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Research article

Integrated Reporting Quality under Mandatory Disclosure: Evidence from Chile

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Ahstract

This study evaluates the quality of integrated reports under mandatory disclosure since 2022, analyzing 290 reports from large and medium-sized firms (2022-2023) across six factors: report structure, strategy, materiality, external environment, governance, and performance. Findings reveal moderate compliance, with strengths in materiality (67.9%) but critical gaps in connectivity between financial results and other capitals (15.2%) and performance (43.2%), hindering value creation integration. Sectoral disparities show that regulated industries excel, while services and healthcare lag. Medium-sized firms face additional challenges due to resource constraints and regulatory adaptation. The study highlights challenges in aligning strategy with metrics, offering recommendations for improved integration, training, and regulatory oversight. It contributes empirically to integrated reporting literature, reinforcing its role in transparency, sustainability, and stakeholder trust.

Keywords: integrated reporting; IIRF; mandatory disclosure; information quality; value creation.

Calidad de los reportes integrados de divulgación obligatoria: evidencia de Chile

Resumen

Este estudio evalúa la calidad de los reportes integrados de divulgación obligatoria desde 2022. Se analizaron 290 reportes de empresas grandes y medianas (2022-2023) en función de seis factores: estructura del reporte, estrategia, materialidad, entorno externo, gobernanza y desempeño. Los resultados revelan un cumplimiento moderado, con fortalezas en la materialidad (67,9 %), pero con deficiencias críticas en la conectividad entre los resultados financieros y otros capitales (15,2 %) y el desempeño (43,2 %), lo que dificulta la integración de la creación de valor. Las disparidades sectoriales muestran que las industrias reguladas destacan, mientras que los servicios y la salud se quedan atrás. Las empresas medianas se enfrentan a retos adicionales debido a las limitaciones de recursos y a la adaptación normativa. El estudio destaca los retos que plantea la alineación de las estrategias con las métricas y ofrece recomendaciones para mejorar la integración, la formación y la supervisión normativa. Contribuye empíricamente a la literatura sobre reportes integrados, reforzando su papel en la transparencia, la sostenibilidad y la confianza de las partes interesadas.

Palabras clave: reportes integrados; IIRF; divulgación obligatoria; calidad de la información; creación de valor.

Qualidade dos relatórios integrados de divulgação obrigatória: evidências do Chile

Resumo

Este estudo avalia a qualidade dos relatórios integrados de divulgação obrigatória a partir de 2022. Foram analisados 290 relatórios de empresas de grande e médio porte (2022–2023) com base em seis fatores: estrutura do relatório, estratégia, materialidade, ambiente externo, governança e desempenho. Os resultados revelam um nível de conformidade moderado, com pontos fortes na materialidade (67,9%), mas com deficiências críticas na conectividade entre os resultados financeiros e outros capitais (15,2%) e no desempenho (43,2%), o que dificulta a integração do processo de criação de valor. As disparidades setoriais indicam que as indústrias regulamentadas se destacam, enquanto os setores de serviços e saúde ficam atrás. As empresas de médio porte enfrentam desafios adicionais devido a limitações de recursos e à adaptação normativa. O estudo destaca os desafios relacionados ao alinhamento das estratégias com as métricas e oferece recomendações para aprimorar a integração, a capacitação e a supervisão regulatória. Contribui empiricamente para a literatura sobre relatórios integrados, reforçando seu papel na transparência, na sustentabilidade e na confiança das partes interessadas.

Palavras-chave: relatórios integrados; IIRF; divulgação obrigatória; qualidade da informação; criação de valor.

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1. Introduction

In recent years, the disclosure of environmental, social, and governance (ESG) information has grown substantially (KPMG, 2023). While the benefits of reporting sustainability information have been widely studied, the lack of uniformity in methods and frameworks has resulted in inconsistent and often irrelevant disclosures (de Silva Lokuwaduge & De Silva, 2022). These inconsistencies hinder comparability across firms and limit the accurate assessment of sustainability performance, thereby undermining corporate accountability. Currently, global, and sector-specific standards exist for sustainability disclosures, with the choice of framework depending on the organization's sector, size, and objectives. Establishing uniform standards to ensure consistency, comparability, and accountability in sustainability reporting is crucial, especially to mitigate the risks of greenwashing (Zúñiga et al., 2020a).

The shift from voluntary to mandatory sustainability disclosure reflects growing pressure on firms to adopt corporate social responsibility practices. Many countries have introduced policies mandating sustainability disclosures, whether through standalone sustainability reports or integrated reports. Unlike sustainability reports, integrated reports merge financial and sustainability information into a cohesive narrative. This approach aims to present a holistic view of organizational performance by demonstrating how businesses create value over time through the interaction of various capitals, including financial and non-financial resources (Bagonza et al., 2024). By contrast, standalone sustainability reports primarily focus on ESG impacts without substantial integration with financial information (Zúñiga et al., 2021). While the benefits of integrated reporting (IR) have been extensively discussed (Galeone et al., 2023; Maama & Marimuthu, 2022; Qian et al., 2023; Sciulli & Adhariani, 2023; Zúñiga et al., 2020a), no verification system has been implemented to ensure compliance with the framework's integration principles or to measure its impact on organizational value creation.

The mandatory adoption of sustainability reporting poses challenges regarding the verification of data quality. Unlike financial information, subject to external audits, sustainability data often relies on diverse and subjective sources lacking standardized verification mechanisms. This has two major implications: the risk of superficial compliance through checklist-style disclosures and an increased likelihood of greenwashing, which undermines trust in reported sustainability efforts.

To explore these challenges, this study examines the Chilean market as a unique case of transitioning from voluntary to mandatory integrated reporting within an emerging economy. This context provides valuable insights into the adoption of international standards and lessons applicable to markets with similar regulatory dynamics. Chile represents a compelling context for studying the implementation of mandatory integrated reporting for three key reasons. First, the country introduced the Norma de

Carácter General Nº 461 (NCG 461) in 2021, becoming one of the first emerging economies to mandate the disclosure of sustainability and corporate governance information under a unified framework. Second, Chile's capital market is relatively developed in comparison with other Latin American countries, yet it faces persistent challenges related to market concentration, corporate accountability, and ESG transparency. Third, the diversity of company sizes and sectors subject to the regulation, ranging from financial institutions to utilities and medium-sized enterprises, offers a rich empirical ground to assess how organizations adapt to new disclosure requirements. These features make Chile an informative case to understand the institutional, organizational, and regulatory factors shaping the effectiveness of mandatory sustainability disclosures in emerging markets.

