

Economic Policy Uncertainty and Stakeholder Attention in CSR Disclosure

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Abstract

We examine how corporate social responsibility (CSR) disclosure changes under economic policy uncertainty (EPU). We study this question using U.S. public firms from 2013 to 2023 and combine disclosure-transparency measures with FinBERT-based analysis of corporate responsibility reports and employee reviews from Glassdoor. Three findings emerge. First, firms increase CSR disclosure transparency when policy uncertainty rises, and CSR reports contain more language linking uncertainty to economic or policy conditions. Second, firms reallocate attention within CSR reports toward employee-related topics, with offsetting declines in climate and social topics. This reallocation is stronger among employee-intensive firms, is not accompanied by a systematic change in tone, and remains after accounting for secular reporting trends and the COVID-19 period. Third, employee-related CSR disclosure is associated with more favorable subsequent employee perceptions when policy uncertainty is high, with results robust to state-level EPU, year fixed effects, two-way clustering, and controls for contemporaneous CSR activity. Our evidence suggests that CSR disclosure under policy uncertainty changes not only in extent, but also in within-report stakeholder attention and the stakeholder-side relevance of employee-related content.

Keywords: Economic Policy Uncertainty, Corporate Social Responsibility, Stakeholder Attention, Textual Analysis, Glassdoor Reviews

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1. Introduction

Corporate social responsibility (CSR) reports are a form of voluntary nonfinancial disclosure through which firms communicate environmental, social, and governance priorities to stakeholders. Although prior research has examined why firms disclose CSR information and how much they disclose, less is known about how firms allocate attention across stakeholder topics within CSR reports when the external environment changes. We study this question in the setting of economic policy uncertainty (EPU), which makes firms’ operating and policy environments harder to predict and affects a wide range of corporate decisions (Gulen and Ion, 2016; Jens, 2017; Bonaime et al., 2018; Bhattacharya et al., 2017; Nagar et al., 2019). How uncertainty relates to CSR remains less settled. Some evidence suggests that firms retrench under uncertainty, while other evidence suggests that they expand CSR to preserve stakeholder trust and reputation (Godfrey et al., 2009; Lins et al., 2017; Peng et al., 2023). This debate, however, has been conducted largely at the aggregate level, through CSR performance, ratings, or overall disclosure. We instead ask whether policy uncertainty changes the allocation of stakeholder attention within CSR reports, and whether employee-related disclosure is associated with subsequent employee perceptions.

CSR reports are produced under limited managerial attention, and firms cannot foreground every stakeholder relationship equally in a single report (Ocasio, 1997). The resulting balance across stakeholder topics is therefore a disclosure characteristic distinct from overall volume. Prior research has largely characterized CSR reports as a whole rather than examining how attention is allocated within them. Consistent with this distinction, Tsang et al. (2023) argue that stakeholder-specific disclosure measures can reveal relationships obscured by aggregate measures. We therefore measure the allocation of attention within CSR reports, focusing on employee-related content.

Employees are a natural focus for this question. Because firms cannot fully secure human capital through formal contracts (Zingales, 2000), the employment relationship rests partly on implicit commitments and trust (Baker et al., 2002). Policy uncertainty makes the firm’s future priorities and labor demand harder to predict, heightening employees’ concerns about job security and internal opportunities. We therefore expect firms to allocate more CSR-report attention to employee-related topics as policy uncertainty rises.

Signaling theory suggests why this reallocation may relate to employee perceptions. Em-

employees cannot directly observe how much attention managers devote to the workforce or where they rank in the firm’s priorities. Firms may therefore have incentives to use employee-related disclosure to make workforce priorities and other hard-to-observe attributes more visible (Spence, 1973; Su et al., 2016; Greening and Turban, 2000). Because EPU makes firms’ workforce priorities harder to assess, employee-related disclosure may be more informative when uncertainty is high. We therefore expect employee-related disclosure to be more strongly associated with employee perceptions when uncertainty is high than when it is low. Such an association, however, does not require that employees read CSR reports directly, as corporate disclosure can reach broader audiences through media and other intermediaries (Bushee et al., 2010).

We examine our research questions using a panel of U.S. public firms from 2013 to 2023. Our primary measure of policy uncertainty is the news-based EPU index of Baker et al. (2016), aggregated over each firm’s fiscal year. To measure disclosure, we combine disclosure-transparency scores from ASSET4 and Bloomberg with report-level text from ResponsibilityReports.com. The textual analysis applies FinBERT to validated CSR reports and classifies report content into stakeholder-related topics, which lets us measure the share of each report devoted to employee-related issues. We match the reports to Glassdoor reviews (Green et al., 2019) and construct one-year-ahead changes in employees’ assessments of workplace conditions, including overall ratings, recommendations, and business outlook.

Our analysis follows a determinant-characteristic-consequence structure. First, we find that CSR disclosure transparency generally increases with policy uncertainty. CSR reports also contain more uncertainty-related language when policy uncertainty rises, linking the disclosure response to the policy-uncertainty environment. Second, and central to the paper, firms reallocate attention within reports. A one-standard-deviation increase in lagged EPU is associated with a 1.33-percentage-point increase in employee-related content, approximately five percent of its mean, accompanied by lower climate- and social-related content shares. The cross-sectional analyses reveal that this reallocation is stronger among firms with higher employee intensity, consistent with the employee-related interpretation. Third, employee-related disclosure is associated with more favorable subsequent Glassdoor perceptions when policy uncertainty is high, but has little association with employee perceptions on average.

We conduct complementary analyses at each stage of this framework. For the determinant

analyses, we use gubernatorial elections in firms’ headquarters states as a localized source of political uncertainty (Peng et al., 2023). The disclosure-transparency and uncertainty-related language results remain qualitatively similar under this alternative measure. For the disclosure-characteristic analysis, we examine whether the increase in employee-related content reflects a general change in reporting style or broader temporal developments. The result is not accompanied by a change in reporting tone and remains after controlling for a linear reporting trend, excluding the COVID-19 fiscal years, and omitting each fiscal year in turn. For the stakeholder-consequence analysis, the Glassdoor result is also robust to state-level EPU, year fixed effects, two-way clustering, and controls for contemporaneous CSR activity. These analyses do not establish causality, but they reduce the concern that the findings are driven by several alternative explanations.

This study makes two main contributions. First, we extend research on the determinants and stakeholder consequences of CSR disclosure. We show that EPU is associated not only with the overall extent of CSR disclosure but also with its internal composition, shifting the relative emphasis of report content toward employee-related topics, and more strongly so among employee-intensive firms. On the consequence side, employee-related report emphasis is associated with more favorable subsequent employee perceptions when uncertainty is high and bears little relation to them on average. Together, these findings connect an external determinant of CSR disclosure to its within-report composition and to a subsequent outcome for the stakeholder receiving greater emphasis, a sequence that prior work has examined only in parts.

Second, we contribute to the measurement of CSR disclosure by moving beyond overall disclosure extent to examine within-report composition. Prior research has progressed from indicators of whether firms disclose to measures of disclosure type and quantity, and studies distinguishing environmental from social disclosure show that disaggregating report content can reveal relationships obscured by aggregate measures (Qiu et al., 2016; Tsang et al., 2023). We extend this progression by constructing token-weighted topic shares from firm-generated CSR reports, allowing us to observe how a single report distributes attention across various stakeholder topics. These measures are distinct from both overall disclosure volume and third-party ESG assessments because they capture the relative emphasis embedded in the firm’s own communication. As a result, they can identify compositional shifts even when the

overall extent of disclosure changes little. More broadly, this approach provides a granular way to examine how firms adjust the emphasis placed on different CSR topics as external conditions change.

The remainder of this paper is organized as follows. Section 2 reviews the related literature and develops our main hypotheses. Section 3 describes the data and variable constructions. Section 4 presents the core empirical results, and Section 5 concludes the paper.

2. Background and Hypothesis Development

2.1. Literature review

2.1.1. CSR disclosure and within-report attention

Corporate social responsibility reports are a form of voluntary disclosure through which firms communicate their environmental, social, and governance priorities to a broad set of stakeholders. Unlike financial statements, these reports are largely discretionary in content and structure, so managers decide not only whether to disclose but also how to distribute limited report space across competing stakeholder topics. The decision to report is itself a discretionary supply-side choice that varies with firm-specific cost-benefit considerations (Chi et al., 2020). A large literature examines the determinants and consequences of this disclosure, including why firms report, how much they report, and how reporting relates to firm outcomes (Tsang et al., 2023). Much of this work characterizes disclosure at the level of the report as a whole, through its existence, length, tone, readability, or overall transparency. The allocation of attention across topics within a report has received comparatively less study.

However, CSR reports are produced under finite managerial attention. Firms cannot foreground every stakeholder relationship with equal weight in a single report, so what managers choose to emphasize reflects where attention is directed (Ocasio, 1997). In this attention-based view, attention is a scarce organizational resource, and its allocation is not incidental but reveals which considerations a firm treats as most pressing at a given moment. What a firm chooses to foreground, and what it leaves in the background, therefore carries information about its priorities. This logic has been applied to the social domain, where the allocation of managerial attention shapes the balance of firms’ socially responsible and

irresponsible activities (Fu et al., 2020), and to CSR disclosure specifically, where policy uncertainty has been shown to draw managerial attention away from substantive CSR reporting (Xue et al., 2024). Applied to the composition of a report, this implies that what a firm emphasizes across stakeholder domains is informative in a way that its overall volume is not. Two firms disclosing the same total amount, or a firm whose reporting volume is stable over time may still weight different stakeholder concerns quite differently, and that difference reflects a choice about where limited attention is placed. The share of a report devoted to a stakeholder domain is therefore a disclosure characteristic in its own right, distinct from how much a firm discloses.

A growing body of work suggests that the consequences of CSR disclosure can differ across stakeholder-relevant issues rather than depending only on the existence or amount of disclosure. Khan et al. (2016) show that firms with strong performance on sustainability issues material to their industry outperform those with weak performance on those issues, while performance on immaterial issues does not predict outperformance, indicating that which stakeholder issues a firm addresses carries economic weight. Wang et al. (2024) further show that the public disclosure of consumer complaints is associated with subsequent CSR responses by the firms involved and by nearby peers, consistent with disclosure having effects on particular external parties rather than only on a diffuse public. There is also qualitative evidence that firms distinguish among constituencies in how they describe and justify CSR. In interview-based evidence from UK accountancy firms, Duff (2017) finds that firms discuss CSR in relation to distinct groups, including clients, potential recruits, and internal staff and partners. Although this evidence comes from a specific industry setting, it is consistent with the view that firms do not necessarily treat CSR as directed toward a single undifferentiated stakeholder group.

What this literature leaves open is whether such differentiation is visible in how attention is allocated across stakeholders within the report itself. The studies above consider disclosure aimed at a single external audience or describe audience differentiation in firms' broader CSR practices rather than in the composition of the report. Qiu et al. (2016) move closer to a within-report view by distinguishing environmental from social disclosure and showing that the two relate differently to firm value, which indicates that disaggregating report content can be informative. Their analysis compares broad categories across firms, and less is known

about how a single firm shifts attention among stakeholders as its circumstances change. How firms allocate attention across stakeholder domains within a report, and toward employees in particular, therefore remains largely unexplored, even though this within-report margin is the one an attention-based view suggests should be most informative. We take up this question by examining how firms reallocate attention across stakeholder domains when their external environment changes.

2.1.2. Economic policy uncertainty and CSR disclosure

Economic policy uncertainty affects a wide range of corporate decisions by making future regulation, taxation, government spending, and aggregate demand harder to predict. Prior work documents effects of policy uncertainty on investment (Gulen and Ion, 2016; Jens, 2017), financing (Duong et al., 2020), acquisitions (Bonaime et al., 2018), innovation (Bhattacharya et al., 2017), and disclosure (Nagar et al., 2019). A common theme is that uncertainty raises the value of waiting and heightens the information problems that firms face with their investors and other stakeholders.

The evidence on how policy uncertainty relates to CSR is mixed. One view draws on real-options logic. Because uncertainty increases the value of deferring commitments with long-horizon payoffs, firms may reduce CSR when policy uncertainty rises (Bernanke, 1983; Gulen and Ion, 2016), and several studies report a negative relation between uncertainty and CSR engagement (Jia and Li, 2020; Niu and Zhou, 2023). A competing view emphasizes the insurance-like properties of CSR. Firms may strengthen CSR under uncertainty to build stakeholder trust, preserve reputation, and hedge policy risk (Godfrey et al., 2009; Lins et al., 2017; Albuquerque et al., 2020), and other studies report a positive relation (Chatjuthamard et al., 2021; Yuan et al., 2022; Peng et al., 2023). Related evidence on firm-level political exposure is similarly unsettled (Hasan and Jiang, 2023). This lack of consensus indicates that the relation between uncertainty and CSR is not resolved at the level of aggregate engagement.

Two features of this literature motivate our approach. First, most EPU-CSR studies measure CSR through performance ratings, engagement scores, or overall disclosure levels. These measures summarize how much a firm does or discloses, but they are not designed to reveal how a firm distributes attention across stakeholders. Ratings also diverge substan-

tially across providers, which complicates inference about firms’ own choices (Berg et al., 2022; Christensen et al., 2022). Second, the studies that examine disclosure directly focus on aggregate properties of the report. Consistent with the attention-draining effect of uncertainty noted earlier, Xue et al. (2024) show that Chinese firms issue CSR reports more similar to their own past reports when policy uncertainty rises, which they interpret as symbolic reporting. This evidence characterizes the report as a whole and over time. It leaves open how attention is allocated across stakeholder domains within a report when uncertainty rises. A firm whose reporting volume is stable over time may still weight different stakeholder concerns quite differently across time, and that difference reflects a choice about where limited attention is placed. We examine this within-report margin, which aggregate and year-over-year measures cannot observe.

