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The Digital Reputation Gap: Selective Corporate Digital Responsibility Disclosure in French Listed Companies

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The Digital Reputation Gap: Selective Corporate Digital Responsibility Disclosure in French Listed Companies

Abstract

Digital transformation has made corporate reputation increasingly dependent on how firms communicate responsibility for data, artificial intelligence, cybersecurity, digital inclusion, digital innovation, and the environmental consequences of digital infrastructure. This study introduces the Digital Reputation Gap (DRG), defined as the difference between disclosure on routinized corporate digital responsibility (CDR) dimensions and disclosure on accountability-sensitive dimensions. Drawing on corporate reputation, voluntary disclosure, impression management, agency theory, and resource dependence theory, the paper argues that CDR disclosure helps firms construct a responsible digital identity, but that this identity may remain selective when firms emphasize more reportable digital responsibility themes while under-disclosing accountability-demanding issues. Using a balanced panel of 74 French listed firms from 2021 to 2023, corresponding to 222 firm-year observations, the study measures CDR disclosure through a manually coded 47-item binary index across six dimensions. Results show that firms disclose substantially more on routinized than accountability-sensitive CDR dimensions. Board size, board digital expertise, and dedicated digital committee presence are positively associated with both disclosure categories, but governance mechanisms do not significantly reduce the Digital Reputation Gap. Robustness analyses using an alternative item-weighted gap, random effects, firm fixed effects, and exclusion of 2021 broadly confirm the findings. The study contributes to corporate reputation and CDR research by showing that digital responsibility disclosure should be assessed not only by volume, but also by balance.

Keywords: Corporate digital responsibility; corporate reputation; digital reputation gap; corporate governance; selective disclosure; responsible digital identity

1. Introduction

Digital transformation has expanded the domain in which firms are judged as responsible, credible, and trustworthy (Lobschat et al. 2021; Mihale-Wilson et al. 2022; Wirtz et al. 2023). Contemporary corporations do not merely use digital technologies as operational tools; they govern data flows, artificial intelligence systems, cybersecurity infrastructures, digital platforms, automated decision processes, user interfaces, and digitally mediated stakeholder relationships. These systems create economic value, but they also produce reputational and accountability risks related to privacy, surveillance, algorithmic fairness, cyber resilience, digital exclusion, automation, responsible innovation, and the environmental footprint of digital infrastructure (Mittelstadt et al. 2016; Belkhir and Elmeligi 2018; Martin 2019; Freitag et al. 2021; Lobschat et al. 2021; Wirtz et al. 2023). CDR has emerged as a conceptual response to this expanded accountability domain, emphasizing the norms, values, and governance arrangements through which organizations create and use digital technologies and data responsibly (Herden et al. 2021; Lobschat et al. 2021; Mihale-Wilson et al. 2022; van der Merwe and Al Achkar 2022).

For reputation scholars, the rise of CDR is important because digital responsibility is increasingly communicated through corporate reports, universal registration documents, sustainability reports, governance statements, and strategic narratives. Corporate reputation is not formed solely by internal performance; it emerges from stakeholders' cumulative interpretations of corporate signals, conduct, identity claims, and communication (Barnett et al. 2006; Fombrun 1996; Fombrun and Shanley 1990; Walker 2010). In this sense, CDR disclosure does not simply transmit information. It participates in the construction of a responsible digital identity: a communicative

representation of the firm as secure, ethical, inclusive, transparent, innovative, and accountable in the digital sphere (van Riel and Fombrun 2007; Cornelissen 2023; Lobschat et al. 2021; van der Merwe and Al Achkar 2022).

The central problem addressed in this paper is that CDR disclosure may be internally selective, consistent with voluntary-disclosure and impression-management research showing that firms may emphasize favorable or less costly information while limiting disclosure on more sensitive issues (Verrecchia 1983; Dye 1985; Merkl-Davies and Brennan 2007; Cho et al. 2015; Marquis et al. 2016). A firm can disclose extensively on privacy policies, cybersecurity controls, digital governance structures, digital inclusion initiatives, or committee mandates while saying much less about algorithmic accountability, surveillance boundaries, explainability, digital environmental impact, automation risks, or responsible deployment of AI-enabled systems. The issue is therefore not only whether firms disclose more or less CDR information, but whether their disclosure is balanced across dimensions that differ in reputational sensitivity. Corporate reporting research has long shown that narrative disclosure may reduce information asymmetry but may also serve impression-management and legitimacy-preserving purposes (Gray et al. 1995; Suchman 1995; Merkl-Davies and Brennan 2007). CDR creates a particularly revealing context for this tension because some digital responsibility themes are easily framed as responsible governance, whereas others expose unresolved ethical, environmental, or socio-technical vulnerabilities associated with algorithmic accountability, digital environmental impact, and responsible innovation (Stilgoe et al. 2013; Mittelstadt et al. 2016; Belkhir and Elmeligi 2018; Martin 2019; Freitag et al. 2021).

This study develops and tests the concept of the Digital Reputation Gap (DRG), defined as the difference between routinized CDR disclosure and accountability-sensitive CDR disclosure. Routinized disclosure comprises data privacy and security, digital inclusion, access and awareness,

and digital governance and transparency. These domains allow firms to present themselves as secure, inclusive, and well governed through familiar corporate-reporting language. Accountability-sensitive disclosure comprises digital ethics, digital environmental impact, and responsible innovation, deployment and economic conduct. These domains expose firms to deeper scrutiny because they raise questions about algorithmic fairness, human autonomy, digital carbon footprint, platform consequences, automation harms, accountability for AI, and responsible commercialization of digital innovation. A positive DRG indicates that the firm discloses more on routinized themes than on accountability-sensitive themes.

The study asks whether corporate governance mechanisms reduce the Digital Reputation Gap by encouraging more balanced CDR disclosure. The empirical setting is a balanced panel of 74 French listed firms observed over 2021-2023, corresponding to 222 firm-year observations. France is a meaningful context because large French listed firms operate within a European governance environment in which sustainability reporting, digital policy, and corporate accountability expectations have intensified, particularly through the Corporate Sustainability Reporting Directive (CSRD) and the EU Artificial Intelligence Act (AI Act) (European Parliament and Council 2022; European Parliament and Council 2024). The 2021-2023 window is also analytically useful because it largely precedes the first mandatory reporting effects of the former and the main applicability period of the latter.

The analysis produces three main findings. First, descriptive evidence confirms a substantial Digital Reputation Gap: firms disclose considerably more on routinized than accountability-sensitive CDR dimensions, and the gap is positive in the vast majority of firm-year observations. Second, board size, board digital expertise, and dedicated digital committee presence are positively associated with both routinized and accountability-sensitive CDR disclosure. Third, none of the

six governance variables significantly reduces the Digital Reputation Gap in the main model, and robustness tests largely confirm this result. The evidence therefore suggests that governance mechanisms can expand both components of CDR disclosure without necessarily rebalancing the disclosure profile between routinized and accountability-sensitive domains.