The research assesses whether information presented in mandatory integrated reports since 2022 complies with the minimum disclosure requirements of the International Integrated Reporting Framework (IIRF). Using an index developed by Zúñiga et al. (2021), the study evaluates six key areas: (1) report structure and effective communication, (2) organizational strategy, (3) materiality, (4) external context, (5) governance, and (6) performance and perspectives (see Appendix 1).

The results indicate that integrated reporting under mandatory requirements shows moderate progress, revealing structural challenges for both companies and regulators. While large corporations achieved an average compliance rate of 61.0% in 2023, compared to 58.8% for medium-sized companies, overall performance remains insufficient to fully adhere to the principles of the IIRF. Notably, the criterion of "Materiality" (67.9% compliance) reflects significant efforts in identifying key aspects, particularly among medium-sized companies reporting for the first time. Sectoral disparities highlight heterogeneity in industries' capacities to implement international standards. Sectors like material processing and renewable resources lead in compliance, likely due to regulatory pressures and sustainability exposure, while sectors like services and healthcare lag significantly.

The findings underline significant difficulties in integrating financial and sustainability information, posing critical challenges for meeting the core principles of the IIRF. This disconnection is most evident in the low performance of the "Performance and Perspective" criterion (43.2%), particularly in sub-factors such as Connectivity of financial results and other capitals (15.2%) and Extent to which companies achieve their objectives (19.5%). These results suggest a lack of clear articulation between business strategies, operational impacts on various capitals and the outcomes reported. The challenge lies in reconciling the quantitative and auditable nature of financial reports with the qualitative and subjective elements often found in sustainability information. This issue affects not only report credibility but also the ability of companies to effectively communicate how they create value over time through the interaction of financial and non-financial capitals. These limitations can also be understood through the lens of Legitimacy Theory, which posits that organizations disclose information not only to inform stakeholders but also to sustain or enhance legitimacy. In mandatory settings, this dynamic can lead to symbolic compliance, whereby firms align formal reporting with regulatory expectations without fully embedding sustainability into strategy or performance metrics.

Recent evidence links legitimacy pressures, media scrutiny and disclosure/assurance choices in IR and ESG reporting, reinforcing this mechanism (Gaia et al., 2025; Raimo et al., 2025; Silva, 2021). By exposing these integration gaps, our study advances understanding of how reporting quality shapes credibility and effectiveness under regulatory pressure.

By providing an empirical assessment of integrated reporting in a mandatory setting, this study contributes to the academic literature by bridging the gap between regulatory compliance and the actual integration of sustainability into corporate disclosures. The research enriches the field of corporate sustainability by offering a structured evaluation of how companies connect financial and non-financial information in their reports, identifying persistent weaknesses and sectoral disparities. These insights are relevant for both theory and practice, as they help clarify the effectiveness of integrated reporting frameworks in promoting transparency, comparability, and long-term value creation in emerging markets.

2. Literature Review

2.1 Integrated Reporting

The disclosure of environmental, social, and governance (ESG) information has experienced continuous growth, largely driven by shifts in the market value composition of firms. Studies focusing on the S&P500 index have shown a significant divergence between book value and market value. In 1975, tangible assets accounted for 83% of corporate value; by 2020, this figure had fallen below 10%, further exacerbated by the COVID-19 (Ocean Tomo, 2020). Consequently, since the 1970s, concerns have been raised about the adequacy of financial reports in meeting user needs, particularly due to the lack of information on nonfinancial corporate activities (Baldissera, 2023). In parallel, the prevalence of sustainability reporting has surged, with 35% of G250 firms publishing sustainability reports in the late 1990s, rising to 96% by 2022 (KPMG, 2023).

The benefits of sustainability disclosures through standalone non-financial reports have been extensively examined. They are often associated with reduced agency costs by mitigating information asymmetries, which in turn influence the cost of capital (Prasad et al., 2022; Zhu et al., 2024), enhance corporate liquidity, and reduce firm-specific risks (Roy et al., 2022; Zúñiga et al., 2020a). Other studies view voluntary disclosures as tools to address legitimacy concerns (Del Gesso & Lodhi, 2024; Rouf & Siddique, 2023) or as enhancements to corporate

reporting practices (Ferri et al., 2023). However, standalone sustainability reports have been criticized for their lack of integration with financial information, focus on immaterial aspects, and disconnection from corporate strategy (de Villiers et al., 2022; Zúñiga et al., 2021). This weak linkage between financial and non-financial variables impairs the stakeholders' ability to assess governance and overall performance, as financial reports alone fail to capture the full impact of sustainability on current and future corporate outcomes (Sciulli & Adhariani, 2023).

To address these gaps, the International Integrated Reporting Council (IIRC) introduced the IIRF in December 2013 (IIRC, 2013). Integrated reporting (IR) represents a convergence of sustainability and financial reporting within a single cohesive narrative. Its primary audience is providers of financial capital, with a focus on how financial and nonfinancial capitals interact with the business model to create value over the short, medium, and long term. In contrast, standalone sustainability reports focus predominantly on environmental, social, and governance impacts, lacking substantive integration with financial information. IR is not an extension of standalone sustainability reports but rather an evolution, designed to complement financial statements (Zúñiga et al., 2021).

Early research on IR emphasized institutional theories and the challenges of implementing this new disclosure model. More recent studies, grounded in economic theories, have linked IR with improved financial performance (Qian et al., 2023; Velte, 2023), reduced cost of capital (Maama & Marimuthu, 2022), and lower earnings forecast errors (Rossignoli et al., 2022; Zúñiga et al., 2020b). Moreover, IR has been associated with enhanced market liquidity (Donkor et al., 2024; Zúñiga et al., 2020b), increased firm value (Utomo et al., 2021), and improved future cash flows (Andronoudis et al., 2024). Collectively, these findings position IR as a flexible tool for communicating value creation, integrating financial and non-financial performance (Arora et al., 2022).