2.1.3. Employee-related disclosure and stakeholder-side implications

Employees are a relevant stakeholder group whose relationship with the firm is directly exposed to policy uncertainty. Uncertainty about investment, hiring, and restructuring bears on employees’ expectations regarding job security, internal opportunity, and the firm’s future priorities (Bloom, 2009; Nguyen and Sila, 2025). Human capital also differs from physical capital in ways that make this relationship difficult to govern through formal contracts. Firms do not fully own human capital (Zingales, 2000), so employment relationships depend partly on implicit commitments and trust. These features make employees a theoretically relevant audience for firm communication precisely when the operating environment becomes harder to interpret.

Prior work treats employee-related CSR primarily as a matter of programs, policies, and expenditures. Flammer and Luo (2017) show that costly CSR activity can serve a workforce-related function when formal contracts are incomplete, supporting the employment relationship where formal arrangements leave gaps. Evidence at the dimension level supports the salience of employees within CSR, as Hasan and Jiang (2023) find that employee relations is among the CSR dimensions responsive to firms’ political environment. This work establishes employees as an economically meaningful CSR audience, but it examines costly activity rather than disclosure. Programs and expenditures are slow to adjust, whereas the attention a firm devotes to employees in its reporting can shift more readily as conditions

change. How firms allocate this employee-related disclosure attention, and whether it carries consequences for employees, remains largely unexplored. Tsang et al. (2023) note that the effect of CSR disclosure characteristics on outcomes for third parties such as employees has not yet been established, and call for research on this question.

Whether employee-related disclosure attention relates to employee outcomes depends on whether it conveys information employees value, and signaling theory speaks to this directly. Employees cannot readily observe how much attention managers devote to the workforce or where they rank in the firm’s priorities, and this information is hardest to read when policy uncertainty clouds the firm’s future (Spence, 1973). Prior work argues that CSR can signal firm attributes that stakeholders would not otherwise observe (Su et al., 2016), including attributes relevant to current and prospective employees (Greening and Turban, 2000). Disclosure that foregrounds employees can therefore signal managerial attention to the workforce, and because a signal is most informative when the underlying information is most hidden, such disclosure should carry more weight for employees when uncertainty is high than on average. Signaling explains why employee-related disclosure could matter to employees, but not how it reaches them, and we interpret this transmission cautiously. CSR reports are externally oriented documents, and we do not observe whether employees read them directly. Our reasoning does not require that they do. Corporate disclosure reaches audiences beyond its immediate readers through the business press and other intermediaries (Bushee et al., 2010), so employee-related content can become known to employees through diffusion as well, and the association we examine does not rest on any single channel of transmission. We therefore treat employee perceptions as an under-examined potential consequence of employee-related disclosure attention, while acknowledging that we observe an association rather than a direct channel from report content to employee readership.

2.2. Hypothesis development

The first implication of our argument concerns the allocation of attention within CSR reports. CSR reports cover multiple stakeholder domains, including environmental issues, community engagement, product responsibility, governance, and employees. Thus, an increase in CSR disclosure does not by itself indicate the stakeholder relation managers seek to address. If CSR disclosure under policy uncertainty serves mainly as a broad reputation

or legitimacy strategy, firms may expand disclosure across CSR topics without a systematic shift toward any particular stakeholder group. If, however, CSR disclosure reflects targeted attention to a specific stakeholder group, the disclosure response should be visible in the composition of CSR reports. The distinction matters because a report can expand or remain stable in aggregate terms while still shifting the internal balance of attention across stakeholders, and aggregate measures of disclosure volume or similarity need not capture a compositional shift.

The relation between economic policy uncertainty and employee-related CSR disclosure is theoretically ambiguous. One view suggests that firms devote less attention to employee-related commitments when policy uncertainty rises. Under traditional agency logic (Holmström, 1979; Holmstrom and Milgrom, 1991), employees benchmark the value of their current job against outside opportunities. When outside options deteriorate during uncertain times, as firms scale back investment (Gulen and Ion, 2016) and hiring (Nguyen and Sila, 2025), employees perceive their current position as relatively more attractive and become less likely to shirk or leave. The firm’s need to emphasize employee-related commitments in its communication weakens accordingly, since less effort is required to retain or motivate a workforce with fewer outside options. This logic points to a negative relationship between employee-related CSR disclosure and policy uncertainty.

An alternative view emphasizes implicit contracting and reciprocity. Employment relationships depend not only on formal incentives but also on informal, self-enforcing understandings between firms and employees, sustained by the expected value of future interactions (Baker et al., 2002). Policy uncertainty weakens this contracting environment by making the firm’s future operating conditions and labor demand harder to predict. Employees face greater ambiguity about job security, internal opportunities, and the firm’s future priorities, and managers in turn have stronger incentives to preserve trust and cooperation within the workforce. Because disclosure is a low-cost and readily adjustable channel, employee-related CSR disclosure offers managers a way to signal continued attention to the workforce and to reinforce these implicit commitments when uncertainty is high. Consistent with gift-exchange and reciprocity models (Akerlof, 1982; Rabin, 1993), visible attention to employee welfare may sustain trust and effort when the firm operates under strain (Hannan, 2005). This logic points to a positive relationship between employee-related CSR disclosure and

policy uncertainty.

These two channels need not carry equal weight when the response is disclosure rather than costly programs. The agency channel operates by reducing the firm’s need to spend resources retaining or motivating employees, and this retrenchment is more likely to affect tangible benefits and programs than the content of CSR reports. Disclosure, by contrast, is inexpensive and adjustable, so managers can shift the emphasis of their communication even when real activities are constrained or slow to move. The implicit-contracting channel gives firms a direct reason to use this flexibility, because visible attention to the workforce is most valuable for preserving trust precisely when the firm’s future priorities are hardest to predict. We therefore expect the implicit-contracting channel to dominate when the response is expressed through disclosure. Accordingly, we predict that firms allocate greater CSR-report attention to employee-related topics as policy uncertainty rises:

H1: Firms allocate greater CSR-report attention to employee-related topics when economic policy uncertainty rises.

Our first hypothesis concerns the direction of firms’ communication. It leaves open what that communication reflects. Employee-related disclosure may capture substantive managerial attention to the workforce, tracking the implicit commitments that bind firms and employees when formal contracts are incomplete. Employment relationships depend partly on employees’ beliefs about the firm’s obligations and intentions (Rousseau, 1995), and employees form perceptions about whether the organization values their contributions (Eisenberger et al., 1986). These perceptions are economically consequential, as employee satisfaction is associated with higher long-run stock returns (Edmans, 2011). If employee-related disclosure reflects substantive attention to the workforce rather than symbolic communication, it should be associated with the workplace conditions employees observe and evaluate, and therefore with improved employee perceptions.

A competing view holds that employee-related disclosure need not reflect substantive commitment. Firms may use CSR communication to manage legitimacy or external impressions without corresponding change (Ashforth and Gibbs, 1990; Marquis et al., 2016). Disclosure under uncertainty may also become less informative, as political uncertainty raises narrative obfuscation (Mekhaimer et al., 2024), or more repetitive, as firms issue CSR reports increasingly similar to their own past disclosures (Xue et al., 2024). Consistent with this

concern, broad CSR commitments do not always translate into stakeholder-protective action during crisis periods (Bae et al., 2021). If employee-related disclosure is largely symbolic, it should bear no systematic relation to subsequent employee perceptions.

These two possibilities are difficult to separate on average, but policy uncertainty sharpens the distinction between them. As uncertainty rises, firms’ investment and hiring decisions bear directly on employees’ expectations about job security, restructuring, and internal opportunity (Bloom, 2009; Gulen and Ion, 2016; Jens, 2017), and employees become more attentive to cues about the firm’s workforce commitments, including the internal priorities reflected in CSR disclosure (Ashford and Cummings, 1983; Ashford, 1986). Employee-related disclosure therefore carries more informational weight when uncertainty is high, because it speaks to a more pressing need and more clearly separates firms that attend to their workforce from those whose reporting is symbolic. When uncertainty is low, the same disclosure carries little such weight and need not relate to employee perceptions. Substantive and symbolic disclosure should thus diverge in their association with subsequent employee perceptions specifically when uncertainty is elevated. Accordingly, we predict:

H2: Under elevated economic policy uncertainty, employee-related CSR disclosure is associated with more favorable subsequent employee perceptions.

3. Data and Sample Construction

3.1. Sample Construction and Timing Alignment

Our analyses combine several data sources. We start constructing our main panel from Compustat North America Fundamentals Annual files merged with equity trading information from CRSP. We retain fiscal years from 2013 to 2023, the window over which our disclosure and employee-perception measures are jointly available. We restrict the sample to ordinary common shares (CRSP *shrcd* of 10 or 11), which excludes American Depositary Receipts, real estate investment trusts, and closed-end funds. We also restrict the sample to firm years with a fiscal-year closing stock price (Compustat, *prcc-f*) higher than \$1 and with positive total assets (Compustat, *at*), sales (Compustat, *sale*), and shareholders’ equity (Compustat, *teq*). These screens aim to remove penny stocks, financially distressed shells, and observations with degenerate fundamentals from the sample.

We construct a Compustat-CRSP firm-year backbone and then merge three data layers: CSR disclosure transparency measures from ASSET4 and Bloomberg, CSR reports for textual analysis, and employee perceptions from Glassdoor reviews. Because CSR reports are not released under a uniform regulatory schedule and report release dates are not consistently available in the archive, we align report content to the fiscal year identified in the report and merge all variables using fiscal-year windows around the Compustat fiscal year-end. Since CSR reports are often made available several months after the release of the annual report (Christensen et al., 2022), we treat the fiscal year window of the CSR report as the control period and the subsequent fiscal year window as the outcome period.¹

The initial Compustat-CRSP panel contains 47,228 firm-year observations from 7,526 unique firms over the 2013-2023 period. Requiring non-missing lagged national EPU and baseline controls leaves 34,330 firm-year observations from 5,519 firms. Within this control-complete panel, the ASSET4 CSR disclosure transparency score is available for 17,010 firm-years from 2,308 firms, and the Bloomberg ESG disclosure score is available for 20,318 firm-years from 2,719 firms. The validated CSR report-text data are available for 6,037 firm-years from 1,288 firms after applying the report validation, 500-token screen, and baseline control requirements. Glassdoor coverage is also substantial before intersecting with CSR report text: after requiring at least five employee reviews in the current fiscal-year window and non-missing baseline controls, the Glassdoor panel contains 11,383 firm-year observations from 1,738 firms, of which 11,363 firm-years have non-missing one-year-ahead overall-rating changes. These coverage statistics indicate that the textual and employee-review analyses are not based on a narrow hand-collected subset, but retain substantial overlap with the public-firm panel after applying the same control-variable screens used in the regressions. Estimation samples are narrower because each empirical test additionally requires the relevant outcome, EPU measure, controls, and fixed-effect structure. For example, the intersection

¹For example, if a firm’s fiscal year ends on December 31, 2015, its FY2015 CSR report is matched with firm-level controls measured using FY2015 accounting data. The national EPU measure corresponds to the trailing twelve-month period ending on December 31, 2015, and the state-level EPU measure is constructed over the same period based on the firm’s headquarters state. Glassdoor outcomes are aggregated from reviews posted during the following fiscal-year window. Because CSR reports summarize firms’ communication priorities during the reporting cycle rather than representing a single discrete event, we interpret the Glassdoor results as evidence on whether employee-related CSR disclosure under uncertainty is associated with subsequent employee perceptions, rather than as event-study evidence of employee reactions to the public report release.

of validated CSR report text and Glassdoor overall-rating outcomes contains 3,630 firm-year observations from 740 firms.

3.2. *Economic Policy Uncertainty*

We use the EPU index developed by Baker et al. (2016) as our primary measure of economic policy uncertainty.² The index reflects the frequency of articles in ten leading U.S. newspapers containing keywords related to economic policy uncertainty, and it is widely used in finance and accounting research to assess the effects of policy uncertainty (e.g., Gulen and Ion (2016); Nagar et al. (2019); Atanassov et al. (2024)). The index is published monthly. Because we study disclosure decisions at an annual frequency, we align the index to each firm’s fiscal year by averaging the monthly values over the twelve months ending on the fiscal-year close and scaling it by 100.

To complement the national index, we use a state-level EPU measure (Baker et al., 2022) aligned to the same trailing twelve-month window and matched to each firm through its headquarters state, scaled by 100. State-level EPU introduces within-year cross-sectional variation that the national index lacks. In specifications that include year fixed effects, this variation allows us to absorb shocks common to all firms in a given year while retaining variation in the local policy uncertainty faced by firms headquartered in different states. We therefore use the state-level measure as a within-year validation test that supplements the national index rather than replaces it.

We also construct gubernatorial-election uncertainty measures based on election cycles in firms’ headquarters states. Gubernatorial elections create localized political uncertainty because they can change state-level policy priorities, regulation, taxation, and public spending. We define an indicator for whether a gubernatorial election occurs in the firm’s headquarters state and fiscal year. These measures provide a complementary source of staggered political uncertainty across states and years.

As noted by Nagar et al. (2019), Baker et al. (2016) find that the EPU index is correlated with general equity market uncertainty and suggest that it be paired with equity-market proxies in a multivariate setting. We therefore include the contemporaneous VIX index

²Data available at <https://www.policyuncertainty.com/>

in all regressions to mitigate this confound. In specifications with year fixed effects, VIX is omitted because common national macroeconomic conditions are absorbed by the year effects.