The paper contributes to three literatures. First, it extends corporate reputation research by conceptualizing CDR disclosure as a mechanism of responsible digital identity construction. Second, it contributes to CDR research by shifting attention from aggregate disclosure volume to the internal composition of disclosure. Third, it contributes to corporate governance and disclosure research by showing that governance mechanisms associated with greater disclosure breadth may not automatically constrain selective digital reputation management. The paper next develops the theoretical logic of the Digital Reputation Gap, before presenting the empirical design and examining whether governance mechanisms are associated with more balanced CDR disclosure.

2. Literature Review and Hypotheses Development

2.1 Corporate reputation, CDR disclosure, and responsible digital identity

Corporate reputation is commonly understood as a stakeholder-based evaluative judgment formed through organizational conduct, visibility, communicated identity, and comparative assessments over time (Fombrun and Shanley 1990; Fombrun 1996; Barnett et al. 2006; Walker 2010). Because stakeholders cannot directly observe many internal organizational processes, corporate disclosure becomes one of the principal channels through which firms make their conduct intelligible and reputationally meaningful. Corporate communication research therefore treats annual reports, sustainability reports, governance statements, and related narratives not merely as repositories of information, but as instruments through which firms articulate identity, responsibility, and stakeholder relationships (van Riel and Fombrun 2007; Cornelissen 2023). In this sense, Corporate

Digital Responsibility disclosure can be understood as part of the construction of responsible digital identity: the communicative representation of the firm as trustworthy, accountable, inclusive, secure, and ethically competent in the digital sphere.

CDR has been conceptualized as the values, norms, and governance arrangements that guide the responsible creation and use of digital technologies and data (Lobschat et al. 2021). Recent CDR research emphasizes that digital responsibility extends beyond privacy compliance and cybersecurity to include digital ethics, algorithmic accountability, inclusion, sustainability, governance transparency, and responsible innovation (Herden et al. 2021; Mihale-Wilson et al. 2022; van der Merwe and Al Achkar 2022; Cheng and Zhang 2023; Carl and Hinz 2024). This multidimensionality creates a disclosure problem. A firm may disclose extensively on some CDR dimensions while remaining comparatively silent on others. Aggregate disclosure volume may therefore conceal an imbalance in the composition of digital responsibility communication.

2.2 Selective CDR disclosure and the Digital Reputation Gap

Following the disclosure-index tradition, this study does not treat CDR disclosure as a homogeneous aggregate. Prior narrative, environmental, and sustainability-disclosure research shows that disclosure indices may be decomposed into theoretically meaningful categories because disclosure items differ in specificity, objectivity, verifiability, symbolic content, and accountability implications (Beattie et al. 2004; Clarkson et al. 2008; Michelon et al. 2015). Clarkson et al. (2008), for example, provide a useful methodological precedent because they construct a structured environmental disclosure index rather than treating environmental reporting as an undifferentiated volume of narrative disclosure. In the same methodological spirit, the present study develops an ex ante distinction between routinized and accountability-sensitive CDR disclosure.

This distinction does not imply that some digital responsibility issues are intrinsically unimportant or free from reputational risk. Data privacy, cybersecurity, digital inclusion, and digital governance are central to responsible digital conduct (Lobschat et al. 2021; Herden et al. 2021; van der Merwe and Al Achkar 2022; Carl and Hinz 2024). They may nevertheless generate severe reputational damage when poorly managed, particularly where failures involve data breaches, cyber-risk oversight, exclusionary digital access, or weak digital accountability (Fombrun and Shanley 1990; Hartmann and Carmenate 2021; Ajayi and Mmutle 2021). They are classified as routinized only in a comparative disclosure sense: relative to other CDR dimensions, they are more likely to be communicated through established corporate-reporting forms, including policies, controls, compliance statements, risk-management systems, accessibility initiatives, committee mandates, and oversight responsibilities. This logic is consistent with cybersecurity-governance research showing that cybersecurity and data protection have become increasingly institutionalized as board-level risk, disclosure, and internal-control issues (Turel and Bart 2014; Higgs et al. 2016; Hartmann and Carmenate 2021).

By contrast, accountability-sensitive disclosure refers to CDR dimensions that require firms to address less standardized and more accountability-demanding issues, including algorithmic fairness, explainability, surveillance boundaries, human autonomy, digital environmental impact, automation-related harms, and responsible commercialization of digital innovation. These issues are harder to codify, quantify, verify, and narrate without exposing unresolved ethical, environmental, or socio-technical tensions. This classification is grounded in CDR research that conceptualizes digital responsibility as a multidimensional domain extending beyond privacy and cybersecurity to include digital ethics, responsible AI, inclusion, sustainability, governance transparency, and responsible innovation (Lobschat et al. 2021; Herden et al. 2021; Mihale-Wilson

et al. 2022; van der Merwe and Al Achkar 2022; Cheng and Zhang 2023; Wirtz et al. 2023; Carl and Hinz 2024). It is also consistent with research on algorithmic accountability and algorithmic decision-making disclosure, which shows that automated decision systems raise difficult questions of fairness, explainability, contestability, human oversight, and accountability (Mittelstadt et al. 2016; Wachter et al. 2017; Martin 2019; Selbst et al. 2019; Raji et al. 2020; Bonsón et al. 2023).

The environmental component of accountability-sensitive CDR disclosure is likewise theoretically justified. Digitalization is often presented as dematerializing or efficiency-enhancing, but digital infrastructures also create environmental burdens through energy consumption, data centers, devices, cloud computing, electronic waste, and the carbon footprint of information and communication technologies (Belkhir and Elmeligi 2018; Freitag et al. 2021). Disclosure on digital environmental impact therefore differs from conventional cybersecurity or policy disclosure because it requires firms to recognize environmental externalities associated with their own digital infrastructures and technology-enabled business models. Similarly, responsible innovation disclosure requires firms to address not only the existence of digital innovation, but the governance of its purposes, limits, risks, and social consequences, a logic consistent with responsible innovation research emphasizing anticipation, reflexivity, inclusion, and responsiveness (Stilgoe et al. 2013).

The Digital Reputation Gap is therefore not a claim that one set of CDR dimensions is substantively safer or less important than the other. It is a disclosure-balance construct designed to capture whether firms concentrate CDR communication in comparatively routinized and reputationally comfortable areas, or whether they also disclose the accountability-sensitive dimensions that more directly test the credibility of responsible digital identity.