Authors suggest that Integrated Reporting and Global Reporting Initiative (GRI) frameworks provide essential prerequisites for achieving the Sustainable Development Goals (SDGs) (Stefanescu, 2022). The authors provide evidence that a stronger alignment exists between the SDGs and the capitals involved in value creation, rendering Integrated Reporting a more suitable option for reporting on SDGs and supporting sustainable development strategies. The exponential growth of non-financial disclosures underscores a paradigm shift in stakeholder expectations for corporate transparency and its impact on market valuation. The evolution of IR emerges as a potential solution, offering a cohesive narrative aligning strategy, governance, performance, and sustainability in an integrated context.

2.2 From Voluntary to Mandatory Disclosure

Studies comparing voluntary and mandatory disclosure environments indicate that while firms in voluntary regimes often achieve higher integrated performance levels, mandatory regulatory frameworks yield positive impacts over the medium term (Loprevite, Ricca, & Rupo, 2018). Existing literature suggests that IR has yet to fully realize its potential in delivering tangible benefits to capital markets (Leukhardt et al., 2022), though it has had positive effects in some contexts (Zúñiga et al., 2020b). These findings highlight the need for regulators to enhance the specificity and rigor of their guidelines, as the benefits of IR appear more pronounced in mandatory environments (Asadi et al., 2024; Leukhardt et al., 2022).

In November 2021, Chile's Financial Market Commission issued General Rule No. 461, requiring sustainability information to be included in annual reports. The regulation mandates integrated reports aligned with the IIRF, aiming to equip investors and the general public with the tools to distinguish companies that are better prepared to identify, quantify, and manage risks. This gradual implementation is expected to reach full compliance by the 2024 fiscal year, with disclosures available by early 2025. The rule emphasizes the integration of sustainability topics—particularly environmental and climate-related issues—into business strategies and evaluation processes (CMF, 2021).

However, the implementation of General Rule No. 461 presents practical challenges. While it requires integrated reporting, it lacks effective verification mechanisms or penalties for non-compliance, undermining the credibility of disclosed information. The IIRF envisions forward-looking disclosures that incorporate subjective and dynamic elements, complicating objective evaluation. Against this backdrop, the present study aims to assess whether mandatory integrated reports meet minimum international standards. Furthermore, it explores potential greenwashing strategies within a mandatory disclosure setting, addressing the tension between regulation, credibility, and responsible corporate practices.

3. Data and methodology

3.1 Sample Selection

The sample comprises all companies mandated to disclose integrated reports under Chile's General Rule No. 461 (see Table 1). The Chilean Financial Market Commission established a phased timeline for incorporating sustainability and corporate governance information into integrated reports. In 2022, companies with assets exceeding 20 million Unidades de Fomento¹ (UF) were required to report, representing 98 issuers (referred to in this study as large companies). This number remained constant in 2023, with sectors such as Infrastructure (26 companies) and Finance (22 companies) being the most prominent. In 2023, companies with assets exceeding 1 million UF2 (referred to as medium-sized companies) were added to the reporting requirements, increasing the total sample to 290 observations across 11 economic sectors. The Food and Beverage sector experienced significant growth, with 45 companies reporting in 2023 compared to 16 in 2022. Conversely, sectors such as Sanitation and Renewable Resources had limited representation, possibly reflecting sector-specific challenges in adopting integrated reporting practices.

3.2 Method

All integrated reports available under Chile's General Rule No. 461 for the fiscal years 2022 and 2023 were collected and analyzed, resulting in a final sample of 290 documents. Data collection was performed manually using a content analysis approach, applying the disclosure quality index developed by Zúñiga et al. (2021). Each report was reviewed in full, and all factors and sub-factors of

2 US M\$38.791

Table 1. Sample Description

	Sectors	Companies with assets	exceeding 20 million UF	Companies with assets exceeding 1 million UF	TOTAL
	_	2022 (A)	2023 (B)	2023 (C)	-
1	Food and Beverages	17	16	12	45
2	Consumer Goods	4	4	10	18
3	Financial	22	23	19	64
4	Infrastructure	26	25	28	79
5	Materials Processing	9	10	11	30
6	Renewable Resources	6	6	3	15
7	Sanitation	1	1	2	4
8	Services	1	1	4	6
9	Technology and Communications	4	4	0	8
10	Resource Transformation	3	3	3	9
11	Transportation	5	5	2	12
	TOTAL	98	98	94	290

Source: own elaboration.

¹ US M\$775.838

the index were coded according to predefined rules. To enhance reliability, the coding process was independently checked by two members of the team, and discrepancies were resolved through discussion. This manual and comprehensive procedure ensures both transparency and replicability of the analysis. No automated software was used in this process; instead, the entire content analysis was conducted manually by the research team to ensure a consistent application of the evaluation criteria.

To evaluate the quality of integrated reports, this study employs an index based on the IIRF (Zúñiga et al., 2021). The index provides a comprehensive assessment of how integrated reports are presented and the type of information disclosed. It identifies companies producing high-quality disclosures and examines the differentiating factors in their content. The index evaluates essential dimensions such as connectivity, consistency, materiality, and strategic orientation—key aspects to ensure that reports adequately reflect organizations' capacities to create value in the short, medium, and long term. This approach promotes an integrated narrative that demonstrates the interactions between financial, social, natural, and human capitals, illustrating their contributions to sustainable value creation.

3.3 Index Structure

The index (see Appendix 1) is organized around six primary factors:

- Integrated Report Structure and Effective Communication: Assesses logical organization, readability, and connectivity within the report.
- 2. Organizational Strategy: Evaluates the clarity of mission, vision, and alignment between business activities and value creation.
- 3. Materiality: Measures the identification, quantification, and communication of material aspects affecting organizational value.
- 4. External Context: Examines the integration of relevant external information, including interactions with stakeholders and adaptation strategies.
- 5. Governance: Evaluates integrated thinking, policies, and the relationship between governance practices and value creation.
- 6. Performance and Perspective: Focuses on the organization's ability to communicate strategic performance, resource allocation, and connectivity between financial and non-financial outcomes.

Each factor is further subdivided into specific subfactors. For instance, the first factor includes seven subfactors, such as adherence to IIRF principles, structural logic, and readability enhancements. Sub-factors are scored on a three-tier scale: 0 if the element is absent or non-compliant, 1 for general discussion, and 2 for specific disclosures. The total score for each factor is the sum of its sub-factor evaluations, providing a detailed analysis of the quality of integrated reports.