3.3. *CSR Disclosure Transparency*

Our measure of CSR disclosure transparency follows Fiechter et al. (2022) and captures the transparency of a firm’s CSR reporting rather than its underlying ESG performance. We obtain the component data from Thomson Reuters ASSET4, one of the most widely used CSR databases in academic research (de Villiers et al., 2022). Importantly, we use ASSET4 items that identify firms’ reporting practices, rather than ASSET4 ESG performance ratings. The composite score, *CSR*, is the sum of five indicator variables capturing five important dimensions of CSR reporting: (1) whether the firm issues a stand-alone CSR report (*CSR_Report*), (2) whether the report is global in scope (*CSR_Global*), (3) whether the firm adopts the Global Reporting Initiative principles (*CSR_GRI*), (4) whether it follows the guidelines of the Organization for Economic Co-operation and Development (*CSR_OECD*), and (5) whether the report is verified by independent third-party experts (*CSR_Assurance*). As a result, the CSR score (*CSR*) ranges from 0 to 5, depending on how many of the five criteria are met. For instance, if a firm issues an audited global-level CSR report without following GRI or OECD guidelines, the firm would receive a CSR score of 3.

As an alternative measure of overall reporting transparency, we gather the Bloomberg ESG disclosure score from Bloomberg. The score ranges from 0.1 for firms that disclose a minimum amount of ESG data to 100 for firms that disclose every data point Bloomberg collects (Christensen et al., 2022). Bloomberg compiles this score from various sources of firms’ public disclosure, including sustainability reports, annual filings, proxy statements, corporate governance reports, supplemental releases, and company websites. Unlike the Bloomberg ESG rating, the disclosure score reflects only the extent and transparency of a firm’s disclosures, not its ESG performance, and therefore aligns with the construct we study. Additionally, the Bloomberg ESG disclosure score is tailored to different industry sectors, so firms are evaluated only on data relevant to their industry. Although individual scores for each ESG pillar are available, we use the overall ESG disclosure score as an alternative measure of reporting transparency, similar to prior studies (Baldini et al., 2018; Christensen

et al., 2022).

We focus on disclosure transparency rather than ESG performance because our analysis focuses on what firms disclose about stakeholder priorities rather than on third-party assessments of ESG performance. As developed in Section 2, economic policy uncertainty increases ambiguity about firms’ future commitments to employees, making employee-related CSR disclosure a flexible channel through which managers can emphasize priorities, frame commitments, and maintain stakeholder trust. Unlike CSR activities, which are often costly and slow to adjust, disclosure can respond more immediately to changes in the external environment. A performance-based approach would also rely on ESG ratings, whose divergence across providers we discuss above, which complicates inference about firms’ disclosure choices. CSR disclosure, by contrast, is generated by the firm itself and therefore more directly captures the communicative response central to our argument.

3.4. CSR Reports and Textual Analysis

For a more granular analysis of firm disclosure behavior, we collect CSR reports from ResponsibilityReports.com.³ ResponsibilityReports.com maintains a large online archive of corporate responsibility reports, including sustainability, corporate social responsibility, citizenship, ESG, and environmental reports. The archive provides report-level information by company name, ticker, industry, stock exchange, and reporting year, which allows us to link each report to firm-year observations in our sample. Because our study focuses on U.S. public firms, we retrieve available reports for companies listed on the NYSE, NASDAQ, and AMEX.

A practical concern with any third-party report repository is that an indexed file may be mislabeled or may not correspond to the firm to which it is attributed. We therefore validate each retrieved report against its directory label through textual analysis. For each report, we extract the full text and count case-insensitive whole-word occurrences of the components of the issuing firm’s name. We treat a report as a confirmed match if any name component appears at least three times in the document, a threshold chosen to accommodate firms whose names abbreviate inconsistently across reports while still ruling out documents that

³Website available at <https://www.responsibilityreports.com/>

do not reference the firm at all. Reports that fail this check or that yield no extractable text are excluded from the sample. Because each report is also indexed by the issuing firm’s ticker and fiscal year in the directory, this name check serves as a confirmation layer on top of the directory’s own indexing rather than as the sole means of identification.

We analyze the content of each report using FinBERT, a BERT-based model fine-tuned for financial text. Specifically, we use two pretrained models developed by Huang et al. (2023): FinBERT-ESG for topic classification and FinBERT-tone for sentiment analysis. FinBERT-ESG classifies each passage into one of nine fine-grained topics: *climate change*, *natural capital*, *pollution & waste*, *human capital*, *product liability*, *community relations*, *corporate governance*, *business ethics & values*, and *non-ESG*. To align the model output with our research objective, we aggregate these topics into five broader categories: *climate* (*climate change*, *natural capital*, and *pollution & waste*), *human capital*, *social* (*product liability* and *community relations*), *governance* (*corporate governance* and *business ethics & values*), and *non-ESG*. We classify business ethics and values as governance because the underlying category generally captures firm-level ethical conduct, fiduciary responsibilities, conflicts of interest, political contributions, and related organizational policies, which are conceptually closer to governance than to workforce practices.⁴

We extract raw text from each report using *PyMuPDF* and split it into paragraphs. Each paragraph is tokenized and passed through FinBERT-ESG to obtain a predicted topic, and through FinBERT-tone to classify sentiment, mapped numerically as

$$tone_p = \begin{cases} 1 & \text{if positive} \\ 0 & \text{if neutral} \\ -1 & \text{if negative} \end{cases} \quad (1)$$

We aggregate the paragraph-level output to the firm-year level, weighting each paragraph by its token count, so that each topic measure represents the share of a report’s content devoted to that topic and each tone measure represents the token-weighted average sentiment of the

⁴Untabulated analyses using a broader employee-related category that combines human capital with business ethics and values yield qualitatively similar inferences.

corresponding content. For a topic category k , the firm-year measures are

$$topic_{k,it} = \frac{\sum_{p \in k} n_p}{\sum_p n_p}, \quad tone_{k,it} = \frac{\sum_{p \in k} n_p \cdot tone_p}{\sum_{p \in k} n_p} \quad (2)$$

where n_p is the token count of paragraph p . Each topic share is expressed in percentage points, computed as the token-weighted fraction of report content assigned to that category multiplied by 100. The *people* category and its associated tone are the focal disclosure measures in our analysis, since they capture employee-related CSR content and allow us to examine how firms allocate disclosure attention toward workforce-related topics. We retain only firm-years whose reports contain at least 500 FinBERT tokens in total, which removes scanned or near-empty files that would yield unreliable topic shares.

We also conduct a keyword search across each paragraph using three curated term lists capturing uncertainty, the economy, and policy. For each paragraph we count case-insensitive whole-word occurrences against each list. Our text-based exposure measure, *EPU Tokens*, is the token-weighted share of a firm-year’s report devoted to paragraphs that contain at least one uncertainty term together with at least one economic or policy term, computed as the FinBERT tokens in such paragraphs divided by total report tokens and expressed in percentage points. The complete term lists are reported in Appendix A2.

3.5. *Glassdoor Employee Perception*

We use employee review data from Glassdoor to capture how the workforce perceives the firm’s internal environment. Glassdoor is an online labor-market platform on which current and former employees anonymously review their employers. A review typically reports a review date, an overall firm rating, the reviewer’s employment status and location, and five separate workplace sub-ratings, namely career opportunities, compensation and benefits, culture and values, senior leadership, and work-life balance. Reviews also indicate whether the employee would recommend the employer to a friend, the employee’s view of the firm’s business outlook, and approval of the CEO. Because Glassdoor reviews are publicly observable, these measures capture not only internal employee perceptions but also an external signal of the firm’s employer reputation.

We match Glassdoor employer profiles to Compustat firms and construct a firm-year panel

of employee perceptions. To improve comparability with our U.S. public-firm sample, we restrict the underlying review data to U.S.-based reviews before aggregation. We aggregate reviews to the firm-year level using a trailing twelve-month window ending on the fiscal-year close, and construct analogous windows for the prior and subsequent twelve-month periods. Our primary Glassdoor outcomes are one-year-ahead changes in the overall employee rating (*Overall Rating*), the mean recommendation indicator (*Recommendation*), and the mean business outlook score (*Business Outlook*). The employee perception index (*Composite Index*) is the average of the standardized changes in overall rating, recommendation-to-friend, and business outlook. We also report changes in the CEO approval score (*CEO Approval*) and employee satisfaction (*Job Satisfaction*), defined as the average of the five workplace sub-ratings.

In the Glassdoor regressions, we require at least five reviews in the current twelve-month window, that is, $n_reviews_{it} \geq 5$. This minimum-review requirement reduces the influence of firm-years in which employee-perception measures rest on very sparse review activity. After restricting reviews to U.S.-based reviewers and requiring at least five reviews in the current twelve-month window, the broader Glassdoor coverage sample contains 11,383 firm-year observations from 1,738 unique firms. The employee-perception regressions require the further intersection of this Glassdoor coverage sample with validated CSR report text and baseline controls. This intersection yields 3,630 firm-year observations in the main overall-rating specification, with the exact number varying across employee-perception outcomes.

3.6. Descriptive Statistics

All variables used in this paper are defined in Appendix A1. Table 1 reports descriptive statistics for the principal disclosure-transparency, CSR report-text, and Glassdoor-CSR-report samples. Panel A describes the disclosure-transparency sample used in the baseline disclosure analyses. Because the ASSET4 and Bloomberg disclosure measures have different data coverage, Panel A reports 17,010 firm-year observations for the ASSET4 CSR disclosure score and 20,318 firm-year observations for the Bloomberg ESG disclosure score. Panel B describes the CSR report-text sample used in the textual-disclosure analyses. This sample contains 6,037 firm-year observations with validated report text, non-missing textual measures, lagged EPU, and baseline controls. Panel C describes the Glassdoor-CSR-report sam-

ple used in the employee-perception analyses. The main overall-rating specification contains 3,630 firm-year observations, with the exact number varying across outcomes. Throughout the results, EPU and the employee-related disclosure measure are standardized in the relevant estimation sample when they enter the regressions as standardized variables, so the reported coefficients can be interpreted in standard-deviation units.

Table 1: Descriptive Statistics

This table reports descriptive statistics for the variables used in the empirical analyses. Panel A describes the CSR disclosure-transparency sample. Because the ASSET4 and Bloomberg disclosure measures have different data coverage, the number of observations differs across the two disclosure-score samples. Panels B and C describe the CSR report-text sample and the Glassdoor-CSR-report sample, respectively. The number of observations varies across variables because of differences in data availability.

Variables	N	Mean	Median	SD	Min	Max
Panel A: CSR Disclosure-Score Sample						
CSR disclosure score	17,010	1.16	0.00	1.51	0.00	5.00
Bloomberg ESG disclosure score	20,318	37.83	32.86	10.80	0.00	85.81
National EPU, lagged	20,318	1.74	1.52	0.61	0.93	3.34
State EPU, lagged	20,318	1.23	0.81	1.04	0.14	6.76
VIX, lagged	20,318	18.55	16.68	5.24	11.09	29.25
State GDP growth	20,318	5.27	5.20	3.87	-3.40	15.90
State unemployment	20,318	5.05	4.60	1.70	2.60	10.10
Tobin's q	20,318	2.15	1.48	1.79	0.58	10.86
Cash flow from operations	20,318	0.02	0.05	0.17	-1.02	0.34
Ln(sales)	20,318	6.74	6.83	2.14	0.29	11.40
EBITDA / assets	20,318	0.06	0.08	0.17	-0.90	0.39
Leverage	20,318	0.24	0.21	0.19	0.00	0.80
Dividend payout	20,318	0.01	0.00	0.03	0.00	0.19
Return volatility, lagged	20,318	2.80	2.38	1.56	0.91	11.97
Bid-ask spread, lagged	20,318	0.35	0.09	0.70	0.01	5.30
Employees	20,241	15.93	2.47	67.60	0.00	2,300.00
Employees / assets	20,222	0.0029	0.0015	0.0044	0.0000	0.0296
Gubernatorial election	20,318	0.25	0.00	0.44	0.00	1.00
Panel B: CSR Report-Text Sample						
People share	6,037	28.02	28.12	9.68	2.14	53.05
Climate share	6,037	27.50	26.44	14.80	0.53	72.07
Social share	6,037	21.97	19.90	11.41	1.73	58.58
Governance share	6,037	16.39	15.66	7.98	0.76	41.99
Uncertainty terms per 100 words	6,037	0.16	0.13	0.13	0.00	0.72
Economy terms per 100 words	6,037	0.12	0.10	0.08	0.00	0.46
Policy terms per 100 words	6,037	0.05	0.04	0.04	0.00	0.19
EPU-related tokens	6,037	2.39	1.64	2.69	0.00	13.94
Report sentiment	6,037	33.49	33.07	11.14	2.81	62.94
People tone	6,012	43.82	42.76	15.66	1.78	88.65
Token ratio	6,037	124.17	123.89	5.97	105.64	149.47
Ln(total words)	6,037	9.58	9.65	0.81	7.27	11.48
Panel C: Glassdoor-CSR-Report Sample						
Δ Overall Rating	3,630	0.02	0.01	0.40	-2.50	2.27
Δ Recommendation	3,625	0.00	0.00	0.16	-0.84	1.00
Δ Business Outlook	3,625	-0.01	0.00	0.30	-1.33	1.50
Δ CEO Approval	3,598	-0.01	-0.01	0.28	-1.83	1.71
Δ Job Satisfaction	3,627	0.02	0.01	0.37	-2.15	1.84
Number of reviews	3,630	152.95	51.00	318.39	5.00	4,311.00

The mean (median) composite CSR disclosure score is 1.16 (0.00), reflecting that many firm-years involve no standalone CSR reporting, while the Bloomberg ESG disclosure score averages 37.83. Within the report sample, the people category on average accounts for 28.02% of textual report content, followed by climate (27.50%), social (21.97%), and gov-

ernance (16.39%). The lagged national EPU index averages 1.74 in the disclosure-score sample. All continuous firm-level variables, the topic shares, and the textual measures are winsorized at the 1st and 99th percentiles to limit the influence of extreme values. The composite CSR score and its components are bounded indicator-based scores with no extreme tail, the Glassdoor outcomes are bounded rating changes that we standardize in the relevant tests, and the EPU index is a common macroeconomic series whose tail observations reflect genuine high-uncertainty episodes rather than data error. Therefore, we do not winsorize the disclosure scores, the Glassdoor outcomes, or the EPU measures.