[Table 1 about here]

This disclosure-balance logic is consistent with voluntary disclosure, legitimacy, and impression-management research. Firms are more likely to disclose information when its expected reputational benefits exceed the proprietary, litigation, or legitimacy costs of making it visible (Verrecchia 1983; Dye 1985). Corporate narratives may therefore emphasize responsibility themes that support a favorable identity while limiting disclosure on issues that expose unresolved tensions or invite stakeholder scrutiny (Suchman 1995; Merkl-Davies and Brennan 2007; Cho et al. 2015). In the CDR context, routinized dimensions can be communicated through established governance, compliance, risk-management, cybersecurity, and inclusion narratives. Accountability-sensitive dimensions, by contrast, are less standardized and more likely to require firms to address algorithmic fairness, digital environmental burden, automation harms, and responsible innovation. The Digital Reputation Gap is therefore expected to emerge because firms have stronger incentives to make routinized CDR responsibilities visible than to disclose more accountability-demanding digital issues.

H1: Routinized CDR disclosure exceeds accountability-sensitive CDR disclosure.

2.3 Corporate governance and the Digital Reputation Gap

If the Digital Reputation Gap reflects selective visibility in CDR disclosure, governance becomes central to its credibility. Agency theory views boards as monitoring mechanisms that can constrain managerial discretion and reduce opportunistic reporting (Jensen and Meckling 1976; Fama and Jensen 1983). Resource-dependence theory adds that boards provide expertise, external knowledge, legitimacy, and strategic advice, which may be especially important when firms confront complex technological and reputational risks (Pfeffer and Salancik 1978; Hillman and Dalziel 2003). In the CDR context, these perspectives are complementary: governance may

discipline selective communication while also supplying the knowledge needed to identify digital accountability issues that are technically complex and difficult for stakeholders to observe.

Governance mechanisms should not be treated as homogeneous signals of credibility. Board-reputation research suggests that boards affect stakeholder perceptions not merely through formal independence, but through the skills, expertise, experience, and external resources directors bring to board deliberation (García-Meca and Palacio 2018). This point is especially relevant to CDR because privacy, cybersecurity, artificial intelligence, data governance, platform conduct, digital sustainability, and responsible innovation require specialized knowledge. Cybersecurity governance research similarly shows that digital risk has moved into board-level oversight through technology expertise, board-level technology committees, audit committee involvement, and risk-governance structures (Turel and Bart 2014; Higgs et al. 2016; Hartmann and Carmenate 2021; Peppard et al. 2023).

Accordingly, governance mechanisms may reduce the Digital Reputation Gap when they push firms beyond disclosure breadth toward disclosure balance. This expectation is not deterministic. Because CDR reporting remains weakly standardized and technically complex, governance may first increase overall disclosure without necessarily reducing the relative imbalance between routinized and accountability-sensitive dimensions. The following hypotheses therefore test whether board structure, monitoring capacity, digital expertise, and specialized digital oversight are associated with the size of the Digital Reputation Gap.

Board size may reduce the Digital Reputation Gap because larger boards can provide broader monitoring capacity, advisory resources, and stakeholder-oriented perspectives. In a complex disclosure domain such as CDR, a larger board is more likely to include directors with diverse functional knowledge relevant to privacy, cybersecurity, digital ethics, sustainability, innovation,

and stakeholder accountability. Prior governance and disclosure research suggests that board size can be associated with broader voluntary and CSR disclosure because larger boards may increase information demand, monitoring capacity, and the range of expertise available for oversight (Allegrini and Greco 2013; Jizi et al. 2014). Board-reputation research similarly indicates that board resources and expertise can shape stakeholder perceptions of corporate credibility (García-Meca and Palacio 2018). Although larger boards may face coordination costs, their broader knowledge base should make it less likely that CDR communication remains concentrated only in routinized themes.

H2a: Board size is negatively associated with the Digital Reputation Gap.

Board independence may reduce the Digital Reputation Gap because independent directors are less tied to managerial preferences and more able to challenge selective corporate narratives (Fama and Jensen 1983). In CDR disclosure, this role matters because managers may have incentives to emphasize more routinized and reputationally manageable themes while limiting disclosure on issues that are more strategically costly or legitimacy-sensitive (Verrecchia 1983; Dye 1985; Merkl-Davies and Brennan 2007; Cho et al. 2015). This concern is particularly relevant for accountability-sensitive CDR issues such as algorithmic accountability, surveillance, digital environmental impact, and responsible innovation (Lobschat et al. 2021; Martin 2019; Napoli 2023). Independent directors may therefore strengthen reporting credibility by increasing scrutiny of selective disclosure choices and encouraging greater attention to accountability-sensitive digital issues.

H2b: Board independence is negatively associated with the Digital Reputation Gap.

Board digital expertise may reduce the Digital Reputation Gap because CDR disclosure involves technically complex issues that are difficult for non-specialist directors to assess. Directors with

substantive digital expertise are better positioned to understand technology-related risks, scrutinize managerial claims about digital responsibility, and request more specific disclosure on accountability-sensitive issues, because board expertise strengthens both advisory capacity and oversight in complex technological domains (Hillman and Dalziel 2003; Turel and Bart 2014; Hartmann and Carmenate 2021; Peppard et al. 2023). From a resource-dependence perspective, such expertise provides cognitive resources that help boards interpret technological uncertainty and connect digital risks to corporate accountability (Hillman and Dalziel 2003). Board digital expertise should therefore make accountability-sensitive CDR issues more visible in board deliberation and reduce the tendency for disclosure to remain concentrated in more routinized domains.

H2c: Board digital expertise is negatively associated with the Digital Reputation Gap.

CEO duality may increase the Digital Reputation Gap because it concentrates executive and board leadership, weakens independent oversight, and gives management greater influence over corporate disclosure narratives (Fama and Jensen 1983; Jensen 1993). This concentration of authority is particularly relevant in CDR reporting, where managers may have incentives to emphasize more routinized and reputation-protective themes while limiting disclosure on strategically costly or accountability-sensitive digital issues (Merkl-Davies and Brennan 2007; Cho et al. 2015). When the CEO also dominates board leadership, selective disclosure choices may face less independent challenge, allowing firms to communicate digital responsibility through more routinized themes while under-disclosing issues such as algorithmic harms, surveillance, digital environmental burden, and responsible innovation.

H2d: CEO duality is positively associated with the Digital Reputation Gap.

Audit committee independence may reduce the Digital Reputation Gap by strengthening reporting oversight, internal-control discipline, and scrutiny of non-financial disclosure. Prior research shows that independent audit committees are associated with stronger monitoring and higher-quality reporting, including broader accountability and CSR disclosure (Abbott et al. 2004; Appuhami and Tashakor 2017). In the CDR context, this role is relevant where digital responsibility intersects with risk management, cybersecurity oversight, data governance, internal controls, and assurance processes, areas in which audit committees are increasingly implicated in monitoring reporting credibility and technology-related risk (Abbott et al. 2004; Appuhami and Tashakor 2017; Hartmann and Carmenate 2021; Smaili et al. 2023). Independent audit committees may therefore encourage more complete disclosure and reduce the tendency for firms to emphasize routinized digital themes while under-disclosing accountability-sensitive dimensions.