4. Results

The results for the Integrated Report Structure and Effective Communication criterion reveal moderate performance among large and medium-sized companies, with overall averages of 63.8% and 63.6% in 2023, respectively (see Table 2). Despite having an additional year of experience, large companies demonstrated no significant improvement from their 64% average in 2022. Medium-sized companies, evaluated for the first time in 2023, exhibited comparable performance, reflecting competitiveness in this initial assessment. Among sub-factors, Report Structure stood out as the highest-rated, scoring 81.7%, indicating progress in the logical and comprehensible presentation of reports. The Optimization of Readability sub-factor also scored well (70.6%), highlighting efforts to enhance clarity through graphical and narrative elements. However, sub-factors like Future Time Dimension (54.9%) and Connectivity of Information (57.7%) recorded lower scores, underscoring persistent challenges in aligning short-, medium-, and long-term strategic perspectives and integrating report components. Sectoral analysis (Appendix 2) revealed notable disparities: Technology & Communication (69.7%), Processing & Materials Extraction (69.0%), and Renewable Resources (69.0%) recorded the highest overall averages, likely reflecting stronger regulatory exposure and greater maturity in sustainability measurement systems. By contrast, Services (45.0%) and Sanitation (48.7%) lagged significantly, which may be linked to limited prior experience and resource constraints in implementing integrated reporting. These findings underscore the need to strengthen connectivity and strategic integration across all industries.

Table 2. Integrated reporting structure and effective communication

	Averag	e Quality of	Integrated	Reports
Integrated	В	IG	MEDIUM	AVERAGE
reporting structure and effective communication (raw score 0-14).	2022	2023	2023	
Follow basic principles of Reporting	61.0%	47.5%	54.2%	54.2%
Connectivity and interdependence to create value	58.8%	63.2%	56.3%	59.4%
Report structure.	79.5%	79.7%	86.0%	81.7%
Connectivity between the information	56.9%	64.8%	51.7%	57.8%
Optimize readability	75.5%	63.4%	73.1%	70.7%
Consistency and Comparability	64.3%	65.7%	73.2%	67.8%
Future time dimension	52.0%	62.1%	50.6%	54.9%
Total Factor 1	64.0%	63.8%	63.6%	63.8%

Source: own elaboration.

Organizational Strategy (see Table 3) evaluates companies' ability to communicate their strategy, vision, business model, and value creation across time horizons.

The average score was 65.4% in 2023, indicating moderate adherence to the IIRF. Large companies achieved a slightly higher score (67.5%) compared to medium-sized ones (62.5%). While large companies showed a marginal improvement from 66.1% in 2022, progress remained limited given their prior experience. Sub-factors like Business Activities and Market (96.9%) and Culture, Ethics, and Values (86.5%) excelled, reflecting a focus on disclosing key activities, markets, and ethical principles. However, sub-factors such as Capital Utilization (52.6%) and Effects of the Value Created (53.2%) pointed to deficiencies in articulating resource impacts on value creation. Sectorally, the transportation (74.2%) and materials processing sectors (76.4%) performed well, likely due to regulatory pressure and sustainability focus, while sanitation (47.5%) and services (46.7%) showed weaker performance, attributed to resource limitations and lack of integrated practices.

Table 3. Organization Strategy

	Averag	e Quality of	f Integrated	Reports
Organization Strategy	В	IG	MEDIUM	AVERAGE
(raw score 0-20).	2022	2023	2023	
Mission and vision	78.1%	75.3%	66.1%	73.1%
Business activities and market (s)	96.7%	97.3%	96.6%	96.9%
Internal risks and opportunities	73.4%	73.9%	68.8%	72.1%
Culture, ethics, and values	85.3%	90.8%	83.2%	86.5%
Capitals used	49.2%	53.8%	54.9%	52.6%
Understanding and interdependence among capitals	35.1%	43.3%	23.4%	33.9%
Perspectives information disclosed	64.5%	65.0%	55.9%	61.8%
Business model	55.2%	53.0%	58.4%	55.5%
How the value created is manifested	73.7%	67.5%	63.2%	68.2%
Effects of the value created	50.2%	55.2%	54.2%	53.2%
Total Factor 2	66.1%	67.5%	62.5%	65.4%

Source: own elaboration.

The Materiality criterion (see Table 4) achieved an overall average of 67.9% in 2023, a slight improvement from 65.8% for large companies in 2022. This criterion measures companies' ability to identify, quantify, and communicate material aspects affecting their capacity to create value. Existence of a Process was the best-performing sub-factor, scoring 70.3%, with large companies achieving 74.3%, showing significant progress from 66.3% in 2022. Mediumsized companies scored 70.2%, reflecting notable progress in initial adoption. However, the Impact on Strategy and Value Creation sub-factor had the lowest average score (49.1%), indicating challenges in evaluating and communicating the material aspects' strategic relevance. Meanwhile, Reliability and Integrity emerged as a strong point, with an average of 89.9%, driven by robust internal and external controls. Materiality, Technology & Communication (81.0%) and Renewable Resources (80.9%) recorded the highest

levels of compliance, reflecting a strong alignment between disclosure practices and stakeholder expectations. In contrast, Sanitation reached only 54.2%, highlighting persistent weaknesses in identifying and communicating material issues (Appendix 2).

Table 4. Materiality

	Average Quality of Integrated Reports							
Materiality (raw score	В	IG	MEDIUM	AVERAGE				
0-8).	2022	2023	2023					
Existence of a process	66.3%	74.3%	70.2%	70.3%				
How they have been determined and quantified	62.9%	56.0%	68.1%	62.3%				
Impact on strategy and value creation	50.6%	51.8%	44.9%	49.1%				
Reliability and completeness	83.4%	92.9%	93.4%	89.9%				
Total Factor 3	65.8%	68.8%	69.1%	67.9%				

Source: own elaboration.

The External Environment criterion (see Table 5) scored an average of 64.5% in 2023, a slight decline from 67.5% for large companies in 2022. This criterion assesses organizations' ability to integrate external environmental information, societal interactions, and adaptability to risks and opportunities. Interaction was the top-performing sub-factor (65.8%), reflecting advances in communicating stakeholder relationships. However, Adaptation Strategy and Business Model scored the lowest (63.4%), highlighting challenges in adapting strategies to external dynamics. Sector analysis revealed disparities, with the materials processing sector leading at over 71%, while the services sector showed the weakest performance (38.9%).