4. Empirical Analysis: CSR Disclosure under Economic Policy Uncertainty

Our empirical analysis follows a determinant-characteristic-consequence structure. We first examine whether policy uncertainty is associated with CSR disclosure transparency and with uncertainty-related framing in CSR reports. We then examine the disclosure characteristic central to the paper: the allocation of attention across stakeholder topics within CSR reports. Finally, we examine whether employee-related disclosure is associated with subsequent employee perceptions. This sequence allows us to distinguish overall disclosure transparency from within-report stakeholder attention and from stakeholder-side associations. Unless otherwise noted, we estimate the specifications using OLS with firm fixed effects and heteroskedasticity-robust standard errors clustered by firm. National EPU is standardized in the disclosure sample and retains this scaling in the disclosure-content and temporal-robustness analyses. In the tone and Glassdoor analyses, the focal disclosure and uncertainty variables are standardized within the corresponding analysis sample. The Glassdoor dependent variables are also standardized.

4.1. Economic Policy Uncertainty as a Determinant of CSR Disclosure

4.1.1. CSR Disclosure Transparency

We begin by examining whether economic policy uncertainty is associated with CSR disclosure transparency. This test establishes the baseline relation in our disclosure framework: whether EPU is associated with firms' CSR reporting choices before we examine the content and composition of those reports. We estimate the following OLS regression:

$$Disclosure_{i,t} = \beta_0 + \beta_1 EPU_{t-1} + \gamma \mathbf{X}_{i,t-1} + \alpha_i + \varepsilon_{i,t} \quad (3)$$

where $Disclosure_{i,t}$ is a CSR disclosure-transparency measure for firm i in year t , EPU_{t-1} is lagged economic policy uncertainty, and $\mathbf{X}_{i,t-1}$ is the vector of firm-level and state-level controls. α_i represents firm fixed effects. The coefficient of interest is β_1 . A positive coefficient would indicate that CSR disclosure transparency is higher when policy uncertainty is higher.

The control variables capture common firm-level determinants of voluntary disclosure and CSR reporting, including firm size and information environment, profitability and growth opportunities, financing and payout policies, and information asymmetry (Di Giuli and Kostovetsky (2014); Chen et al. (2020)). We also control for state-level macroeconomic conditions using state GDP growth and state unemployment, and for equity-market uncertainty using the VIX index. Following Peng et al. (2023), we include firm fixed effects to absorb time-invariant heterogeneity in firms' disclosure policies. Standard errors are clustered at the firm level. Because the national EPU index varies primarily over time, these baseline specifications should be interpreted as association tests that relate the national uncertainty environment to firms' CSR disclosure choices after controlling for observable macroeconomic and firm-level conditions. We later use state-level uncertainty measures and year fixed effects to reduce concerns that the results are driven by common national trends.

We report two disclosure measures, each estimated under three nested specifications. The first includes EPU and the control variables. The second adds the firm's contemporaneous ESG activity score (*ESG Score*) to separate disclosure transparency from underlying CSR activity. The third adds the one-year lagged CSR disclosure score (CSR_{t-1}) to account for persistence in reporting practices. This sequence allows us to assess whether the relation between EPU and disclosure transparency remains after conditioning on firms' ESG activity and prior disclosure.

Table 2 reports the results. Columns (1) through (3) use the ASSET4-based composite CSR disclosure score. In Column (1), the coefficient on lagged EPU is positive and statistically significant at the 1 percent level. The coefficient of 0.221 indicates that a one-standard-deviation increase in policy uncertainty is associated with a 0.221-point increase

Table 2: Economic Policy Uncertainty and Disclosure Transparency

This table examines the association between lagged national economic policy uncertainty and firms' CSR disclosure transparency. Columns (1)–(3) use the ASSET4-based CSR disclosure score as the dependent variable, and Columns (4)–(6) use the Bloomberg ESG disclosure score. The specifications sequentially add ESG activity and lagged disclosure to distinguish the relation between policy uncertainty and disclosure transparency from firms' underlying ESG activity and persistent reporting behavior. All specifications include firm fixed effects, firm-level controls, state-level macroeconomic controls, and equity-market uncertainty controls. Standard errors are clustered at the firm level.

Variables	Dependent variable: CSR Score			Dependent variable: ESG Disclosure Score		
	(1) CSR	(2) CSR	(3) CSR	(4) ESG	(5) ESG	(6) ESG
EPU_{t-1}	0.221*** (12.140)	-0.016 (-1.038)	0.024* (1.700)	2.861*** (37.360)	2.215*** (22.580)	2.496*** (23.500)
$ESG\ Score_t$		0.060*** (50.280)	0.045*** (32.760)		0.282*** (32.980)	0.225*** (25.820)
CSR_{t-1}			0.348*** (22.740)			1.348*** (20.300)
VIX_{t-1}	0.034*** (15.260)	0.020*** (10.990)	0.009*** (4.619)	0.100*** (10.570)	0.030*** (2.821)	-0.023** (-2.034)
$GDP\ State_{t-1}$	0.058*** (23.220)	0.021*** (9.910)	0.017*** (8.311)	0.453*** (34.230)	0.326*** (25.510)	0.315*** (23.950)
$Unemploy\ State_{t-1}$	-0.100*** (-14.260)	-0.015*** (-2.667)	-0.004 (-0.883)	-0.813*** (-29.980)	-0.636*** (-19.320)	-0.635*** (-18.710)
$Tobin's\ Q_{t-1}$	0.025** (2.206)	0.018** (2.172)	0.008 (0.950)	0.040 (0.804)	0.031 (0.639)	0.005 (0.088)
CFO_{t-1}	0.342*** (2.665)	0.156 (1.519)	0.115 (1.056)	0.529 (1.025)	0.704 (1.062)	1.016* (1.705)
$Sales_{t-1}$	0.411*** (12.670)	0.138*** (6.292)	0.130*** (6.142)	1.133*** (7.464)	0.317** (2.071)	0.508*** (2.890)
$EBITDA_{t-1}$	-1.109*** (-6.317)	-0.491*** (-3.402)	-0.415*** (-2.845)	-1.869** (-2.459)	-0.696 (-0.703)	-1.047 (-1.017)
$Leverage_{t-1}$	0.203* (1.658)	0.008 (0.083)	0.064 (0.764)	0.897 (1.616)	0.301 (0.532)	0.385 (0.639)
$Dividend_{t-1}$	-0.023 (-0.039)	0.181 (0.374)	0.216 (0.486)	3.961* (1.686)	3.519 (1.256)	4.381 (1.429)
$Ret\ Vol_{t-1}$	0.007 (0.665)	0.006 (0.697)	0.002 (0.238)	-0.058 (-1.376)	0.012 (0.249)	-0.008 (-0.164)
$Spread_{t-1}$	0.051* (1.916)	0.033 (1.369)	0.007 (0.307)	0.008 (0.080)	-0.182 (-1.074)	-0.370** (-2.205)
Observations	17,010	17,009	15,223	20,318	14,784	13,161
R-squared	0.741	0.821	0.849	0.874	0.911	0.922
Firm FE	YES	YES	YES	YES	YES	YES
Cluster	Firm	Firm	Firm	Firm	Firm	Firm

Note: Robust t-statistics are reported in parentheses. Standard errors are clustered at the firm level.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

in the CSR disclosure score. Relative to the sample mean of 1.16 reported in Table 1, this estimate is economically meaningful. Because the ASSET4 score captures formal reporting practices, the result suggests that firms' CSR reporting infrastructure is more extensive when policy uncertainty is higher.

The estimate attenuates once we condition on ESG activity and prior disclosure. In Column (2), the coefficient on EPU becomes small and statistically insignificant after adding the contemporaneous ESG activity score. This attenuation is informative because the ASSET4 composite measure captures structured reporting practices that are likely correlated with firms' broader ESG activity and reporting capacity. In Column (3), after adding the lagged CSR disclosure score, the coefficient on EPU becomes positive and marginally significant. Thus, the ASSET4 evidence suggests that policy uncertainty is associated with formal CSR reporting, although part of this association reflects firms' ESG activity and the persistence of reporting practices.

Columns (4) through (6) use the Bloomberg ESG disclosure score, a broader measure of public ESG disclosure transparency. The coefficient on lagged EPU is positive and statistically significant at the 1 percent level in all three specifications. In Column (4), a one-standard-deviation increase in EPU is associated with a 2.861-point increase in the Bloomberg ESG disclosure score. The coefficient remains positive and significant after controlling for ESG activity in Column (5) and after adding lagged disclosure in Column (6). Because the Bloomberg measure captures the breadth of ESG-related information available through firms' public disclosures, this evidence suggests that the association between EPU and disclosure transparency is not limited to a small set of formal reporting indicators.

Taken together, Table 2 provides baseline evidence that CSR disclosure transparency is higher when policy uncertainty rises. The conclusion is strongest for the broader Bloomberg disclosure score and more conservative for the ASSET4 composite reporting score. The results establish that EPU is associated with greater CSR disclosure transparency, but they do not indicate how firms allocate attention within CSR reports. We therefore next examine whether similar patterns appear using a localized political-uncertainty measure and then turn to the content and composition of CSR reports.

To complement the national index, we use gubernatorial elections in firms' headquarters states as a localized source of political uncertainty. The national EPU index captures aggre-

gate uncertainty but varies primarily over time, so it may be correlated with other national shocks or secular trends in CSR reporting. Gubernatorial elections generate uncertainty that varies across states and years and can affect expectations about state-level regulation, taxation, public spending, and labor-market policy. Matching firms to elections in their headquarters states allows us to examine whether the disclosure response also appears under staggered, state-level political uncertainty.

Table 3 reports the results. The coefficients on gubernatorial-election uncertainty are positive and statistically significant across both disclosure measures and across the nested specifications. For the ASSET4 composite score, the coefficients range from 0.089 to 0.181. For the Bloomberg disclosure score, they range from 0.378 to 0.453. These results indicate that CSR disclosure transparency is higher not only when national EPU rises, but also around state-level political uncertainty in firms' headquarters states.

This evidence strengthens the interpretation of Table 2. Although the gubernatorial-election tests do not establish causality, they show that the disclosure-transparency result is not confined to national time-series variation. Instead, the evidence is consistent with firms providing more transparent CSR disclosure when the policy environment relevant to their local headquarters state becomes more uncertain.

4.1.2. Uncertainty-Related Framing within CSR Reports

The disclosure-transparency results show that CSR disclosure is more extensive when policy uncertainty is higher. These tests, however, do not reveal whether the additional disclosure is specifically connected to uncertainty. One concern is that the transparency results reflect a general increase in CSR reporting rather than a disclosure response related to policy uncertainty. We therefore examine the text of CSR reports and test whether firms incorporate more uncertainty-related language when EPU rises.

Table 4 reports the results. We search report paragraphs using curated lists of terms related to uncertainty, the economy, and policy. We then aggregate the matches to the report level and regress each textual measure on lagged EPU and the full set of controls.

Column (1) shows that EPU is positively associated with uncertainty-related language. The coefficient on lagged EPU is 0.007 and statistically significant at the 5 percent level. This result indicates that CSR reports contain more uncertainty-related discussion when the

Table 3: Gubernatorial Election Uncertainty and CSR Disclosure Transparency

This table provides complementary evidence using gubernatorial-election uncertainty measured at the headquarters-state level. Columns (1)–(3) use the ASSET4-based CSR disclosure score as the dependent variable, and Columns (4)–(6) use the Bloomberg ESG disclosure score. The table assesses whether firms' disclosure transparency is also associated with state-level political uncertainty that varies across states and years, rather than only with national time-series movements in EPU. *Guber* is an indicator variable equal to 1 for firm-years with a gubernatorial election in the firm's headquarters state. All specifications include firm fixed effects, firm-level controls, state-level macroeconomic controls, and equity-market uncertainty controls. Standard errors are clustered at the firm level.