H2e: Audit committee independence is negatively associated with the Digital Reputation Gap.

A dedicated digital committee may reduce the Digital Reputation Gap because it formalizes board-level attention to digital transformation, cybersecurity, data governance, artificial intelligence, innovation, and technology-related stakeholder risks. Board-level technology committees have been described as governance mechanisms that signal attention to IT risk and strengthen oversight of technology-related issues (Higgs et al. 2016; Hartmann and Carmenate 2021). More broadly, research on board governance of technology emphasizes that digital transformation and technology-related risks increasingly require explicit board-level structures and responsibilities (Turel and Bart 2014; Peppard et al. 2023). By allocating agenda space and oversight responsibility to digital matters, dedicated digital committees may encourage firms to disclose not only governance architecture, but also more accountability-sensitive digital issues.

H2f: Dedicated digital committee presence is negatively associated with the Digital Reputation Gap.

3. Methodology

3.1 Sample and data sources

The initial population consists of firms included in the SBF 120 index during the 2021-2023 period. The SBF 120 was selected because it represents a broad set of large and liquid French listed companies, making it an appropriate setting for examining voluntary CDR disclosure among prominent corporations with substantial public visibility and stakeholder exposure (Euronext 2025). The 2021-2023 window is also suitable because it provides a voluntary-disclosure baseline before first-wave CSRD reporting and before the AI Act entered into force and its phased obligations began to apply (European Commission 2024; European Commission 2025). France offers a relevant institutional context because it is a major European civil-law jurisdiction in which sustainability reporting, corporate governance, and digital responsibility expectations were already developing during the period examined.

To construct a balanced panel, firms were retained only if they remained in the index throughout the three-year observation period and had the required reporting documents available for all years. Historical index membership and firm eligibility were verified manually using index-constituent information, company reports, and corporate documentation. Financial institutions, insurance companies, and real estate firms were excluded because their regulatory requirements, capital structures, risk profiles, and disclosure obligations differ materially from those of non-financial firms. The final sample comprises 74 non-financial French listed companies, corresponding to 222 firm-year observations. The list of sample firms and the industry classification used in the empirical models are provided in Online Resource 1.

Data were collected manually from each firm's Universal Registration Document (URD), which served as the primary source for both CDR disclosure coding and governance-variable extraction. CDRDI scoring was restricted to information contained in the URD or in contemporaneous annual, integrated, or sustainability reports explicitly referred to and substantively incorporated by the URD. Information available only through external hyperlinks, corporate webpages, or non-incorporated documents was not used for scoring. Financial and firm-level controls were collected from audited financial statements and accompanying notes. Corporate websites and related publications were used only to verify sample eligibility, clarify governance-variable interpretation, and check data consistency, not as independent sources for CDR disclosure scoring.

3.2 Content-analysis procedure and CDR disclosure index

CDR disclosure is measured through a manually coded Corporate Digital Responsibility Disclosure Index (CDRDI) designed to capture the breadth of observable CDR reporting. The index was developed through a multi-stage process combining normative relevance, theoretical coverage, and coding replicability. First, the initial item framework drew on policy and practitioner sources that define emerging expectations for responsible corporate conduct in the digital sphere, including the CDR Manifesto, France Stratégie's work on corporate digital responsibility, and the Swiss Digital Initiative's guidance (Corporate Digital Responsibility Initiative 2021; France Stratégie 2020; Swiss Digital Initiative and IMD 2022). These sources were useful because they translate emerging digital-responsibility expectations into practical domains such as data protection, transparency, digital inclusion, responsible technology use, and governance.

Second, the framework was refined using scholarly CDR research, which conceptualizes digital responsibility as a multidimensional construct extending beyond privacy and cybersecurity to include data governance, digital ethics, digital environmental impact, inclusion, transparency, and

responsible innovation (Arciniega Gil and Ratnane 2023; Herden et al. 2021; van der Merwe and Al Achkar 2022; Carl and Hinz 2024). The final index comprises 47 binary disclosure items organized across six dimensions: data privacy and security; digital ethics; digital environmental impact; digital inclusion, access and awareness; digital governance and transparency; and responsible innovation, deployment, and economic conduct.

The index follows the established content-analysis and disclosure-index tradition in accounting, sustainability, and narrative reporting research. Disclosure indices are appropriate where the objective is to measure the presence and scope of specific information categories rather than to evaluate externally verified performance outcomes (Beattie et al. 2004; Clarkson et al. 2008). Each item is coded 1 when the firm provides specific and substantive disclosure and 0 when the item is absent, vague, purely symbolic, limited to generic compliance language, available only through an external hyperlink, or insufficiently detailed. Dichotomous scoring is used because the study focuses on disclosure breadth rather than disclosure quality or tone; this approach improves comparability across firms and years and limits coder discretion in assessing narrative intensity (Beattie et al. 2004; Clarkson et al. 2008; Michelon et al. 2015).

The coding unit is the firm-year report. Scoring was restricted to information contained in the Universal Registration Document or in contemporaneous annual, integrated, or sustainability reports explicitly referred to and substantively incorporated by the URD. This rule is important because the study examines formal corporate reporting as a reputational communication channel, rather than the broader universe of information available across webpages, hyperlinks, press releases, or non-incorporated corporate materials.

$$\text{CDR_INDEX}_{it} = \frac{\Sigma_{j=1}^{47} \text{CDR_ITEM}_{ijt}}{47}$$

Where CDR_ITEM_{ijt} equals 1 if firm i discloses item j in year t, and 0 otherwise. Dimension-level indices are calculated in the same way, by dividing the number of disclosed items in each dimension by the total number of items assigned to that dimension. Thus, each dimension index ranges from 0 to 1 and is comparable across dimensions despite differences in item counts.

Before full coding, the protocol was piloted on 15 randomly selected firm-year reports. Two coders independently applied the CDRDI to the pilot sample, allowing ambiguous cases to be identified before full-scale coding. Intercoder reliability was assessed before reconciliation using percentage agreement and Krippendorff's alpha, both of which are appropriate for binary content-analysis data. The pilot coding yielded 92% overall agreement and a Krippendorff's alpha of 0.84. Remaining disagreements were discussed item by item and used to refine the operational definitions, particularly for disclosures located at the boundary between digital governance, digital ethics, and responsible innovation.

After the final coding protocol had been applied to the full sample, the coded data were reviewed by an independent expert familiar with French corporate annual reports. This post-coding review was used to verify the interpretation of report language, the treatment of incorporated disclosures, and the consistency of borderline coding decisions. Any ambiguous cases identified during this review were reassessed against the finalized coding protocol to ensure consistent application across the sample.