Table 5. External Environment

	Average Quality of Integrated Reports						
External Environment	В	IG	MEDIUM	AVERAGE			
(raw score 0-6).	2022	2023	2023				
Firm's external environment	67.5%	62.4%	63.0%	64.3%			
Interaction	64.0%	71.7%	61.6%	65.8%			
Adaptation strategy and business model	70.8%	61.1%	58.3%	63.4%			
Total Factor 4	67.5%	65.1%	61.0%	64.5%			

Source: own elaboration.

The Governance criterion (see Table 6) scored an average of 54.2%, a slight improvement from 52.7% for large companies in 2022. Policies and Procedures performed best (80%), while Governance Declaration Existence was the weakest (46.4%). Medium-sized companies outperformed large ones in governance declarations, scoring 52.3% versus 40.0%, suggesting a greater willingness to adopt this subfactor. Sector analysis highlighted significant variability, with the materials processing and technology sectors leading, while the sanitation and services sectors lagged substantially.

The weakest area was Performance and Prospects (see Table 7), with an average compliance of 43.2%. Firms exhibited moderate adherence to strategic planning, with 62.8% compliance in defining strategic objectives over time. However, while large firms improved their strategies in place (from 50.2% in 2022 to 64.0% in 2023), medium firms struggled, with only 46.6% compliance. Resource allocation planning remains one of the weakest areas, averaging 34.0%, reflecting significant challenges in linking strategy to tangible investments and actions. Although firms showed improvement in reporting quantitative and qualitative indicators (58.6%), this did not translate into clear performance tracking, as seen in the low 19.5% compliance with achieving stated targets. The ability to assess and communicate the organization's effects on capitals was slightly stronger (59.0%), but the persistent gap in Connectivity between financial performance and other capitals (14.9%) remains a fundamental weakness. This highlights the struggle of firms to demonstrate how financial outcomes are influenced by sustainability factors and other intangible elements, which is a core principle of integrated reporting.

The overall quality of integrated reports reveals a mixed performance across different evaluation criteria (see Table 8). Large firms achieved a total average compliance of 61.0%, while medium firms followed closely at 58.8%, resulting in an overall industry average of 59.8%. Among the six dimensions analyzed, Materiality (67.9%) and Organizational Strategy (65.4%) ranked highest, suggesting that companies are prioritizing the identification and disclosure of relevant information. However, the persistent gaps in Governance (54.2%) and Performance and Prospects (43.2%) underscore deficiencies in strategic

integration and decision-making alignment. While large firms demonstrated slight improvements across most dimensions from 2022 to 2023, the marginal gains in Integrated Reporting Structure (63.8%) and External Environment (64.5%) suggest that firms are still struggling to integrate financial and non-financial disclosures into a cohesive narrative. The Performance and Prospects category remains the weakest, reflecting the continued difficulty in aligning long-term strategic objectives with measurable financial and sustainability outcomes. The discrepancy between high compliance in Materiality (67.9%) and the significantly lower connectivity of financial performance (14.9%) suggests that while companies recognize key sustainability issues, they struggle to integrate these into value-creation models effectively.

Table 8. Average Quality of Integrated Reports

	Average Quality of Integrated Reports						
Average Quality of	В	IG	MEDIUM	AVERAGE			
Integrated Reports	2022	2023	2023				
Integrated reporting structure and effective communication	64.0%	63.8%	63.6%	63.8%			
Organization Strategy	66.1%	67.5%	62.5%	65.4%			
Materiality	65.8%	68.8%	69.1%	67.9%			
External Environment	67.5%	65.1%	61.0%	64.5%			
Governance	52.7%	55.8%	54.1%	54.2%			
Performance and Prospect	42.0%	45.3%	42.3%	43.2%			
Total Average	59.7%	61.0%	58.8%	59.8%			

Source: own elaboration.

Table 6. Governance

			Average Quality o	f Integrated Reports	
0	40)	В	IG	MEDIUM	AVERAGE
Governance (raw score 0-	-10) —	2022	2023	2023	
5.1 Integrated thinking		50.1%	54.2%	53.5%	52.6%
.2 Existence of a statement from those in governance	charge of	46.9%	40.0%	52.3%	46.4%
.3 Policies and procedures		80.5%	84.7%	74.9%	80.0%
.4 Governance practices that exceed legal	requirements	40.4%	53.2%	42.1%	45.2%
.5 Remuneration and value creation proce	SS	45.6%	47.1%	47.9%	46.9%
Total Factor 5		52.7%	55.8%	54.1%	54.2%

Source: own elaboration.

 Table 7. Performance and Prospect

	Average Quality of Integrated Reports					
Performance and Prospect (raw score 12)	В	IG	MEDIUM	AVERAGE		
remormance and Prospect (raw score 12)	2022	2023	2023			
6.1 Strategic objectives over time	65.2%	62.7%	60.4%	62.8%		
6.2 Strategies in place	50.2%	64.0%	46.6%	53.6%		
6.3 Resource allocation plans	33.0%	33.8%	35.3%	34.0%		
6.4 Quantitative and/or qualitative indicators	55.4%	58.3%	62.2%	58.6%		
6.5 The extent of the company's target achievement	18.9%	24.0%	15.7%	19.5%		
6.6 The organization's effects on capitals	56.6%	59.5%	60.9%	59.0%		
6.7 Connectivity of financial performance and other capitals	14.9%	14.7%	15.2%	14.9%		
Total Factor 6	42.0%	45.3%	42.3%	43.2%		

Source: own elaboration.

A key observation across all criteria is that companies perform relatively well in structural and procedural aspects (e.g., report organization, materiality processes, policies), yet struggle with strategic integration and connectivity of information. Reports often present fragmented narratives where financial and sustainability data coexist without clear linkages, reinforcing the idea that integrated reporting is treated as a compliance exercise rather than a value-driven practice. Sectoral disparities further reinforce this point. Industries facing strong regulatory pressures, such as material processing and renewable resources, tend to perform better, while service-oriented sectors and sanitation exhibit weaker compliance. This may be due to lower perceived risks or less direct regulatory enforcement in those industries.