Variables	Dependent variable: CSR Score			Dependent variable: ESG Disclosure Score		
	(1) CSR	(2) CSR	(3) CSR	(4) ESG	(5) ESG	(6) ESG
<i>Guber</i> _{<i>t</i>−1}	0.181*** (13.610)	0.111*** (9.911)	0.089*** (6.818)	0.378*** (6.806)	0.393*** (6.356)	0.453*** (6.545)
<i>ESG Score</i> _{<i>t</i>}		0.059*** (51.300)	0.045*** (33.740)		0.322*** (36.500)	0.266*** (28.490)
<i>CSR</i> _{<i>t</i>−1}			0.345*** (22.590)			1.273*** (18.080)
<i>VIX</i> _{<i>t</i>−1}	0.061*** (26.800)	0.020*** (11.920)	0.013*** (8.115)	0.460*** (41.310)	0.247*** (24.810)	0.226*** (21.410)
<i>GDP State</i> _{<i>t</i>−1}	0.048*** (20.620)	0.024*** (12.450)	0.018*** (9.391)	0.283*** (25.110)	0.183*** (16.920)	0.157*** (13.760)
<i>Unemploy State</i> _{<i>t</i>−1}	-0.059*** (-9.640)	-0.007 (-1.380)	0.007 (1.445)	-0.603*** (-22.410)	-0.314*** (-11.120)	-0.271*** (-9.323)
<i>Tobin's Q</i> _{<i>t</i>−1}	0.042*** (3.710)	0.016** (1.965)	0.009 (1.056)	0.313*** (5.881)	0.201*** (3.903)	0.206*** (3.580)
<i>CFO</i> _{<i>t</i>−1}	0.483*** (3.670)	0.148 (1.434)	0.121 (1.107)	2.505*** (4.507)	2.129*** (3.111)	2.479*** (3.805)
<i>Sales</i> _{<i>t</i>−1}	0.414*** (12.580)	0.128*** (5.844)	0.117*** (5.535)	1.774*** (11.010)	0.457*** (2.889)	0.507*** (2.636)
<i>EBITDA</i> _{<i>t</i>−1}	-1.272*** (-7.029)	-0.456*** (-3.166)	-0.395*** (-2.711)	-5.111*** (-6.245)	-2.649*** (-2.605)	-2.953** (-2.569)
<i>Leverage</i> _{<i>t</i>−1}	0.280** (2.261)	-0.030 (-0.321)	0.048 (0.566)	2.482*** (4.301)	1.353** (2.280)	1.623** (2.495)
<i>Dividend</i> _{<i>t</i>−1}	-0.127 (-0.210)	0.142 (0.296)	0.171 (0.384)	3.268 (1.357)	3.723 (1.257)	3.726 (1.098)
<i>Ret Vol</i> _{<i>t</i>−1}	0.028*** (2.774)	0.005 (0.597)	0.004 (0.493)	0.255*** (5.767)	0.241*** (4.749)	0.259*** (4.946)
<i>Spread</i> _{<i>t</i>−1}	0.054* (1.940)	0.029 (1.227)	0.004 (0.151)	0.168* (1.743)	-0.062 (-0.361)	-0.359** (-2.147)
Observations	17,010	17,009	15,223	20,318	14,784	13,161
R-squared	0.739	0.821	0.849	0.856	0.903	0.913
Firm FE	YES	YES	YES	YES	YES	YES
Cluster	Firm	Firm	Firm	Firm	Firm	Firm

Note: Robust t-statistics are reported in parentheses. Standard errors are clustered at the firm level.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 4: Economic Policy Uncertainty and Intra-Report Linguistic Properties

This table examines whether CSR reports contain more uncertainty-related language when national economic policy uncertainty rises. The dependent variables capture uncertainty-related, economy-related, policy-related, and combined EPU-related textual content, as well as token-to-word ratio. The table evaluates whether the disclosure response documented in the transparency tests is reflected in the language and framing of CSR reports rather than only in overall disclosure volume. All specifications include firm fixed effects, firm-level controls, state-level macroeconomic controls, and equity-market uncertainty controls. Standard errors are clustered at the firm level.

Variables	(1) Uncertainty	(2) Economy	(3) Policy	(4) EPU Tokens	(5) Token Ratio
EPU_{t-1}	0.007** (2.339)	0.004 (1.623)	-0.001 (-0.971)	0.290*** (4.178)	-0.440** (-2.146)
VIX_{t-1}	0.002*** (5.775)	0.000 (-1.289)	0.000*** (2.587)	0.006 (0.608)	-0.025 (-0.960)
$GDP\ State_{t-1}$	0.003*** (7.377)	0.000 (-0.671)	0.000*** (3.524)	0.066*** (6.767)	-0.052* (-1.904)
$Unemploy\ State_{t-1}$	-0.007*** (-6.272)	0.000 (0.175)	0.000 (-0.257)	-0.070*** (-2.600)	0.027 (0.390)
$Tobin's\ Q_{t-1}$	0.000 (-0.150)	0.001 (0.455)	0.000 (0.036)	-0.055 (-1.299)	-0.007 (-0.062)
CFO_{t-1}	-0.022 (-0.706)	0.004 (0.211)	-0.006 (-0.473)	-0.395 (-0.492)	4.880** (2.061)
$Sales_{t-1}$	0.055*** (6.738)	-0.003 (-0.767)	0.007*** (3.397)	0.737*** (4.586)	0.220 (0.613)
$EBITDA_{t-1}$	-0.075* (-1.921)	0.009 (0.416)	0.001 (0.037)	-0.255 (-0.265)	-4.395 (-1.346)
$Leverage_{t-1}$	-0.023 (-1.030)	0.005 (0.312)	0.012* (1.949)	-0.485 (-0.913)	0.806 (0.579)
$Dividend_{t-1}$	-0.044 (-0.256)	0.077 (0.888)	0.063* (1.797)	1.766 (0.520)	-0.521 (-0.083)
$Ret\ Vol_{t-1}$	0.004** (2.043)	-0.003** (-2.068)	0.001 (1.639)	0.102* (1.878)	0.285** (2.028)
$Spread_{t-1}$	0.015 (1.095)	-0.023* (-1.939)	0.003 (1.016)	0.675 (0.966)	0.279 (0.268)
Observations	6,037	6,037	6,037	6,037	6,037
R-squared	0.740	0.620	0.672	0.550	0.486
Firm FE	YES	YES	YES	YES	YES
Cluster	Firm	Firm	Firm	Firm	Firm

Note: Robust t-statistics are reported in parentheses. Standard errors are clustered at the firm level.
 *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

national policy environment becomes more uncertain.

Columns (2) and (3) help narrow the interpretation. The coefficient on economy-related language is positive but statistically insignificant, and the coefficient on policy-related language is negative and statistically insignificant. These results suggest that the textual response is not simply a mechanical increase in generic discussion of the economy or policy in isolation. Instead, the stronger evidence appears when uncertainty language is connected to economic or policy content.

Column (4) reports the combined EPU-related textual measure. The coefficient on lagged EPU is 0.290 and statistically significant at the 1 percent level. Relative to the mean value of 2.39 reported in Table 1, this estimate represents an increase of approximately 12 percent. This result suggests that CSR reports contain more language linking uncertainty to economic or policy conditions when national EPU rises. The finding supports the interpretation that the disclosure expansion documented in Table 2 is related to the policy-uncertainty environment rather than only to a secular increase in CSR reporting.

Column (5) examines the token-to-word ratio. The coefficient on lagged EPU is negative and statistically significant at the 5 percent level. Because the token-to-word ratio depends partly on how the tokenizer maps words into sub-word units, we interpret this result cautiously. A lower ratio is consistent with CSR reports using relatively simpler or more common language when policy uncertainty is higher, but the main inference from Table 4 does not rely on this linguistic-complexity measure. Overall, Table 4 indicates that the textual response to national EPU is concentrated in uncertainty-related framing, especially language that links uncertainty with economic or policy conditions.

We next repeat the intra-report linguistic analysis using gubernatorial-election uncertainty. This test provides complementary evidence on whether CSR-report language changes around localized political uncertainty, rather than only around national EPU.

Table 5 reports the results. Consistent with the national-EPU evidence, CSR reports contain more uncertainty-related language following gubernatorial-election uncertainty. The coefficient on gubernatorial-election uncertainty in Column (1) is 0.024 and statistically significant at the 1 percent level. Column (3) also shows a positive and significant coefficient for policy-related language, indicating that CSR reports contain more policy-related discussion around gubernatorial-election uncertainty.

Table 5: Gubernatorial Election Uncertainty and Intra-Report Linguistic Properties

This table repeats the intra-report linguistic analysis using gubernatorial-election uncertainty measured at the headquarters-state level. The dependent variables capture uncertainty-related, economy-related, policy-related, and combined EPU-related textual content, as well as token-to-word ratio. The table provides complementary evidence on whether CSR-report language changes around localized political uncertainty rather than only around national EPU. All specifications include firm fixed effects, firm-level controls, state-level macroeconomic controls, and equity-market uncertainty controls. Standard errors are clustered at the firm level.

Variables	(1) Uncertainty	(2) Economy	(3) Policy	(4) EPU Tokens	(5) Token Ratio
<i>Guber</i> _{<i>t</i>-1}	0.024*** (8.957)	-0.001 (-0.355)	0.004*** (4.344)	0.304*** (4.334)	-0.550*** (-3.336)
<i>VIX</i> _{<i>t</i>-1}	0.004*** (10.700)	0.000 (0.025)	0.000*** (3.053)	0.044*** (4.944)	-0.085*** (-3.695)
<i>GDP State</i> _{<i>t</i>-1}	0.003*** (8.772)	0.000 (-1.547)	0.001*** (5.436)	0.060*** (6.231)	-0.046* (-1.815)
<i>Unemploy State</i> _{<i>t</i>-1}	-0.003*** (-3.646)	0.001 (0.949)	0.000 (0.410)	0.003 (0.119)	-0.092 (-1.487)
<i>Tobin's Q</i> _{<i>t</i>-1}	0.000 (0.022)	0.001 (0.920)	-0.000 (-0.382)	-0.025 (-0.587)	-0.052 (-0.444)
<i>CFO</i> _{<i>t</i>-1}	-0.022 (-0.728)	0.007 (0.421)	-0.008 (-0.614)	-0.223 (-0.279)	4.642** (1.968)
<i>Sales</i> _{<i>t</i>-1}	0.049*** (6.166)	-0.003 (-0.721)	0.006*** (2.979)	0.661*** (4.089)	0.359 (0.994)
<i>EBITDA</i> _{<i>t</i>-1}	-0.062* (-1.655)	0.004 (0.162)	0.005 (0.333)	-0.357 (-0.376)	-4.319 (-1.323)
<i>Leverage</i> _{<i>t</i>-1}	-0.024 (-1.073)	0.010 (0.569)	0.010 (1.617)	-0.283 (-0.532)	0.527 (0.376)
<i>Dividend</i> _{<i>t</i>-1}	-0.050 (-0.302)	0.077 (0.885)	0.062* (1.800)	1.699 (0.507)	-0.394 (-0.063)
<i>Ret Vol</i> _{<i>t</i>-1}	0.005** (2.419)	-0.003* (-1.808)	0.001 (1.485)	0.131** (2.491)	0.240* (1.735)
<i>Spread</i> _{<i>t</i>-1}	0.016 (1.199)	-0.023** (-1.967)	0.004 (1.091)	0.677 (0.988)	0.272 (0.255)
Observations	6,037	6,037	6,037	6,037	6,037
R-squared	0.744	0.620	0.673	0.550	0.487
Firm FE	YES	YES	YES	YES	YES
Cluster	Firm	Firm	Firm	Firm	Firm

Note: Robust t-statistics are reported in parentheses. Standard errors are clustered at the firm level.
*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Column (4) reports the combined EPU-related textual measure. The coefficient is 0.304 and statistically significant at the 1 percent level. This estimate is close in magnitude to the corresponding national-EPU coefficient in Table 4. The result suggests that CSR reports contain more text linking uncertainty to economic or policy conditions not only when national EPU rises, but also around localized political uncertainty in firms’ headquarters states.

Column (5) shows that the token-to-word ratio declines around gubernatorial-election uncertainty. As in Table 4, we interpret this measure cautiously because it partly reflects the tokenizer’s mapping of words into sub-word units. The result nevertheless provides no evidence that CSR-report language becomes more complex around localized political uncertainty.

Together, Tables 4 and 5 provide textual evidence that CSR reports incorporate more uncertainty-related framing when the policy environment becomes more uncertain. The evidence is present using both national EPU and gubernatorial-election uncertainty. This pattern helps connect the disclosure-transparency results to the paper’s policy-uncertainty setting. The findings indicate that the disclosure response is not only a matter of broader CSR disclosure transparency; it is also reflected in the language of CSR reports themselves.

Tables 2 through 5 provide the first step in the empirical argument. Policy uncertainty is associated with greater CSR disclosure transparency and with more uncertainty-related framing inside CSR reports. These findings provide evidence consistent with EPU being a determinant of CSR reporting. They do not, however, show how firms allocate attention across stakeholder topics. As discussed earlier, within-report attention allocation is a distinct disclosure characteristic, because the same report can shift emphasis across climate, social, governance, and employee-related topics even if aggregate disclosure changes little. We therefore next examine whether the composition of CSR reports changes when uncertainty rises.

4.2. *Stakeholder Attention Allocation within CSR Reports*

4.2.1. *Within-Report Attention Reallocation*

We test *H1* by examining whether CSR-report attention is allocated differently across stakeholder topics when policy uncertainty rises. The prediction is that EPU changes the

salience of stakeholder concerns and is therefore associated with where firms place disclosure attention within CSR reports. Because CSR reports cover multiple topics and report space is limited, an increase in one stakeholder category can be accompanied by lower relative attention to others. The relevant question is therefore not only whether CSR disclosure is more extensive, but how attention is distributed within the report.

We classify each report paragraph into ESG topic categories using FinBERT and aggregate token-weighted topic shares to the firm-year level. The governance category combines corporate governance and business-ethics content; the climate category combines climate change, natural capital, and pollution and waste; the social category combines product liability and community relations; and human capital forms a separate category and is our main variable of interest, which we label *PeopleShare* in the empirical tables. Because these topic shares are compositional, an increase in one category mechanically corresponds to a decrease in one or more other categories. The tests therefore examine both whether employee-related content rises and which topics receive less relative attention.

Panel A of Table 6 reports the topic-share results. The coefficient on the people category is positive and statistically significant at the 1 percent level. A one-standard-deviation increase in lagged EPU is associated with a 1.330 percentage-point increase in the share of CSR-report content devoted to people-related topics. Relative to the mean people share of 28.02 percent in Table 1, this estimate represents approximately 4.8 percent of the average people-topic share. This finding supports *H1*, which predicts that CSR reports allocate greater relative attention to employee-related topics when policy uncertainty rises.