[Table 2 about here]

3.3 Dependent variable: Digital Reputation Gap

The main dependent variable is the Digital Reputation Gap (DRG), which captures the internal balance of CDR disclosure rather than aggregate disclosure volume. The measure is constructed as the difference between disclosure on routinized CDR dimensions and disclosure on

accountability-sensitive CDR dimensions. Positive values indicate that the firm discloses more extensively on comparatively routinized and reputationally comfortable digital responsibility themes, whereas values close to zero indicate a more balanced disclosure profile. Negative values indicate that disclosure is more extensive on accountability-sensitive than routinized dimensions.

$$\text{DRG}_{it} = \text{ROUTINE_CDR}_{it} - \text{SENSITIVE_CDR}_{it}$$

where DRG_{it} denotes the Digital Reputation Gap for firm i in year t. ROUTINE_CDR_it is the average of the Data Privacy and Security index, the Digital Inclusion, Access and Awareness index, and the Digital Governance and Transparency index. SENSITIVE_CDR_it is the average of the Digital Ethics index, the Digital Environmental Impact index, and the Responsible Innovation, Deployment and Economic Conduct index. The two components are calculated as follows:

$$\text{ROUTINE_CDR}_{it} = \frac{\text{DP}_{it} + \text{DIA}_{it} + \text{DGT}_{it}}{3}$$

$$\text{SENSITIVE_CDR}_{it} = \frac{\text{DE}_{it} + \text{DEI}_{it} + \text{RIT}_{it}}{3}$$

where DP denotes Data Privacy and Security, DIA denotes Digital Inclusion, Access and Awareness, DGT denotes Digital Governance and Transparency, DE denotes Digital Ethics, DEI denotes Digital Environmental Impact, and RIT denotes Responsible Innovation, Deployment and Economic Conduct. Each component index ranges from 0 to 1 and is calculated as the number of disclosed items in the relevant dimension divided by the total number of items assigned to that dimension.

The construction of DRG follows the logic of disclosure-index research, in which item-level disclosures are grouped into conceptually meaningful categories before empirical testing (Beattie et al. 2004; Clarkson et al. 2008). The measure therefore does not assess the substantive quality of

firms' digital responsibility practices; rather, it captures the balance of what firms make visible in formal corporate reporting. This distinction is important because disclosure indices measure observable reporting breadth, not externally verified conduct or performance outcomes (Beattie et al. 2004; Clarkson et al. 2008; Michelon et al. 2015).

A high DRG indicates that responsible digital identity is communicated asymmetrically: the firm discloses more on routinized dimensions than on accountability-sensitive dimensions. Conversely, a low or near-zero DRG indicates that disclosure is more evenly distributed across the two groups. This makes DRG a compositional disclosure measure rather than a general CDR-performance measure. Its purpose is to identify whether firms' digital responsibility narratives are concentrated in more reportable and reputationally comfortable domains, or whether they extend to the dimensions that more directly test the credibility of responsible digital identity.

For robustness, the study also uses an alternative item-weighted measure of the Digital Reputation Gap. In this specification, routinized disclosure is calculated as the proportion of disclosed items across the 24 routinized items, while accountability-sensitive disclosure is calculated as the proportion of disclosed items across the 23 accountability-sensitive items. The alternative measure is calculated as follows:

$$\text{ALT_DRG}_{it} = \text{ROUTINE_ITEM_INDEX}_{it} - \text{SENSITIVE_ITEM_INDEX}_{it}$$

This alternative specification reduces the possibility that the results are driven by averaging the three dimensions within each group rather than by the underlying item-level disclosure structure.

3.4 Governance variables and controls

The main independent variables capture board structure, monitoring capacity, digital expertise, and specialized digital oversight. Board size (BSIZE) is measured as the total number of directors. Board independence (BI) is measured as the proportion of independent directors on the board.

CEO duality (CEO_D) equals 1 when the chief executive officer also serves as board chair, and 0 otherwise. Board digital expertise (BDE) is measured as the proportion of directors whose disclosed biographies, professional experience, executive responsibilities, advisory roles, or formal competencies indicate substantive expertise in digital technology, information systems, cybersecurity, data governance, artificial intelligence, analytics, platform technologies, digital transformation, or technology-driven innovation. Generic references to innovation, strategy, operations, or managerial experience were not sufficient unless explicitly linked to digital or technology-related domains.

Audit committee independence (ACI) is measured as the proportion of independent members on the audit committee. Dedicated digital committee (DDC) equals 1 when the firm discloses a board committee, board subcommittee, or formally designated board-level oversight body with responsibility for digital transformation, technology, cybersecurity, innovation, data governance, artificial intelligence, or closely related matters. Executive management bodies, operational steering committees, and general CSR or innovation committees were not coded as DDC unless the disclosure clearly assigned them a board-level digital oversight mandate. These measures are consistent with corporate-governance and digital-risk disclosure research on board monitoring, board resources, audit oversight, and technology committees (Abbott et al. 2004; Fama and Jensen 1983; Hartmann and Carmenate 2021; Higgs et al. 2016; Hillman and Dalziel 2003).

The models include standard financial and firm-level controls. Profitability (ROA) is measured as return on assets. Firm size (SIZE) is measured as the natural logarithm of total assets. Firm age (AGE) is measured as the number of years since incorporation. Leverage (LEV) is measured as total debt divided by total assets. Internationalization (INTL) is measured as the proportion of revenue generated outside France. These controls are included because voluntary disclosure and

sustainability-reporting research links disclosure to firm visibility, resource availability, financial constraints, operating complexity, and stakeholder exposure (Brammer and Pavelin 2006; Michelon and Parbonetti 2012; Roberts 1992).

Industry fixed effects control for sectoral differences in digital exposure, stakeholder scrutiny, and disclosure norms, while year fixed effects capture common changes during the pre-CSRD and pre-AI Act observation period (European Commission 2024; European Commission 2025). The analysis also includes a Vivendi-UMG spin-off dummy (UMG) to account for the exceptional profitability effect associated with Vivendi's non-recurring capital gain from the Universal Music Group spin-off. UMG equals 1 for Vivendi in 2021 and 0 otherwise.