Medium-sized firms face additional challenges compared to large corporations, particularly in aligning their reporting frameworks with strategic objectives. The resource constraints, lack of specialized sustainability reporting teams, and the complexity of adapting to new regulatory requirements make it more difficult for medium enterprises to achieve a seamless integration of financial and non-financial information. This highlights the need for targeted support mechanisms, such as regulatory incentives, training programs, and sector-specific guidelines, to assist medium-sized firms in strengthening their reporting capabilities and fostering a more meaningful application of integrated reporting principles. These findings underscore the need for stronger regulatory guidance and organizational capacity-building efforts to ensure that integrated reporting serves as a mechanism for value creation rather than a procedural obligation. Moving forward, companies should not only improve their technical reporting capacity but also develop a culture of integration where financial and non-financial metrics are aligned with long-term strategic objectives.

5. Discussion of results

The findings of this study reveal both advancements and persistent challenges in the adoption of integrated reporting under mandatory disclosure requirements. While overall compliance levels indicate moderate adherence to the IIRF, critical deficiencies in specific areas suggest that firms struggle with the fundamental principles of integrated reporting.

A key insight from the sectoral analysis is that industries facing higher regulatory pressures, such as renewable resources and material processing, exhibit superior compliance levels compared to service-oriented sectors. This aligns with the theory of legitimacy, which posits that firms operating in industries with higher environmental and social scrutiny are more likely to engage in voluntary or mandated sustainability reporting as a strategy to maintain legitimacy (Luft Mobus, 2005).

Beyond legitimacy considerations, our findings reveal a persistent "procedural-strategic gap." While

firms demonstrate relatively strong performance in structural aspects of reporting, they struggle to embed integrated thinking into strategic planning and resource allocation. This imbalance suggests that companies are meeting disclosure requirements procedurally, but without transforming their decision-making processes. The results therefore indicate that mandatory disclosure regimes alone are insufficient to ensure substantive integration of sustainability into corporate strategies. In contrast, service-oriented sectors, where sustainability risks are perceived as lower, may lack the incentives or resources to prioritize high-quality integrated reporting.

The Chilean context helps explain these results. The introduction of General Rule No. 461 represented a rapid transition from voluntary to mandatory reporting, creating strong compliance incentives but limited time for organizational learning. In a capital market characterized by concentration and high reliance on financial information, sustainability metrics historically received less regulatory and investor scrutiny, which may account for the weaker performance in governance and performance dimensions. Medium-sized firms, in particular, faced significant capacity constraints, as they were required to comply with the same framework as large corporations despite having fewer resources and less reporting experience. These contextual factors suggest that the observed "procedural-strategic gap" is not only a firm-level issue but also a systemic challenge tied to the regulatory and institutional environment in Chile.

The sectoral disparities also suggest that regulatory exposure and operational externalities shape the quality of disclosures. Regulated industries, such as renewable resources and materials processing, reveal stronger discipline in articulating connectivity because they have longer experience in measuring non-financial risks and responding to public scrutiny. In contrast, service-oriented and sanitation firms exhibit weaker integration, which indicates not only resource limitations but also the absence of established systems for tracking non-financial capitals. These results highlight the importance of sector-specific dynamics in determining how firms internalize integrated reporting practices.

The disparities in Connectivity between financial results and other capitals (15.2%) and Performance and prospects (43.2%) highlight a fundamental gap in how firms articulate the interaction between financial and non-financial information. This suggests that firms primarily approach integrated reporting as a compliance exercise rather than a strategic tool. The theory of signaling provides an alternative explanation, where firms that effectively integrate sustainability and financial data may differentiate themselves in the market, signaling superior governance and long-term value creation. However, the low scores in these areas indicate that most companies have yet to leverage integrated reporting as a strategic differentiator.

From a governance perspective, the study finds that governance practices exceeding legal requirements scored an average of 45.2%, suggesting that many firms adopt a

minimum compliance approach rather than embedding integrated thinking into their decision-making processes. This corroborates prior studies that emphasize the agency theory perspective, where the absence of strong governance incentives results in firms fulfilling only baseline requirements rather than voluntarily enhancing transparency.

Taken together, the findings reveal that Chilean firms have made measurable progress in adopting integrated reporting under a mandatory regime, yet critical deficiencies persist in connectivity and performance. They suggest that the most pressing barrier is not the availability of disclosure frameworks but the capability of firms, especially medium-sized enterprises, to translate strategic objectives into measurable outcomes. Finally, they indicate that without targeted support and stronger verification mechanisms, mandatory disclosure risks remaining at a compliance level, limiting its transformative potential for corporate sustainability and value creation.

6. Limitations and future research

Despite its contributions, this study is not without limitations. First, the analysis is primarily descriptive and restricted to the 2022-2023 reporting period, which limits the ability to capture longer-term dynamics of compliance and integration. Second, the focus on Chile, while valuable as a pioneering emerging-market case, constrains the generalizability of the findings to other institutional contexts. Third, although the coding procedure was conducted manually and cross-checked to enhance reliability, the evaluation of disclosure quality inevitably involves a degree of subjectivity. These limitations suggest that future research should extend the analysis to longer time horizons, apply statistical techniques such as factor analysis and correlations across disclosure dimensions, and compare results across countries. Such efforts would provide a more comprehensive understanding of how mandatory integrated reporting regimes shape disclosure quality and organizational practices over time.

7. Conclusions

This study set out to assess whether mandatory integrated reports in Chile comply with minimum requirements of the International IR Framework and to identify where integration is most and least effective. In summary, the analysis shows that Chilean companies have achieved a moderate level of compliance with the IR Framework, with relative strengths in materiality and structural aspects of reporting, but persistent weaknesses in connectivity and performance integration.

Sectoral differences reflect varying levels of regulatory pressure and measurement maturity, while medium-sized firms face additional capability constraints compared to large corporations.