The remaining columns show how this change is reflected across other stakeholder categories. Climate-related content declines by 0.811 percentage points, and social content declines by 0.748 percentage points. Both estimates are statistically significant. Governance content increases by 0.707 percentage points. These patterns suggest that the disclosure response is not a uniform expansion across all CSR categories. Instead, the composition of CSR reports shifts away from climate and social topics and toward people-related and governance content, with the largest and most precise increase occurring in the people category.

This reallocation is central to the disclosure-composition interpretation of the evidence. The results suggest that CSR reports place relatively greater emphasis on workforce-related topics when policy uncertainty is higher. Because the dependent variables are topic shares,

Table 6: Stakeholder Attention Allocation within CSR Reports under Uncertainty

This table examines how the allocation of stakeholder attention within CSR reports varies with national economic policy uncertainty. Panel A reports regressions of FinBERT-based topic shares on lagged EPU, focusing on climate, people, social, and corporate-governance content. Panel B examines whether the tone of people-related disclosure changes with EPU and with the share of report content devoted to people-related topics. The table evaluates whether firms' CSR reports contain relatively greater employee-related attention under uncertainty and whether this change is accompanied by a shift in tone. All specifications include firm fixed effects and controls. Standard errors are clustered at the firm level.

Panel A: Stakeholder Topic Shares within CSR Reports				
Variables	(1) Climate Share	(2) People Share	(3) Social Share	(4) Gov Share
EPU_{t-1}	-0.811** (-2.424)	1.330*** (5.100)	-0.748** (-2.529)	0.707*** (3.359)
Observations	6,037	6,037	6,037	6,037
R-squared	0.795	0.686	0.752	0.679
Controls	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES
Cluster	Firm	Firm	Firm	Firm
Panel B: Tone of Employee-Related CSR Disclosure				
Variables	(1) People Tone	(2) People Tone	(3) People Tone	
$People Share_t$		-0.694 (-1.372)	-0.695 (-1.373)	
EPU_{t-1}	-0.202 (-0.413)	-0.110 (-0.224)	-0.114 (-0.234)	
$People Share_t \times EPU_{t-1}$			-0.057 (-0.224)	
Observations	6,009	6,009	6,009	
R-squared	0.510	0.510	0.510	
Controls	YES	YES	YES	
Firm FE	YES	YES	YES	
Cluster	Firm	Firm	Firm	

Note: Robust t-statistics are reported in parentheses. Standard errors are clustered at the firm level.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

the evidence should be interpreted as a change in relative disclosure emphasis rather than as direct evidence of changes in underlying CSR activity or employee treatment. The finding identifies employees as the stakeholder group receiving greater relative report attention during high-EPU periods, but it does not by itself establish why firms make this disclosure choice or whether the change reflects underlying workforce policies.

Panel B examines whether the tone of employee-related content changes with EPU or with the share of people-related disclosure. This test helps distinguish the attention-allocation result from a simple tone-based explanation. If the increase in people-related disclosure reflected unusually optimistic employee rhetoric, we would expect people tone to become more positive when EPU rises, especially in firm-years with more people-related content.

Column (1) shows that EPU is not significantly related to people tone. Column (2) shows that the coefficient on people-related disclosure is negative but statistically insignificant. Column (3) adds the interaction between people share and EPU. The interaction is also small and statistically insignificant. These results indicate that the increase in employee-related disclosure is not accompanied by a systematic change in the tone of that disclosure.

The tone results help narrow the interpretation of Panel A. The increase in people-related attention does not appear to be driven by a systematic shift in employee-related tone. The evidence suggests that CSR reports devote more relative attention to employee-related issues while the tone of that disclosure remains broadly stable.

4.2.2. Time-Trend and COVID-19 Robustness

Because national EPU is common to firms within a given period, unrestricted year fixed effects would absorb the variation used to estimate its association with human-capital disclosure. The baseline specification therefore identifies the relation from changes in national EPU over time within firms. This raises the possibility that the coefficient reflects other aggregate developments that coincide with EPU. Two concerns are particularly relevant in our setting. First, human-capital reporting may have increased over the sample period as human capital became more salient to investors and regulators alongside the SEC’s 2020 amendment to Regulation S-K, which expanded the required disclosure of material human-capital resources and related measures or objectives (Bourveau et al., 2022). Second, the COVID-19 pandemic and associated changes in workplace arrangements may have prompted

firms to devote greater reporting attention to employee health, safety, well-being, and other workforce-related issues (Clayton, 2020). We conduct several tests to assess whether these temporal patterns account for the result in Table 6.

Table 7 presents the results. Column (1) reproduces the baseline *People Share* specification reported in Panel A of Table 6. Column (2) adds a linear time trend that increases by one in each fiscal year to capture a gradual common change in human-capital reporting over the sample period. Following prior research that uses deterministic trends and pandemic-period indicators to distinguish pandemic-related shifts from broader temporal movements (Kruger et al., 2023), Column (3) includes an indicator equal to one for fiscal years 2020 and 2021, while Column (4) includes both the linear trend and the COVID-period indicator. The positive coefficients on the trend and COVID-period variables are consistent with the concerns motivating these tests, namely that human-capital disclosure increased gradually over time and was unusually elevated during the pandemic period.

Across Columns (2)–(4), the coefficient on lagged EPU remains positive and statistically significant. Its magnitude declines after the additional time controls are introduced, from 1.330 in the baseline specification to 0.722 when both controls are included, indicating that secular reporting changes and the pandemic period explain part, but not all, of the baseline association. Because the COVID-period indicator assumes that the pandemic can be represented by a common level shift in *People Share*, Column (5) provides an alternative test by excluding fiscal years 2020 and 2021 entirely. The coefficient on lagged EPU remains positive and statistically significant. Taken together, the results indicate that the association between EPU and *People Share* is not confined to the pandemic period or explained solely by a gradual increase in human-capital reporting.

We further examine whether the baseline result is disproportionately influenced by any single fiscal year. Following the leave-one-out sensitivity approach, we re-estimate the baseline specification eleven times, sequentially excluding each fiscal year from 2013 through 2023. Figure 1 plots the resulting EPU coefficients and their 95% confidence intervals. The dashed horizontal line represents the full-sample estimate. The leave-one-year-out coefficients range from 1.061 to 1.517, remain positive and statistically significant in every iteration, and exhibit no abrupt change when any particular year is omitted. Notably, excluding 2020 produces a larger rather than smaller coefficient, indicating that the onset of the pandemic

Table 7: Economic Policy Uncertainty and Employee-Related CSR Disclosure: Time-Trend and COVID-19 Robustness

This table examines whether the positive association between economic policy uncertainty and employee-related attention in CSR reports is robust to alternative controls for secular time trends and the COVID-19 period. The dependent variable is *People Share*. Column (1) reports the baseline specification. Column (2) adds a linear time trend. Column (3) includes an indicator for fiscal years 2020–2021. Column (4) includes both the linear trend and the COVID-19 indicator. Column (5) excludes fiscal years 2020–2021 from the estimation sample. All specifications include firm fixed effects and the full set of controls. Standard errors are clustered at the firm level.

Variables	(1) Baseline	(2) Linear Trend	(3) COVID	(4) Trend and COVID	(5) Exclude COVID
EPU_{t-1}	1.330*** (5.100)	1.137*** (4.487)	0.806*** (2.801)	0.722** (2.570)	0.788** (2.217)
<i>Linear Trend</i>		0.163** (2.326)		0.127* (1.747)	
<i>COVID Period</i>			1.469*** (3.636)	1.284*** (3.070)	
Observations	6,037	6,037	6,037	6,037	4,110
R-squared	0.686	0.687	0.687	0.688	0.712
Controls	YES	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES	YES
Cluster	Firm	Firm	Firm	Firm	Firm
Linear Trend	NO	YES	NO	YES	NO
COVID Indicator	NO	NO	YES	YES	NO
Exclude FY2020–FY2021	NO	NO	NO	NO	YES

Note: Robust t-statistics are reported in parentheses. Standard errors are clustered at the firm level.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

does not drive the baseline finding.

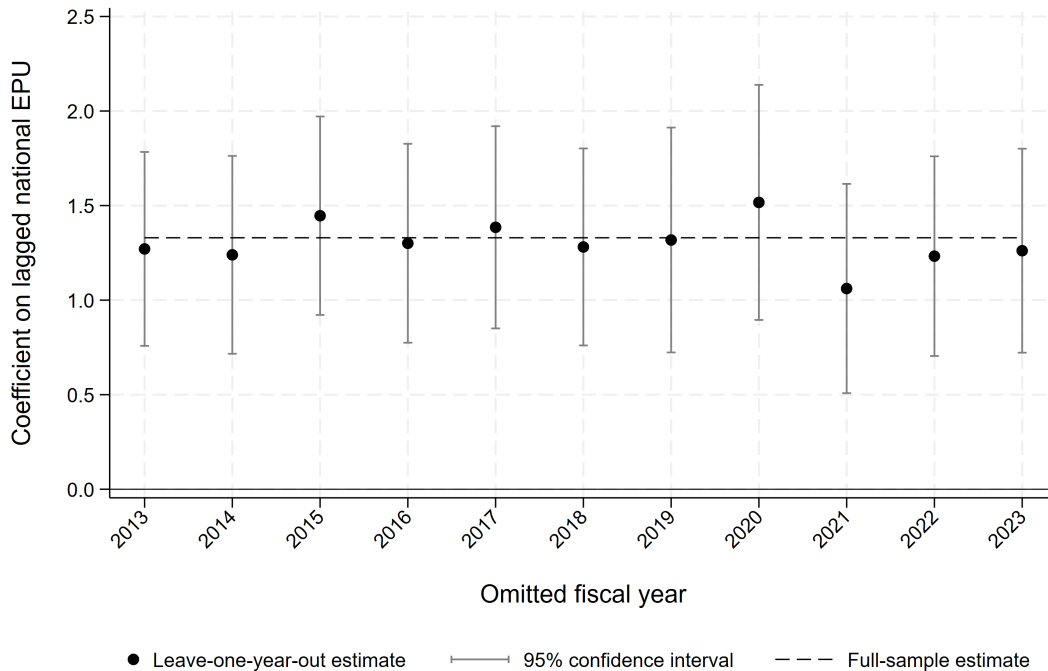


Fig. 1. Leave-One-Year-Out Estimates of the Association between *EPU* and *People Share*

Taken together, these tests indicate that the positive association between national EPU and employee-related disclosure is not attributable solely to a linear reporting trend, the COVID-19 period, or a single influential fiscal year. Although the national-EPU design cannot absorb all unrestricted annual shocks, the stability of the coefficient across these specifications supports the interpretation that the baseline finding is not mechanically driven by the most salient temporal features of the sample.

4.2.3. *Employee Intensity and Stakeholder Attention Allocation*

We next examine whether the shift toward people-related disclosure is stronger when employees are more central to the firm’s operating model. If the increase in people-related report attention reflects stakeholder-specific salience rather than a generic change in CSR reporting style, the association should be stronger among firms for which employees represent a more important input.

We measure *Employee Intensity* using the number of employees scaled by the firm’s total assets from Compustat. For each firm, we compute the average value of employees-to-assets

over the sample period and standardize this firm-level measure to have mean zero and unit variance. We use a firm-level average rather than contemporaneous employee intensity to capture a relatively stable operating characteristic and to reduce concerns that short-run changes in employment or assets mechanically respond to the same uncertainty shock. We estimate the following specification:

$$\begin{aligned} \textit{People Share}_{i,t} = & \beta_0 + \beta_1 \textit{Employee Intensity}_i + \beta_2 \textit{EPU}_{t-1} + \beta_3 (\textit{EPU}_{t-1} \times \textit{Employee Intensity}_i) \\ & + \gamma \mathbf{X}_{i,t} + \alpha_i + \lambda_t + \varepsilon_{i,t} \end{aligned} \quad (4)$$

where *People Share*_{*i,t*} is the share of CSR-report content devoted to employee-related topics, *EPU*_{*t-1*} is lagged national economic policy uncertainty, and *Employee Intensity*_{*i*} is the standardized firm-level average of employees scaled by assets. α_i and λ_t represent firm and year fixed effects, respectively. Because employee intensity is time invariant, its main effect is absorbed by firm fixed effects. The coefficient of interest is therefore the interaction between EPU and employee intensity. In specifications with year fixed effects, this interaction captures whether employee-intensive firms shift more strongly toward people-related disclosure in high-EPU periods relative to less employee-intensive firms, after absorbing common time-series shocks.

We report three specifications that incrementally tighten the fixed-effect structure and standard-error adjustment. The first includes firm fixed effects and firm-clustered standard errors. The second adds year fixed effects while continuing to cluster standard errors at the firm level. The third includes firm and year fixed effects and two-way clustered standard errors by firm and fiscal year.

Table 8 reports the results. The coefficient on the interaction between lagged EPU and employee intensity is positive across all three specifications. In Column (1), with firm fixed effects and firm-clustered standard errors, the coefficient is 0.258 and statistically significant at the 5 percent level. In Column (2), after adding year fixed effects, the coefficient is 0.275. In Column (3), with firm and year fixed effects and two-way clustering by firm and fiscal year, the coefficient remains 0.275 and is statistically significant.