3.5 Model specification and estimation strategy

To examine whether corporate governance mechanisms are associated with the composition of CDR disclosure, the empirical analysis estimates the following general specification:

$$Y_{it} = \alpha_0 + \beta_1 \text{BSIZE}_{it} + \beta_2 \text{BI}_{it} + \beta_3 \text{CEO_D}_{it} + \beta_4 \text{BDE}_{it} + \beta_5 \text{ACI}_{it} +$$

$$\beta_6 \text{DDC}_{it} + \gamma \text{Controls}_{it} + \lambda_j + \tau_t + \varepsilon_{it}$$

where Y_{it} is alternately defined as ROUTINE_CDR, SENSITIVE_CDR, and DRG for firm i in year t. The ROUTINE_CDR and SENSITIVE_CDR models decompose the two components of the Digital Reputation Gap and assess whether governance mechanisms are associated differently with routinized and accountability-sensitive disclosure. The DRG model represents the main test of H2a-H2f because it examines whether governance mechanisms are associated with a narrower imbalance between the two disclosure categories. Aggregate CDR disclosure is not modeled separately because it may conceal the very asymmetry that the Digital Reputation Gap is designed to capture. The control vector includes ROA, SIZE, AGE, LEV, INTL, and UMG. Industry fixed effects (λ_j) control for sectoral differences in digital exposure, stakeholder scrutiny, and disclosure

norms, while year fixed effects (τ_t) capture common temporal changes during the pre-CSRD and pre-AI Act observation period (European Commission 2024; European Commission 2025).

Before estimating the regression models, several preliminary diagnostics were conducted. Because H1 concerns whether routinized disclosure systematically exceeds accountability-sensitive disclosure, a one-sample t-test is used to examine whether the mean DRG is significantly greater than zero. Pearson correlations and variance inflation factors indicate no severe multicollinearity among the explanatory variables. Excluding the UMG adjustment dummy, the highest pairwise correlation is 0.541 between board independence and audit committee independence; including UMG, the highest pairwise correlation is 0.647 between ROA and UMG, which is expected given the non-recurring profitability effect captured by the dummy. The maximum VIF is 2.376 and the mean VIF is 1.473, both below conventional thresholds for problematic multicollinearity (Hair et al. 2019).

The baseline models are estimated using pooled OLS with industry and year fixed effects. This specification is appropriate for the study's objective because the dataset is a short balanced panel of 74 firms observed over three years, and the analysis focuses on cross-sectional differences in disclosure composition rather than causal within-firm changes. Several governance characteristics, including board structure, board digital expertise, audit committee independence, and dedicated digital committee presence, exhibit limited within-firm variation during the observation window. Industry fixed effects control for sectoral differences in digital exposure, stakeholder scrutiny, and disclosure norms, while year fixed effects capture common temporal changes during the pre-CSRD and pre-AI Act period. Firm-clustered robust standard errors are used to account for possible heteroskedasticity and within-firm error dependence, consistent with recommended practice for corporate-governance panel data (Petersen 2009; Wooldridge 2010). Because panel diagnostics

indicate that the repeated firm-year structure is relevant, the robustness analyses also report random-effects and firm fixed-effects specifications to assess whether the findings are sensitive to alternative treatments of unobserved firm heterogeneity.

Panel diagnostics nevertheless confirm the relevance of the repeated firm-year structure. The Breusch-Pagan Lagrange Multiplier test rejects the pooled specification in favor of a panel structure (chi-square(1) = 26.602, $p < .001$). The Hausman test does not reject the consistency of the random-effects estimator (chi-square(12) = 14.346, $p = .279$). The Breusch-Pagan/Cook-Weisberg test does not reject homoskedasticity in the pooled DRG model (chi-square(1) = 0.427, $p = .513$), and the Wooldridge test does not indicate first-order serial correlation ($F(1, 73) = 1.034$, $p = .313$). The results are therefore interpreted as conditional associations rather than causal estimates.

Additional dataset verification checks, the Pearson correlation matrix, and multicollinearity diagnostics are reported in Online Resource 3.

4. Results

4.1 Descriptive statistics

Table 3 reports descriptive statistics for the CDR disclosure measures, governance variables, and controls. The mean value of ROUTINE_CDR is 0.479, compared with 0.276 for SENSITIVE_CDR. The average DRG is therefore positive, with a mean of 0.203 and a standard deviation of 0.127. Although DRG ranges from -0.125 to 0.509, indicating some variation across firm-year observations, the overall pattern suggests substantially higher disclosure on routinized than accountability-sensitive dimensions.

[Table 3 about here]

At the dimension level, digital governance and transparency has the highest mean score, followed by digital inclusion, data privacy and security, and digital environmental impact. Digital ethics has the lowest mean score, at 0.126. This pattern is consistent with the expectation that firms disclose more extensively on comparatively routinized CDR domains than on more accountability-sensitive issues.

H1 predicts that routinized CDR disclosure exceeds accountability-sensitive CDR disclosure. A one-sample t-test confirms that the mean DRG is significantly greater than zero ($t(221) = 23.849$, $p < .001$), and DRG is positive in 94.1% of firm-year observations. H1 is therefore supported.

Table 4 reports yearly means for the CDR dimensions and DRG. Both ROUTINE_CDR and SENSITIVE_CDR increase between 2021 and 2023, but the gap remains positive and relatively stable, moving from 0.197 in 2021 to 0.207 in 2023. This suggests that the expansion of CDR disclosure over time does not eliminate the imbalance between routinized and accountability-sensitive dimensions.

[Table 4 about here]

4.2 Main regression results

Table 5 reports the pooled OLS results with industry fixed effects, year fixed effects, and firm-clustered robust standard errors. Models 1 and 2 estimate the governance associations with the two components of the Digital Reputation Gap, namely ROUTINE_CDR and SENSITIVE_CDR. Model 3 uses DRG as the dependent variable and provides the main test of H2a-H2f.

The component models show that board size, board digital expertise, and dedicated digital committee presence are positively and significantly associated with both ROUTINE_CDR and SENSITIVE_CDR. These results suggest that larger boards, digitally knowledgeable boards, and formal digital oversight structures are associated with broader CDR disclosure across both

routinized and accountability-sensitive domains. The coefficients for dedicated digital committee presence are positive in both component models, with a slightly larger coefficient for SENSITIVE_CDR, indicating that digital committees are associated not only with formal governance-oriented disclosure but also with more accountability-sensitive CDR disclosure.

Model 3 shows a different pattern. None of the governance variables is significantly associated with DRG. Board size, board independence, CEO duality, and board digital expertise have positive but statistically insignificant coefficients, while audit committee independence and dedicated digital committee presence have negative but statistically insignificant coefficients. Thus, the main gap model does not support H2a-H2f.

The results therefore indicate that governance mechanisms are associated with greater disclosure on both components of CDR, but not with a statistically significant reduction in the imbalance between them. Governance appears to expand the visibility of digital responsibility disclosure rather than decisively rebalancing disclosure toward accountability-sensitive dimensions. This finding is important because it shows that broader CDR disclosure does not necessarily imply a narrower Digital Reputation Gap.

[Table 5 about here]

4.3 Robustness and sensitivity analyses

Table 6 reports additional analyses for the main DRG model. Four specifications are used to assess the sensitivity of the results. First, the model is re-estimated using the item-weighted alternative Digital Reputation Gap, in which routinized disclosure is calculated across the 24 routinized items and accountability-sensitive disclosure across the 23 accountability-sensitive items. Second, a random-effects specification is estimated to account for unobserved firm-level heterogeneity while retaining cross-sectional variation. Third, a firm fixed-effects model with year fixed effects is used

to examine whether within-firm changes in governance characteristics are associated with changes in DRG. Fourth, the analysis is repeated after excluding 2021 to assess whether the results are driven by the first year of the observation period.