From our perspective, these findings confirm that mandatory disclosure is an important step but not sufficient

to ensure integrated thinking in practice. In the Chilean context, the rapid implementation of General Rule No. 461 has accelerated adoption, yet it has also exposed structural and organizational limitations that are likely to be mirrored in other emerging economies transitioning to mandatory regimes. Overall, the evidence indicates partial compliance with IR principles and underscores the need to close the procedural-strategic gap if integrated reporting is to realize its intended purpose. Thus, beyond its descriptive findings, the study contributes to the literature by providing one of the first empirical assessments of mandatory integrated reporting in an emerging economy, offering insights into the institutional challenges and theoretical tensions that shape the quality of disclosure.

7.1 Implications for Firms and Regulators

These findings have significant implications for both corporate managers and regulators. For firms, the low connectivity scores indicate a need for enhanced internal training and cross-functional collaboration to better integrate financial and non-financial information. Senior management should promote integrated thinking across departments to ensure sustainability efforts are not siloed from financial reporting processes. The consequences of these gaps are significant. For companies, failing to strengthen the integration between strategy, performance, and reporting not only undermines stakeholder trust but also exposes them to reputational risks and accusations of greenwashing.

Medium-sized firms are particularly vulnerable, as limited resources may cause them to focus on formal compliance while overlooking substantive integration, thereby widening the gap with larger peers. For regulators, persistent weaknesses in connectivity and performance dimensions risk eroding the credibility of the mandatory regime itself. If disclosures remain largely procedural, the policy objective of fostering transparency and value creation will not be achieved, leading to increased skepticism from investors and international observers. These consequences highlight that both firms and regulators must go beyond formal alignment with standards to ensure that integrated reporting becomes a credible tool for accountability and sustainable decision-making.

For regulators, the results underscore the importance of strengthening verification mechanisms. The absence of mandatory third-party assurance for integrated reports raises concerns about the credibility of disclosed information. Lessons from jurisdictions with stronger assurance requirements suggest that introducing external audits of sustainability disclosures could enhance the reliability and comparability of reports (Leukhardt et al., 2022). Additionally, sector-specific guidelines could help address disparities in adoption levels, ensuring that industries with historically lower sustainability reporting engagement receive tailored support.

From a broader Latin American perspective, Chile's transition to mandatory integrated reporting provides valuable lessons for other emerging economies

considering similar regulatory frameworks. The results suggest that while mandating integrated reporting can drive improvements, compliance alone does not guarantee quality. The implementation of incentive-based mechanisms, such as linking compliance levels to corporate governance ratings or access to green financing, could motivate firms to move beyond a compliance mindset and embed sustainability into their strategic objectives.

In summary, this study highlights the need for both corporate actors and regulators to move beyond a checklist approach to integrated reporting. While firms have made measurable progress under Chile's mandatory disclosure regime, the findings suggest that achieving the full benefits of integrated reporting requires deeper integration of sustainability information into financial decision-making. Strengthening training, regulatory oversight, and incentives will be critical to improving the quality of disclosures and ensuring that integrated reporting fulfills its intended role in fostering transparency, sustainability, and stakeholder trust.

Conflict of interest

The authors declare no conflict of interest.

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During the manuscript preparation process, Al-assisted tools were used to enhance language clarity and coherence. The authors carefully reviewed and validated all generated content to ensure its alignment with the study's objectives and maintain the integrity of the academic analysis.

Statement on the Use of Al

The authors declare that they used ChatGPT exclusively to support manuscript writing, for wording suggestions, organization of ideas, and style editing. ChatGPT was not used to generate data, analyses, results, or figures. All content was reviewed, validated, and edited by the authors, who take full responsibility for its accuracy, originality, and validity.

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Annexes

Table A1. IR Disclosure Quality Index Criteria

	Factor	Explanation
1	Integrated reporting structure and effective com	munication (raw score 0-14).
1.1	Follow basic principles of Reporting	IR is prepared in response to the requirements established in the IIRF as a standalone report or be included as a distinguishable and identifiable communication, having a declaration referencing the IR Framework (Guiding Principles and Content Element) as a preparation basis. (0-2)
1.2	Connectivity and interdependence to create value	It needs to provide connectivity and interdependence about factors that affect the ability to create value.
1.3	Report structure.	The IR provides an effective report structure. Comprehensible logic in a sequence of chapters, avoiding longer and static report. [0-2]
1.4	Connectivity between the information Optimize readability	There is connectivity (interrelatedness and dependencies) between the information provided by the company that affects the organization's ability to create value over time. This connectivity is between: the content element, the past, present, and future information, the capitals, financial and non-financial information, quantitative and qualitative information, governance, and all company communication channels. (0-2) Includes internal cross-reference as appropriate to limit repetition, avoiding highly
1.5	optimize readability	generic disclosure that are not specific to the organization (boilerplate). Additionally, it expresses concepts clearly and in as few words as possible, including charts, pictures, and all necessary explanations that help readers navigate through the document (0-2)
1.6	Consistency and Comparability.	Existence of a consistent basis to prepare the IR over time, in order to ensure the comparison with other organizations to the extent it is material to the organization's own ability to create value over time. (0-2)
1.7	Future time dimension	Includes a clear description about the future time dimension (short, medium, and long-time) considered in preparing and presenting the IR. (0-2)
2	Organization Strategy (raw score 0-20).	
2.1	Mission and vision	Provides a clear mission and vision for the organization. The IR must show clearly what the company's strategy is and how it is related to the value creation process in the short, medium, and long term. [0-2]
2.2	Business activities and market (s)	Describes the principal business activities and the market (s) where the company is operating. $(0-2)$
2.3	Internal risks and opportunities	Gives a representative picture about risks and opportunities that the company faces internally. How affects the firm's ability to create value in the short, medium, and long term, and how the company is dealing with them. [0-2]
2.4	Culture, ethics, and values	Describes the organization's culture, ethics and values, ownership and operating structure, and key quantitative information (e.g. number of employees, revenue and number of countries in which the organization operates. (0-2)
2.5	Capitals used	Describes individually the resources (capitals used by the organization to create value, including trade-off). These are determined by their effect on the organization's ability to create value over time, rather than whether or not they are owned by the firm (if these are not easily quantifiable, their effects are explained). [0-2]
2.6	Understanding and interdependence among capitals	Promotes the understanding and interdependence of each capital over the short, medium, and long term. $(0-2)$
2.7	Perspectives information disclosed	The information disclosure involves different perspectives, including internal, external, positive, and negative aspects supported in a constant relationship with providers of financial capital and stakeholders. [0-2]
2.8	Business model	Describes the key business model including inputs, business activities, outputs and outcomes . (0-2) i. Inputs. An IR shows the most important material inputs on which the organization depends. These capitals disclosures must have an important dependence to create value
		over time. ii. Business activity. An IR describes key business activities; for example: how the organization differentiates itself in the marketplace, the extent to which the business model relies on revenue generation after the initial point of sale, how the organization innovates and how the business model has been designed to adapt to change.
		iii. Outputs. An IR identifies what the key product and services are.
		iv. Outcomes. Both internal outcomes (e.g., employee morale, organizational reputation, revenue, and cash flows) and external outcomes (e.g., customer satisfaction, tax payments, brand loyalty, and social and environmental effects). Both positive outcomes (i.e., those that result in a net increase in the capitals and thereby create value) and negative outcomes (i.e., those that result in a net decrease in the capitals and thereby diminish value).