The magnitude is modest, but the pattern is consistent with the stakeholder-attention

Table 8: Employee Intensity and Attention to Employee-Related CSR Disclosure

This table examines whether the reallocation of CSR-report attention toward employee-related topics under policy uncertainty is stronger among employee-intensive firms. The dependent variable is the share of CSR-report content classified as people-related using FinBERT. EPU_{t-1} is the lagged national economic policy uncertainty index, standardized within the disclosure sample. Employee intensity is the firm-level average of Compustat employees scaled by total assets over the sample period, standardized to have mean zero and unit variance. Because employee intensity is time invariant, its main effect is absorbed by firm fixed effects. All specifications include firm-level controls, state-level macroeconomic controls, and equity-market uncertainty controls. Column (1) includes firm fixed effects and firm-clustered standard errors. Column (2) adds year fixed effects and clusters standard errors at the firm level. Column (3) includes firm and year fixed effects and two-way clusters standard errors by firm and fiscal year. VIX is omitted from columns (2) and (3) because it is absorbed by year fixed effects.

Variables	(1) People Share	(2) People Share	(3) People Share
$EPU_{t-1} \times Employee\ Intensity_i$	0.258** (2.130)	0.275** (2.250)	0.275** (2.291)
Observations	6,030	6,030	6,030
R-squared	0.687	0.689	0.689
Controls	YES	YES	YES
Firm FE	YES	YES	YES
Year FE	NO	YES	YES
Cluster	Firm	Firm	Firm-Year

Note: Robust t-statistics are reported in parentheses.

Standard errors are clustered at the firm level in Columns (1) and (2), and two-way clustered by firm and fiscal year in Column (3).

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

interpretation of *H1*. The result indicates that the relation between EPU and people-related disclosure is more pronounced among employee-intensive firms. We interpret this test as cross-sectional validation rather than as a separate source of causal identification. Employee intensity is not randomly assigned, and the design relies on employee intensity capturing a relatively stable feature of the firm’s operating model. Nevertheless, the concentration of the EPU relation among employee-intensive firms is less consistent with a purely generic reporting trend and more consistent with the view that employee salience matters for the allocation of CSR-report attention.

Overall, Tables 6 through 8 provide the core disclosure-composition evidence of the paper. Firms do not merely increase disclosure quality or transparency, but also shift the composition of CSR reports across stakeholder topics. The evidence points to greater relative attention to employee-related disclosure, while the tone tests suggest that this shift is not driven by a systematic change in employee-related sentiment. Disclosure-composition evidence alone, however, does not show whether employee-related disclosure is associated with stakeholder-side outcomes. We therefore turn to Glassdoor reviews to examine whether employee-related disclosure under uncertainty is associated with subsequent employee perceptions.

4.3. Employee Perceptions, Evidence from Glassdoor

4.3.1. National-Level EPU and Employee Perceptions

We next examine whether employee-related CSR disclosure is associated with subsequent employee perceptions. This analysis tests *H2* and provides stakeholder-side evidence on the relevance of CSR disclosure content. The prediction is not that employee-related disclosure is uniformly associated with more favorable employee perceptions. Rather, *H2* predicts that this association is stronger when policy uncertainty is high, because information about job stability, firm prospects, and managerial priorities is likely to become more salient during uncertain periods.

We do not assume that employees directly read CSR reports. CSR reports are public disclosure documents, and their content may diffuse through corporate websites, recruiting materials, internal communication, media coverage, stakeholder intermediaries, and labor-

market platforms (Bushee et al., 2010). The Glassdoor tests therefore do not require direct report readership by employees. Instead, they examine whether employee-related content in public CSR disclosure is associated with subsequent employee perceptions and employer-reputation outcomes.

We estimate the following model on the intersection of firm-years with sufficient Glassdoor coverage, validated CSR report text, non-missing EPU measures, and baseline controls:

$$\begin{aligned} \Delta Rating_{i,t+1} = & \beta_0 + \beta_1 People\ Share_{i,t} + \beta_2 EPU_{t-1} + \beta_3 (People\ Share_{i,t} \times EPU_{t-1}) \\ & + \beta_4 EPU_t + \gamma \mathbf{X}_{i,t} + \alpha_i + \varepsilon_{i,t} \end{aligned} \quad (5)$$

where $\Delta Rating_{i,t+1}$ is the one-year-ahead change in an employee-perception measure (Green et al., 2019) and $People\ Share_{i,t}$ is the employee-disclosure share. α_i represents firm fixed effects. We standardize EPU and $People\ Share$ within the estimation sample. The main uncertainty variable is EPU_{t-1} , because the disclosure decision is formed under the uncertainty environment preceding the CSR report. We also control for contemporaneous EPU_t to reduce the concern that the interaction captures employees' direct response to the current macroeconomic environment. The employee-perception results are qualitatively similar without the contemporaneous EPU control.⁵

We examine three primary ratings: *rating*, *recommend*, and *outlook*. We also examine a composite index based on these three outcomes. Finally, we examine changes in CEO approval and job satisfaction as comparison outcomes. CEO approval captures assessment of a specific executive, while job satisfaction aggregates workplace sub-ratings such as compensation, work-life balance, culture, leadership, and career opportunities. These outcomes provide useful comparisons because they may be less directly related to broad CSR-report content in the short run.

Table 9 reports the results. Columns (1) through (3) examine the primary employee-perception outcomes. The interaction between employee-related disclosure and EPU is positive across all three primary employee-perception outcomes. It is statistically significant at

⁵The employee-response result is not sensitive to whether we control for contemporaneous EPU. Untabulated results show qualitatively similar coefficients when the contemporaneous EPU control is excluded.

Table 9: Employee-Related CSR Disclosure and Subsequent Glassdoor Perceptions

This table examines whether employee-related CSR disclosure is associated with subsequent employee perceptions when policy uncertainty is high. The dependent variables are one-year-ahead changes in Glassdoor outcomes: overall rating, recommendation, business outlook, the composite employee-perception index, CEO approval, and job satisfaction. The key variable is the interaction between the people-topic share of CSR reports and lagged national EPU, both standardized within the estimation sample. The table provides stakeholder-side evidence on whether employee-related CSR disclosure under uncertainty is associated with externally observable employee-perception and employer-reputation outcomes. All specifications include firm fixed effects and controls. Standard errors are clustered at the firm level.

	(1)	(2)	(3)
Variables	Δ Overall Rating	Δ Recommendation	Δ Business Outlook
<i>People Share_{i,t}</i>	0.005 (0.241)	-0.014 (-0.656)	-0.036 (-1.478)
<i>EPU_{t-1}</i>	-0.002 (-0.053)	0.052 (1.148)	0.115*** (2.602)
<i>People Share_{i,t} × EPU_{t-1}</i>	0.020* (1.662)	0.021* (1.688)	0.029** (2.320)
Observations	3,630	3,623	3,623
R-squared	0.167	0.132	0.185
Controls	YES	YES	YES
Firm FE	YES	YES	YES
Year FE	NO	NO	NO
Cluster	Firm	Firm	Firm
	(4)	(5)	(6)
Variables	Δ Composite Index	Δ CEO Approval	Δ Job Satisfaction
<i>People Share_{i,t}</i>	-0.016 (-0.702)	-0.007 (-0.272)	0.015 (0.683)
<i>EPU_{t-1}</i>	0.060 (1.373)	0.083* (1.782)	0.038 (0.832)
<i>People Share_{i,t} × EPU_{t-1}</i>	0.026** (2.045)	0.013 (0.881)	0.003 (0.204)
Observations	3,630	3,593	3,624
R-squared	0.170	0.151	0.149
Controls	YES	YES	YES
Firm FE	YES	YES	YES
Year FE	NO	NO	NO
Cluster	Firm	Firm	Firm

Note: Robust t-statistics are reported in parentheses. Standard errors are clustered at the firm level.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

the 10 percent level for overall rating and recommendation, and at the 5 percent level for business outlook. The coefficients are 0.020 for overall rating, 0.021 for recommendation, and 0.029 for business outlook. Because People and EPU are standardized, these estimates indicate that the association between employee-related disclosure and subsequent employee perceptions becomes more positive when policy uncertainty is one standard deviation higher.

The magnitudes are modest in absolute terms, but meaningful in this setting. The dependent variables are changes in firm-year averages of Glassdoor ratings, which are relatively sticky. In addition, Glassdoor reviews are publicly observable and contribute to a firm's employer reputation. Thus, the results suggest that employee-related CSR disclosure under uncertainty is associated with favorable changes in externally observable employee-perception outcomes.

The direct effect of employee-related disclosure is statistically insignificant across the first three columns. This pattern is consistent with the conditional nature of *H2*. Employee-related disclosure does not appear to predict more favorable employee perceptions on average. Instead, its association becomes more positive when uncertainty is high. This pattern is consistent with the view that employee-related disclosure is more relevant when uncertainty makes information about workforce stability, operating continuity, benefits, and managerial priorities more salient.

The direct effect of EPU is positive and significant for business outlook but insignificant for overall rating and recommendation. This pattern is plausible because business outlook is a forward-looking measure and may be more directly related to expectations about the firm's future prospects. Overall rating and recommendation capture broader assessments of the employment relationship and appear to be more closely associated with employee-related disclosure when uncertainty is high.

Columns (4) through (6) examine the composite index and the two comparison outcomes. Column (4) shows that the interaction is positive and statistically significant for the composite employee-perception index, with a coefficient of 0.026. This result indicates that the pattern across the primary perception measures is not confined to a single rating dimension. In contrast, Columns (5) and (6) show insignificant interactions for CEO approval and job satisfaction. This distinction suggests that the association is concentrated in broad firm-level employee perceptions and employer reputation rather than in assessment of a specific

executive or in all workplace sub-ratings.

Although the use of subsequent employee perceptions helps establish timing, these tests do not rule out time-varying firm conditions that jointly affect employee-related disclosure and employee sentiment under high uncertainty. For example, unobserved changes in work-force strategy, operating conditions, internal communication, or employee-relations practices could increase both employee-related CSR disclosure and subsequent employee perceptions. We therefore interpret the Glassdoor results as stakeholder-side evidence consistent with the relevance of employee-related disclosure content, rather than as a causal estimate of disclosure on employee sentiment.

4.3.2. State-Level EPU and Employee Perceptions

Finally, we examine whether the employee-perception results hold when policy uncertainty is measured at the state level. State-level EPU is matched to firms through their headquarters states and provides within-year cross-sectional variation in the local policy environment. This design allows us to include year fixed effects and absorb national shocks, broad labor-market trends, and common time-series movements in Glassdoor perceptions that could otherwise confound the national-EPU specification. We also include two-way clustered standard errors by firm and fiscal year, and control for contemporaneous CSR activity to reduce the concern that the results reflect underlying CSR activity rather than disclosure content.

Table 10 reports the results. The interaction between employee-related disclosure and state-level EPU is positive for overall rating, recommendation, business outlook, and the composite employee-perception index. It is statistically significant at the 10 percent level for overall rating, at the 5 percent level for recommendation and the composite index, and at the 1 percent level for business outlook. The coefficients range from 0.018 to 0.029 across these four outcomes. The interaction is insignificant for CEO approval and job satisfaction, consistent with the pattern in Table 9.

The persistence of the interaction after adding year fixed effects and two-way clustered standard errors is important because it shows that the employee-perception evidence is not driven only by national time-series variation or by one-way clustering choices. The inclusion of contemporaneous CSR activity further reduces the concern that the relation captures

Table 10: Employee-Related CSR Disclosure and Glassdoor Perceptions Using State-Level EPU

This table repeats the Glassdoor employee-perception analysis using state-level EPU matched to firms' headquarters states. The dependent variables are one-year-ahead changes in Glassdoor outcomes: overall rating, recommendation, business outlook, the composite employee-perception index, CEO approval, and job satisfaction. The key variable is the interaction between the people-topic share of CSR reports and lagged state-level EPU, both standardized within the estimation sample. The table assesses whether the employee-side evidence is similar when policy uncertainty varies across firms through their headquarters-state policy environment. All specifications include firm fixed effects, year fixed effects, controls, and contemporaneous CSR activity. Standard errors are two-way clustered by firm and fiscal year.

	(1)	(2)	(3)
Variables	Δ Overall Rating	Δ Recommendation	Δ Business Outlook
<i>People Share_{i,t}</i>	0.017 (0.824)	-0.002 (-0.091)	-0.024 (-1.029)
<i>State EPU_{t-1}</i>	0.016 (0.397)	-0.008 (-0.238)	-0.027 (-0.854)
<i>People Share_{i,t} × State EPU_{t-1}</i>	0.018* (1.801)	0.019** (2.045)	0.029*** (2.685)
<i>ESG Score_t</i>	0.000 (-0.131)	0.000 (-0.098)	0.002 (0.868)
Observations	3,205	3,202	3,202
R-squared	0.168	0.136	0.188
Controls	YES	YES	YES
CSR Activity Control	YES	YES	YES
Firm FE	YES	YES	YES
Year FE	YES	YES	YES
Cluster	Firm-Year	Firm-Year	Firm-Year
	(4)	(5)	(6)
Variables	Δ Composite Index	Δ CEO Approval	Δ Job Satisfaction
<i>People Share_{i,t}</i>	-0.003 (-0.121)	-0.004 (-0.116)	0.017 (0.828)
<i>State EPU_{t-1}</i>	-0.007 (-0.202)	0.026 (0.933)	0.001 (0.041)
<i>People Share_{i,t} × State EPU_{t-1}</i>	0.025** (2.547)	0.008 (0.783)	0.004 (0.391)
<i>ESG Score_t</i>	0.001 (0.403)	0.002 (0.824)	0.002 (0.637)
Observations	3,205	3,180	3,203
R-squared	0.171	0.156	0.148
Controls	YES	YES	YES
CSR Activity Control	YES	YES	YES
Firm FE	YES	YES	YES
Year FE	YES	YES	YES
Cluster	Firm-Year	Firm-Year	Firm-Year

Note: Robust t-statistics are reported in parentheses.