The robustness results are broadly consistent with the main findings. Across the alternative DRG, random-effects, and post-2021 specifications, none of the governance variables is significantly associated with the Digital Reputation Gap. In the firm fixed-effects model, CEO_D is negative and statistically significant, but this result is not replicated in the other specifications. It should therefore be interpreted cautiously as a specification-specific finding rather than robust evidence against H2d.

Overall, the robustness analyses reinforce the main conclusion that the governance mechanisms examined in this study do not consistently reduce the Digital Reputation Gap. The evidence suggests that board structure, digital expertise, and dedicated digital oversight are more clearly associated with broader CDR disclosure than with a systematic rebalancing of disclosure toward accountability-sensitive dimensions.

[Table 6 about here]

5. Discussion

This study develops and tests the concept of the Digital Reputation Gap as a measure of selective CDR disclosure. The findings provide a nuanced view of digital responsibility reporting as reputational communication. First, the descriptive evidence supports H1: firms disclose significantly more on routinized than accountability-sensitive CDR dimensions. Second, the regression results show that board size, board digital expertise, and dedicated digital committee presence are positively associated with both routinized and accountability-sensitive disclosure. Third, none of the governance mechanisms significantly reduces the Digital Reputation Gap in the

main model. These results indicate that governance mechanisms may expand the visibility of CDR disclosure without necessarily rebalancing its internal composition.

The support for H1 is theoretically important because it confirms that CDR disclosure is not evenly distributed across its constituent dimensions. Firms disclose more extensively on data privacy and security, digital inclusion, and digital governance than on digital ethics, digital environmental impact, and responsible innovation. This pattern is consistent with disclosure-index research showing that disclosure categories differ in specificity, verifiability, and accountability content, and that aggregate disclosure scores may conceal important compositional differences (Beattie et al. 2004; Clarkson et al. 2008; Michelon et al. 2015). It is also consistent with CDR research emphasizing that digital responsibility is multidimensional and extends beyond privacy and cybersecurity to include ethics, AI accountability, inclusion, sustainability, governance transparency, and responsible innovation (Lobschat et al. 2021; Herden et al. 2021; Mihale-Wilson et al. 2022; van der Merwe and Al Achkar 2022; Carl and Hinz 2024).

The observed gap suggests that firms are more comfortable disclosing digital responsibility through routinized reporting forms such as policies, risk frameworks, oversight structures, accessibility initiatives, and compliance statements. Cybersecurity and data protection, for example, have become increasingly institutionalized as board-level risk and governance issues, making them more readily reportable through established corporate-governance language (Turel and Bart 2014; Higgs et al. 2016; Hartmann and Carmenate 2021). By contrast, accountability-sensitive dimensions require firms to address less standardized and more accountability-demanding issues, including algorithmic fairness, explainability, surveillance boundaries, digital environmental burden, automation consequences, and responsible commercialization. These issues are more likely to expose unresolved ethical, environmental, and socio-technical tensions,

as emphasized in algorithmic accountability, responsible AI, and responsible innovation research (Mittelstadt et al. 2016; Wachter et al. 2017; Martin 2019; Selbst et al. 2019; Raji et al. 2020; Stilgoe et al. 2013). The Digital Reputation Gap therefore captures a meaningful asymmetry in responsible digital identity construction: firms make digital responsibility visible, but this visibility remains tilted toward comparatively more reportable and reputationally comfortable domains.

The component models add an important layer to this interpretation. Board size, board digital expertise, and dedicated digital committee presence are positively associated with both ROUTINE_CDR and SENSITIVE_CDR. This indicates that governance capacity, technological knowledge, and formal digital oversight are not irrelevant to CDR disclosure. Larger boards may provide broader advisory resources and stakeholder sensitivity; digitally knowledgeable boards may be better able to understand complex technology-related risks; and digital committees may institutionalize board attention to digital transformation, cybersecurity, data governance, AI, and innovation. These results are consistent with agency theory, which views boards as monitoring mechanisms capable of constraining managerial discretion, and with resource-dependence theory, which emphasizes the knowledge, legitimacy, and advisory resources directors provide (Jensen and Meckling 1976; Fama and Jensen 1983; Pfeffer and Salancik 1978; Hillman and Dalziel 2003). They are also consistent with board-reputation research showing that board resources and expertise can shape stakeholder perceptions of corporate credibility (García-Meca and Palacio 2018).

However, the main DRG model shows that these governance mechanisms do not significantly reduce disclosure imbalance. This result qualifies the governance-credibility argument. Governance structures may help firms disclose more, including on accountability-sensitive CDR themes, but they do not necessarily change the relative distribution of disclosure between routinized and accountability-sensitive domains. In practical terms, governance appears to move

the disclosure frontier outward rather than decisively redirecting disclosure toward the most accountability-demanding dimensions. This distinction matters because total disclosure expansion can coexist with persistent selectivity. A firm may become more communicative about digital responsibility while still maintaining a reputational pattern in which more routinized themes remain more visible than accountability-sensitive ones.

The non-significant findings for H2a-H2f should therefore not be interpreted simply as evidence that governance is unimportant. Rather, they suggest that existing governance mechanisms may be insufficiently connected to disclosure balance in an emerging and weakly standardized reporting domain. Digital expertise and digital committees may increase awareness, oversight, and reportability, but the translation of such governance capacity into balanced disclosure may require stronger metrics, clearer reporting standards, assurance processes, stakeholder pressure, and more explicit board accountability for digital ethics, digital environmental impact, and responsible innovation. This interpretation is consistent with Napoli's (2023) evidence that the responsibility implications of digital technologies depend on governance conditions, particularly board independence, rather than on technology use alone. It is also consistent with prior disclosure research showing that corporate reporting may expand symbolically or selectively when disclosure remains discretionary, strategically costly, or weakly standardized (Gray et al. 1995; Merkl-Davies and Brennan 2007; Cho et al. 2015; Marquis et al. 2016).

The findings also contribute to corporate reputation theory. If reputation is shaped by stakeholder interpretation of corporate signals, then CDR disclosure is not merely a technical reporting exercise; it is a mechanism through which firms construct responsible digital identity (Fombrun and Shanley 1990; Fombrun 1996; Barnett et al. 2006; Walker 2010; van Riel and Fombrun 2007). The evidence shows that this identity construction is selective. Firms communicate responsibility

most extensively in domains that can be framed through security, inclusion, governance, and control, while providing less disclosure on domains that expose moral, environmental, and socio-technical tensions. This selective pattern may generate reputational benefits by making digital responsibility visible, but it may also create credibility risks if stakeholders perceive that firms emphasize comfortable themes while under-disclosing issues that more directly test accountability. This interpretation aligns with CSR communication research showing that responsibility communication can strengthen reputation when perceived as credible, but can also generate skepticism when it appears promotional, selective, or disconnected from substantive practice (Morsing and Schultz 2006; Du et al. 2010; Coombs and Holladay 2012; Ajayi and Mmutle 2021; Sandberg 2012).

