality (MDQ).

Committees have the power to affect environmental initiatives and company performance through the mechanism of reporting. Changes to both internal and external forces affect how well an accounting system is designed (Haldma and Laats, 2002). Integrated reports may vary from company to company due to contextual factors in IR. This may also shed light on why IR's impact on business results varies depending on whether or not disclosure is optional or required. Theoretically, it makes sense to pay more attention to the interrelationships between a larger number of variables in any given study (Otley, 2016). According to this analysis, there is a dearth of research that accounts for mediating and moderating variables.

In light of (RQ5), the review focuses on the three categories of research strategies: mixed, qualitative, and quantitative. The most widely used techniques are regression analysis and content analysis (CA). In most of the articles, both quantitative and qualitative data were examined using content analysis (Anifowose et al., 2020; Adhikariparajul et al., 2019). As per Hsieh & Shannon (2005), CA is "a research method for the subjective interpretation of the content of text data through the systematic classification phase of coding and finding themes or patterns." CA is a complex, flexible, and tough method that can be used in qualitative, quantitative, and frequently mixed-method research. Most researchers utilize regression-based analysis because it can be used to analyze a range of quantitative data. This review reveals that IR researchers frequently use secondary data possibly because of the relevance, "availability, and nature of different accounting research—including IR research. The study by Garca-S & Noguera (2017) relied on secondary data sourced from four databases - AMADEUS, EIRIS, the Spencer and Stuart Board Index, and integrated information reporting on the websites of sample firms. Panel data, descriptive statistics, regression analysis, and the generalized method of moments (GMM) are some examples of quantitative research methods. The research quantitative approach by Mervelskemper and Streit (2017) used the Ohlson model, descriptive statistics, the ordinary least squares (OLS) method, secondary data from Thomson Reuters' ASSET4 ESG database, and Thomson Reuters Datastream (Datastream Worldscope, and Datastream Global" Equity Indices). In their 2019 paper, Cosmulese et al. employed secondary data collected using a mixed-method approach from quoted

companies on the NYSE and NASDAQ. They also used dynamic analysis, correlation, patrimonial analysis, and descriptive statistics. The quantitative research by Vitolla et al. (2020) used secondary data from the IIRC website's "IR Reporters" and "Leading Practices" sections. The study employed linear multiple regression, cross-sectional analysis, and descriptive statistics. A mixed-method approach was used by Terblanche & De Villiers (2019) by employing CA and secondary data from the integrated or annual report, the INET BFA database. The data analysis was done using descriptive statistics, multivariate analysis, Pearson & Spearman correlation, and Non-parametric Kruskal-Wallis tests. Le Roux & Pretorius (2019) used a qualitative method, a single case study, primary data from individual interviews, group interviews, and discussions, as well as secondary data from literature, reports, and websites. In the study by Casonato et al. (2019), a case study approach that involved a qualitative method, post-factor analysis, document analysis, and secondary data was employed. A mixed technique that involved secondary data from annual IRs, descriptive and panel data regression analysis, content analysis, as well as a quantitative and qualitative method, was reported by Anifowose et al (2020). A content data analysis method was used by Adhikariparajul et al. (2019) in an approach that combined quantitative and qualitative methods; the secondary data for the study was sourced from yearly reports. The data were analyzed using t-tests, logistic regression, and chi-square tests. A quantitative study methodology was used by Raimo et al. (2020) which combined reports from sample firms obtained from the IIRC website; the data analysis was done using descriptive statistics, linear multiple regression, and correlation analysis. In their quantitative study approach, Cooray et al. (2020a) gathered secondary data from annual reports of companies listed on the Colombo Stock Exchange (CSE), then used CA and descriptive statistics, including correlation and regression analysis to analyze the data. Wahl et al.'s (2020) quantitative research methodology used fixed effects (FE) estimation with secondary data gathered from FactSet and IIRC databases. Panel regression analysis was used to analyze the data descriptively. A quantitative research design was used by Wang et al. (2020) based on secondary data sourced from Thomson Reuters ASSET4, Global Compustat, and S&P Capital IQ. Regression and Pearson & Spearman correlation analyses were used to conduct the descriptive statistics. Additionally, Omran et al. (2020) used a quantitative study approach based on secondary data gathered from Refinitiv's Eikon platform, which was formerly Thomson Reuters' Financial and Risk (F&R) unit's platform. Descriptive data analysis was done using Panel data analysis, two-stage least-squares (2SLS) regression, and Pearson and Spearman correlations. The study by Landau et al. (2020) also collected data using the Ohlson model and Thomson Reuters Datastream. Descriptive data analysis was done using Pearson correlation and multivariate regression analysis. A quantitative approach was used in the study by Cooray et al. (2020b) to collect data