	Factor	Explanation
2.9	How the value created is manifested	The value created by the company is manifested through the value created by the company and others (i.e., stakeholders and society at large).
2.10	Effects of the value created	Explains how the value created by the firm affects stakeholders and providers of financial capitals (or shareholders) over time.
3	Materiality (raw score 0-8).	
3.18	Existence of a process	Existence of a process to determine what material aspects are considered in the IR. (0-2)
3.19	How they have been determined and quantified.	How they have been determined and quantified. Assess the importance of matters based on the magnitude of the effect (risk, opportunities and outcomes) and the likelihood of occurrence (in a qualitative and/or quantitative way). (0-2)
3.20	Possible effects	How they may affect the organization's strategy and the value creation process over time through the capital used. (0-2)
3.21	Reliability and completeness	It includes the controls that have been applied to reduce material errors and an acceptably low level of risk. (Mechanisms such as robust internal control and reporting systems, stakeholder engagement, internal audit or similar functions, independent external assurance, information's limitation, etc.) (0-2)
4	External Environment (raw score 0-6).	
4.22	Firm's external environment	Includes significant facts about the firm's external environment, its interaction (society at large) and how it affects the value creation process. [0-2]
4.23	Interaction	It describes the interaction, relationship and activities done by the company in order to respond the shareholders' needs. Also, how this interaction, relationship and activities affect the value creation process. [0-2]
4.24	Adaptation strategy and business model	Describes how the company adapts the strategy and the business model to respond the external environmental risk and opportunities. [0-2]
5	Governance (raw score 0-10)	
5.25	Integrated thinking	Promotes decision making through an integrated thinking; focuses on the value creation process over time (conciseness, strategic and future orientation). (0-2)
5.26	Existence of a statement from those in charge of governance	Existence of a statement from those in charge of governance, including: [0-2]
		5.2.6.1 An acknowledgement of their responsibility, guaranteeing the integrity of this report.
		$5.2.6.2~\mbox{An}$ acknowledgement that the IR has been prepared on a collective mind basis, and
		5.2.6.3 Their opinion or a declaration that the IR was made in compliance with the IIRF. If it does not include a governance declaration they should explain:
		5.2.6.4 What role those in charge of governance played in its preparation and presentation.
		5.2.6.5 What steps are being taken to include such a statement in future reports.
		5.2.6.6 The time frame for doing so, which should be no later than the organization's third integrated report that references this Framework.
5.27	Policies and procedures	Includes policies and procedures used in the strategic decision, supporting the company's ability to create value in the short, medium, and long term. (0-2)
5.28	Governance practices that exceed legal requirements	Describes whether the organization is implementing governance practices that exceed legal requirements. (0-2)
5.29	Remuneration and value creation process	Describes how remuneration and incentives are linked to the value creation process in the short, medium, and long term, and how they are linked to the organization's use of and effects on the capitals. [0-2]
6	Performance and Prospect (raw score 12)	
6.30	Strategic objectives over time.	Describes the company's short-, medium-, and long-term strategic objectives. (0-2)
6.31	Strategies in place	The strategies it has in place, or intends to implement, to achieve the strategic objectives and how it will be measured. $(0-2)$
6.32	Resource allocation plans	The resource allocation plans it has to implement its strategy; and what the linkage between them is. $(0-2)$
6.33	Quantitative and/or qualitative indicators	Quantitative and/or qualitative indicators .
6.34	The extent of company's target achievement	Indicates to what extent the company has achieved its strategic objectives. (0-2)
6.35	The organization's effects on capitals	The organization's effects (both positive and negative) on the capitals, including material effects on capitals up and down the value chain. (0-2)
6.36	Connectivity of financial performance and other capitals	KPIs demonstrating the connectivity of financial performance, with performance regarding other capitals. (0-2)

Table A2. Sectoral averages of integrated report quality by industry (2022–2023)

Evaluation Criterion / Industry	Food & Beverages	Consumer Goods	Financial	Infrastructure	Processing & Materials Extraction	Renewable Resources	Sanitation	Services	Technology & Communication	Resource Transformation	Transport	AVERAGE
1. Integrated reporting structure and communication	63.5%	61.5%	64.9%	60.7%	72.4%	78.2%	58.9%	48.6%	68.4%	60.4%	64.3%	63.8%
2. Organizational strategy	64.6%	60.4%	66.6%	65.1%	74.3%	65.8%	53.3%	52.5%	69.6%	71.2%	71.1%	65.0%
3. Materiality	64.7%	69.3%	71.0%	67.3%	72.4%	80.9%	54.2%	52.5%	81.0%	67.7%	67.6%	68.1%
4. External environment	63.0%	51.6%	61.2%	60.0%	77.5%	73.2%	58.3%	46.7%	80.5%	76.7%	58.3%	64.3%
5. Governance	57.6%	54.9%	54.5%	52.7%	63.5%	62.0%	40.0%	40.0%	70.8%	54.4%	53.5%	54.9%
6. Performance and prospects	49.0%	40.7%	33.3%	45.7%	53.8%	53.8%	27.4%	30.0%	47.6%	49.7%	44.9%	43.3%
TOTAL AVERAGE	60.4%	56.4%	58.6%	58.6%	69.0%	69.0%	48.7%	45.0%	69.7%	63.4%	59.9%	59.9%

Note: Values represent average disclosure quality scores for each factor, calculated from the coding of 290 integrated reports [2022–2023]