The study also refines the corporate governance and disclosure literature. Much prior work examines whether governance mechanisms increase disclosure volume or disclosure quality (Michelon and Parbonetti 2012; Allegrini and Greco 2013; Jizi et al. 2014; Appuhami and Tashakor 2017). The present findings suggest that, in complex digital domains, the relevant question is not only whether governance increases disclosure, but whether it rebalances disclosure toward more accountability-sensitive issues. The distinction between disclosure breadth and disclosure balance is therefore central. Board mechanisms that are positively associated with both routinized and accountability-sensitive disclosure may still leave the Digital Reputation Gap unchanged if they increase both components in parallel. This helps explain why governance variables can appear beneficial in component models while remaining insignificant in the gap model.

Finally, the robustness analyses reinforce the caution required in interpreting governance effects. The alternative item-weighted DRG, random-effects estimation, firm fixed effects, and exclusion

of 2021 broadly confirm that the Digital Reputation Gap is not consistently reduced by the governance mechanisms examined. The isolated negative coefficient for CEO duality in the firm fixed-effects model is not replicated across other specifications and should therefore be treated as specification-specific rather than conclusive evidence. Overall, the results support the view that current governance mechanisms expand CDR disclosure more clearly than they correct its selective composition.

6. Conclusion

This study introduced the Digital Reputation Gap as a disclosure-balance construct that captures whether firms communicate CDR symmetrically across routinized and accountability-sensitive dimensions. The central argument is that CDR disclosure is not only a matter of aggregate reporting volume, but also of internal composition. Firms may construct a responsible digital identity by disclosing extensively on data privacy, cybersecurity, digital inclusion, and digital governance while providing less disclosure on more accountability-demanding issues such as digital ethics, digital environmental impact, and responsible innovation.

Using a balanced panel of 74 French listed firms over 2021-2023, the study finds strong evidence of a positive Digital Reputation Gap. Routinized CDR disclosure significantly exceeds accountability-sensitive disclosure, supporting the view that digital responsibility reporting is systematically tilted toward more routinized and reputationally comfortable themes. This finding contributes to the corporate reputation literature by showing that responsible digital identity can be selectively constructed through disclosure composition, not merely through disclosure presence or volume.

The governance results provide a more nuanced conclusion. Board size, board digital expertise, and dedicated digital committee presence are positively associated with both routinized and

accountability-sensitive disclosure, indicating that governance capacity and digital oversight are related to broader CDR visibility. However, these mechanisms do not significantly reduce the Digital Reputation Gap in the main model. The evidence therefore suggests that governance structures may expand CDR disclosure without necessarily rebalancing it toward more accountability-sensitive dimensions.

The study's broader implication is that digital governance credibility should not be assessed only by the existence of board structures, digital expertise, or higher disclosure volume. A credible responsible digital identity requires balanced disclosure across the full range of digital responsibility issues. For scholars, this highlights the importance of examining disclosure composition rather than relying solely on aggregate indices. For boards, regulators, investors, and stakeholders, it suggests that the key question is not only whether firms disclose CDR information, but whether they disclose the issues that most directly test digital accountability.

7. Theoretical Contributions

The first contribution is to corporate reputation theory. The study extends reputation research into the digital responsibility domain by showing that firms construct responsible digital identity through disclosure. Reputation is not only a function of what firms do or how visible they are; it is also shaped by how firms narrate responsibility in emerging domains where stakeholders face informational opacity. The Digital Reputation Gap helps theorize how such narration can become selective.

The second contribution is to CDR scholarship. Existing CDR research has clarified the multidimensional nature of digital responsibility, but empirical disclosure studies often focus on aggregate disclosure volume. This paper introduces a compositional disclosure measure that

distinguishes routinized from accountability-sensitive dimensions. This distinction shows that CDR disclosure can expand while remaining imbalanced.

The third contribution is to corporate governance and disclosure research. The study demonstrates that governance mechanisms associated with higher disclosure breadth are not necessarily associated with lower selective disclosure. This finding refines the assumption that stronger governance automatically improves disclosure credibility. In emerging and technically complex domains such as CDR, governance credibility depends not only on structures and expertise but also on whether those mechanisms push disclosure toward accountability-sensitive issues.

8. Practical, Managerial, and Policy Implications

For boards of directors, the findings imply that digital responsibility should be treated as a reputational governance issue rather than only a technology or compliance matter. Boards should ask not only whether the firm reports on cybersecurity, privacy, and digital governance, but whether it also reports on algorithmic fairness, human oversight, digital environmental impacts, responsible deployment, and remediation of digital harms.

For corporate communication and sustainability teams, the results caution against constructing digital responsibility narratives that are broad but unbalanced. A credible responsible digital identity requires disclosure across the full digital responsibility spectrum. Communication that overemphasizes routinized themes may produce short-term reputational benefits but can create credibility risks if stakeholders later perceive that accountability-sensitive digital issues were avoided.

For regulators, investors, and standard setters, the study suggests that disclosure assessment should move beyond the volume of CDR information. Evaluation frameworks should consider the balance between routinized and accountability-sensitive dimensions, because high aggregate disclosure

may coexist with selective opacity. This is especially relevant as European reporting and AI governance regimes mature.

9. Limitations and Future Research

The study has limitations that open avenues for further research. First, the sample is restricted to French listed firms over 2021-2023. The setting is theoretically relevant, but the findings may not generalize to other jurisdictions, private firms, or post-CSRD reporting periods. Future research could compare countries with different governance systems, digital regulation, and disclosure cultures.

Second, the study uses binary content analysis. This approach improves comparability and reduces coder discretion, but it captures disclosure breadth rather than disclosure quality, credibility, tone, or assurance. Future research could combine binary scoring with textual analysis, narrative quality assessment, or external validation of digital responsibility practices.

Third, the research design is associational. Firm-clustered standard errors, fixed effects, and robustness tests strengthen inference, but they do not eliminate endogeneity concerns. Future work could exploit regulatory shocks, board appointments, committee creation events, or longitudinal post-CSRD data to examine causal mechanisms more directly.

Fourth, DRG is an internally constructed disclosure-balance measure. Future research could examine whether the gap predicts external reputation outcomes, media sentiment, investor reactions, ESG ratings, stakeholder trust, or controversy risk. Such work would help establish whether selective CDR disclosure has measurable reputational consequences.

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