from 132 yearly reports. The data analysis was done using Pearson correlation and panel regression analyses following descriptive statistics and content analysis. An exploratory case study using textual content analysis and action research design was carried out by Barnabè & Nazir (2020); the data for the test was gathered from the IIRC database.

#### Implications to Theory and Practice

The study has provided a comprehensive review of the literature review in the last 6 years regarding integrated reporting in the global context, the systematic review paper clarifies the TCM framework as the study employed TCM building on the concepts of Paul and Benito (2018). The findings of the literature enhance the understanding of integrated reporting in terms of the accurate methodology and research design to conduct studies in this field of knowledge. Readers and researchers of integrated reporting are equipped with an overview of the results of integrated reporting. Kahiya (2018) believes that TCM frameworks aid in the consolidation of previously disparate knowledge. The findings pave the way for future development in the field of integrated reporting. This comprehensive synthesis of past literature studies aids practitioners in the future direction of integrated reporting. This review takes into account contingent variables (mediating and moderating) and thus provides comprehensive insights based on the ADO and TCM frameworks.

#### Conclusion

The author makes a contribution to the existing body of IR literature by presenting a comprehensive review of the available empirical evidence in this study. The author places a strong emphasis on empirical research carried out across the globe between the years 2017 and 2023. The author gives an evaluation of 54 research that were methodologically sound and were carried out in various countries. In this review, the material on the contingent variables, and methods that were incorporated by academics in earlier studies is analysed and summarised in a systematic manner. The author addresses two different research topics by conducting a comprehensive review of the relevant scholarly literature and providing solutions to these questions. The findings of the study have revealed that the accuracy of analyst earnings forecasts, the value of the firm, and the value of the market are not outcomes of IR. The environmental, social, and governance (ESG) reporting, earnings per share (EPS), needs for external financing moderate, Corporate Social Responsibility (CSR), firm complexity, financial leverage, board gender diversity and family firms were shown to be two of the moderating variables, in terms of contingent factors. Also, sustainability committees have an indirect influence on the environmental performance of corporations, which suggests that IR may play the role of a mediator. In

the majority of the earlier studies, quantitative research methods and secondary sources of data were utilised. Using a methodical approach, the author did his utmost to incorporate the vast majority of previously published publications. On the other hand, it's possible that some items were accidentally left out. Because of this, the findings reported in this review may be limited. The findings regarding the antecedents of IR and their subsequent effects are fairly contradictory, unclear, and inconsistent. Thus, the implementation of moderating and mediating variables might be of assistance in clarifying this inconsistency. The majority of the research contained in this study was carried out in developed economies and environments with mandated disclosure requirements. As a result, there should be a greater emphasis placed on research concerning the capital markets of emerging nations and the circumstances of voluntary disclosure. The research community will be able to use this information to judge whether or not the results will differ from those gained through mandated disclosure and the contexts of developed countries. The value and relevance of IR information can be evaluated using a variety of different measures, which can be used to detect any differences and the reasons behind those discrepancies. Since that Integrated reporting is able to increase environmental and societal well-being, future research could be conducted to provide recommendations to guide theoretical and practice policy on the future of Integrated reporting should be further explored within organisations is vital. Since that IR has the potential to increase societal and environmental well-being, a study that makes recommendations to guide policy and practice regarding how IR should be further explored within organisations is vital.

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