Standard errors are two-way clustered by firm and fiscal year.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

firms’ underlying CSR activity rather than employee-related disclosure content. Nevertheless, these specifications remain association tests. They strengthen the stakeholder-side interpretation by showing that the conditional relation between employee-related disclosure and subsequent employee perceptions appears when uncertainty varies across firms through their headquarters-state policy environment.

Taken together, Table 9 and Table 10 provide evidence consistent with *H2*. Employee-related disclosure is associated with more favorable subsequent employee perceptions specifically when policy uncertainty is elevated. This conditional pattern helps distinguish the evidence from two alternatives. If employee-related disclosure were purely symbolic and uninformative, we would be less likely to observe a systematic association with subsequent perceptions. If firms with better employee relations simply disclosed more about employees in all periods, the direct effect of employee-related disclosure should be consistently positive. Instead, the association becomes positive when uncertainty is high, consistent with CSR disclosure carrying greater stakeholder-side relevance when the external operating environment is more difficult to interpret. This interpretation remains indirect, however, because we do not observe the dissemination channel through which CSR-report content becomes salient to employees or labor-market participants.

5. Conclusion

This study examines how corporate social responsibility (CSR) disclosure changes under economic policy uncertainty. Using U.S. public firms from 2013 to 2023, we combine CSR disclosure-transparency measures, FinBERT-based textual analysis of corporate responsibility reports, and employee reviews from Glassdoor. We document that firms expand CSR disclosure transparency when policy uncertainty rises, that CSR reports contain more uncertainty-related economic and policy language, and that report attention shifts toward employee-related topics. The increase in employee-related disclosure remains after accounting for a linear reporting trend and the COVID-19 period and is not driven by any single fiscal year. We further show that this shift is stronger among employee-intensive firms and that employee-related CSR disclosure is positively associated with subsequent employee perceptions when uncertainty is high.

These findings contribute to the literature on CSR disclosure under uncertainty. Prior

work has largely examined CSR performance, ratings, overall disclosure, or report-level similarity. We extend this literature by showing that policy uncertainty affects a different disclosure margin: the allocation of stakeholder attention within CSR reports. This distinction is important because aggregate CSR disclosure measures may miss meaningful shifts in the internal composition of firm-generated reports. Our evidence indicates that CSR disclosure under uncertainty changes not only in extent, but also in stakeholder emphasis.

The paper also contributes to research on CSR disclosure characteristics and stakeholder-side outcomes. By measuring the share of CSR reports devoted to employee-related topics, we capture within-report variation that aggregate disclosure measures and ESG ratings are not designed to detect. The conditional association between employee-related CSR disclosure and subsequent Glassdoor perceptions suggests that disclosure composition is related to stakeholder-side outcomes, especially when uncertainty makes information about firm priorities more salient.

Our results should be read with several caveats. Our identification relies on firm fixed effects, lagged controls, market- and state-level macroeconomic controls, and within-year variation from state-level and gubernatorial-election policy uncertainty, which together mitigate concerns about persistent cross-sectional differences and aggregate shocks common to all firms. FinBERT-based topic shares and crowd-sourced employee reviews also measure disclosure attention and employee sentiment with possible error. We therefore interpret the evidence as showing that employee-related CSR disclosure is associated with stakeholder-side perceptions under uncertainty, rather than as a causal estimate of employee reactions to CSR reports. Future research can examine whether similar reallocations of disclosure attention occur across other stakeholder groups, other disclosure settings, and other sources of uncertainty.

References

- Akerlof, G.A., 1982. Labor contracts as partial gift exchange. *The Quarterly Journal of Economics* 97, 543–569.
- Albuquerque, R., Koskinen, Y., Yang, S., Zhang, C., 2020. Resiliency of environmental and social stocks: An analysis of the exogenous covid-19 market crash. *The Review of Corporate Finance Studies* 9, 593–621.
- Ashford, S.J., 1986. Feedback-seeking in individual adaptation: A resource perspective. *Academy of Management journal* 29, 465–487.
- Ashford, S.J., Cummings, L.L., 1983. Feedback as an individual resource: Personal strategies of creating information. *Organizational Behavior and Human Performance* 32, 370–398.
- Ashforth, B.E., Gibbs, B.W., 1990. The double-edge of organizational legitimation. *Organization Science* 1, 177–194.
- Atanassov, J., Julio, B., Leng, T., 2024. The bright side of political uncertainty: The case of r&d. *The Review of Financial Studies* 37, 2937–2970.
- Bae, K.H., El Ghouli, S., Gong, Z.J., Guedhami, O., 2021. Does csr matter in times of crisis? evidence from the covid-19 pandemic. *Journal of Corporate Finance* 67, 101876.
- Baker, G., Gibbons, R., Murphy, K.J., 2002. Relational contracts and the theory of the firm. *The Quarterly Journal of Economics* 117, 39–84.
- Baker, S.R., Bloom, N., Davis, S.J., 2016. Measuring economic policy uncertainty. *The Quarterly Journal of Economics* 131, 1593–1636.
- Baker, S.R., Davis, S.J., Levy, J.A., 2022. State-level economic policy uncertainty. *Journal of Monetary Economics* 132, 81–99.
- Baldini, M., Maso, L.D., Liberatore, G., Mazzi, F., Terzani, S., 2018. Role of country-and firm-level determinants in environmental, social, and governance disclosure. *Journal of Business Ethics* 150, 79–98.

- Berg, F., Kölbel, J.F., Rigobon, R., 2022. Aggregate confusion: The divergence of esg ratings. *Review of Finance* 26, 1315–1344.
- Bernanke, B.S., 1983. Irreversibility, uncertainty, and cyclical investment. *The Quarterly Journal of Economics* 98, 85–106.
- Bhattacharya, U., Hsu, P.H., Tian, X., Xu, Y., 2017. What affects innovation more: policy or policy uncertainty? *Journal of Financial and Quantitative Analysis* 52, 1869–1901.
- Bloom, N., 2009. The impact of uncertainty shocks. *Econometrica* 77, 623–685.
- Bonaime, A., Gulen, H., Ion, M., 2018. Does policy uncertainty affect mergers and acquisitions? *Journal of Financial Economics* 129, 531–558.
- Bourveau, T., Chowdhury, M., Le, A., Rouen, E., 2022. Human capital disclosures. Available at SSRN 4138543 .
- Bushee, B.J., Core, J.E., Guay, W., Hamm, S.J., 2010. The role of the business press as an information intermediary. *Journal of Accounting Research* 48, 1–19.
- Chatjuthamard, P., Treepongkaruna, S., Jiraporn, P., Jiraporn, N., 2021. Does firm-level political risk influence corporate social responsibility (csr)? evidence from earnings conference calls. *Financial Review* 56, 721–741.
- Chen, T., Dong, H., Lin, C., 2020. Institutional shareholders and corporate social responsibility. *Journal of Financial Economics* 135, 483–504.
- Chi, W., Wu, S.J., Zheng, Z., 2020. Determinants and consequences of voluntary corporate social responsibility disclosure: Evidence from private firms. *The British Accounting Review* 52, 100939.
- Christensen, D.M., Serafeim, G., Sikochi, A., 2022. Why is corporate virtue in the eye of the beholder? the case of esg ratings. *The Accounting Review* 97, 147–175.
- Clayton, J., 2020. Modernizing the framework for business, legal proceedings and risk factor disclosures. United States Securities and Exchange Commission .

- Di Giuli, A., Kostovetsky, L., 2014. Are red or blue companies more likely to go green? politics and corporate social responsibility. *Journal of Financial Economics* 111, 158–180.
- Duff, A., 2017. Corporate social responsibility as a legitimacy maintenance strategy in the professional accountancy firm. *The British Accounting Review* 49, 513–531.
- Duong, H.N., Nguyen, J.H., Nguyen, M., Rhee, S.G., 2020. Navigating through economic policy uncertainty: The role of corporate cash holdings. *Journal of Corporate Finance* 62, 101607.
- Edmans, A., 2011. Does the stock market fully value intangibles? employee satisfaction and equity prices. *Journal of Financial Economics* 101, 621–640.
- Eisenberger, R., Huntington, R., Hutchison, S., Sowa, D., 1986. Perceived organizational support. *Journal of Applied Psychology* 71, 500.
- Fiechter, P., Hitz, J.M., Lehmann, N., 2022. Real effects of a widespread csr reporting mandate: Evidence from the european union’s csr directive. *Journal of Accounting Research* 60, 1499–1549.
- Flammer, C., Luo, J., 2017. Corporate social responsibility as an employee governance tool: Evidence from a quasi-experiment. *Strategic Management Journal* 38, 163–183.
- Fu, R., Tang, Y., Chen, G., 2020. Chief sustainability officers and corporate social (ir) responsibility. *Strategic Management Journal* 41, 656–680.
- Godfrey, P.C., Merrill, C.B., Hansen, J.M., 2009. The relationship between corporate social responsibility and shareholder value: An empirical test of the risk management hypothesis. *Strategic Management Journal* 30, 425–445.
- Green, T.C., Huang, R., Wen, Q., Zhou, D., 2019. Crowdsourced employer reviews and stock returns. *Journal of Financial Economics* 134, 236–251.
- Greening, D.W., Turban, D.B., 2000. Corporate social performance as a competitive advantage in attracting a quality workforce. *Business & Society* 39, 254–280.
- Gulen, H., Ion, M., 2016. Policy uncertainty and corporate investment. *The Review of Financial Studies* 29, 523–564.

- Hannan, R.L., 2005. The combined effect of wages and firm profit on employee effort. *The Accounting Review* 80, 167–188.
- Hasan, M.M., Jiang, H., 2023. Political sentiment and corporate social responsibility. *The British Accounting Review* 55, 101170.
- Holmström, B., 1979. Moral hazard and observability. *The Bell Journal of Economics* , 74–91.
- Holmstrom, B., Milgrom, P., 1991. Multitask principal–agent analyses: Incentive contracts, asset ownership, and job design. *The Journal of Law, Economics, and Organization* 7, 24–52.
- Huang, A.H., Wang, H., Yang, Y., 2023. Finbert: A large language model for extracting information from financial text. *Contemporary Accounting Research* 40, 806–841.
- Jens, C.E., 2017. Political uncertainty and investment: Causal evidence from us gubernatorial elections. *Journal of Financial Economics* 124, 563–579.
- Jia, J., Li, Z., 2020. Does external uncertainty matter in corporate sustainability performance? *Journal of Corporate Finance* 65, 101743.
- Khan, M., Serafeim, G., Yoon, A., 2016. Corporate sustainability: First evidence on materiality. *The Accounting Review* 91, 1697–1724.
- Kruger, S., Maturana, G., Nickerson, J., 2023. How has covid-19 impacted research production in economics and finance? *The Review of Financial Studies* 36, 3348–3381.
- Lins, K.V., Servaes, H., Tamayo, A., 2017. Social capital, trust, and firm performance: The value of corporate social responsibility during the financial crisis. *The Journal of Finance* 72, 1785–1824.
- Marquis, C., Toffel, M.W., Zhou, Y., 2016. Scrutiny, norms, and selective disclosure: A global study of greenwashing. *Organization Science* 27, 483–504.
- Mekhaimer, M., Soliman, M., Zhang, W., 2024. Does political uncertainty obfuscate narrative disclosure? *The Accounting Review* 99, 367–394.

- Nagar, V., Schoenfeld, J., Wellman, L., 2019. The effect of economic policy uncertainty on investor information asymmetry and management disclosures. *Journal of Accounting and Economics* 67, 36–57.
- Nguyen, D.D., Sila, V., 2025. Corporate hiring under uncertainty. *The Review of Corporate Finance Studies* 14, 949–988.
- Niu, Z., Zhou, X., 2023. Political uncertainty and corporate sustainability: how does official turnover affect environmental investment. *Asia-Pacific Journal of Accounting & Economics* 30, 1184–1203.
- Ocasio, W., 1997. Towards an attention-based view of the firm. *Strategic Management Journal* 18, 187–206.
- Peng, D., Colak, G., Shen, J., 2023. Lean against the wind: The effect of policy uncertainty on a firm’s corporate social responsibility strategy. *Journal of Corporate Finance* 79, 102376.
- Qiu, Y., Shaukat, A., Tharyan, R., 2016. Environmental and social disclosures: Link with corporate financial performance. *The British Accounting Review* 48, 102–116.
- Rabin, M., 1993. Incorporating fairness into game theory and economics. *The American Economic Review* , 1281–1302.
- Rousseau, D.M., 1995. Psychological contracts in organizations: Understanding written and unwritten agreements. Thousand Oaks .
- Spence, M., 1973. Job market signaling. *Quarterly Journal of Economics* 87, 354–374.
- Su, W., Peng, M.W., Tan, W., Cheung, Y.L., 2016. The signaling effect of corporate social responsibility in emerging economies. *Journal of Business Ethics* 134, 479–491.
- Tsang, A., Frost, T., Cao, H., 2023. Environmental, social, and governance (esg) disclosure: A literature review. *The British Accounting Review* 55, 101149.
- de Villiers, C., Jia, J., Li, Z., 2022. Corporate social responsibility: A review of empirical research using thomson reuters asset4 data. *Accounting & Finance* 62, 4523–4568.

- Wang, Y., Tsang, A., Xiang, Y., Yan, S., 2024. How can regulators affect corporate social responsibility? evidence from regulatory disclosures of consumer complaints in the us. *The British Accounting Review* 56, 101280.
- Xue, X., Wang, L., Hu, N., 2024. Economic policy uncertainty and corporate social responsibility disclosure similarity: evidence from china. *The British Accounting Review* 56, 101305.
- Yuan, T., Wu, J.G., Qin, N., Xu, J., 2022. Being nice to stakeholders: The effect of economic policy uncertainty on corporate social responsibility. *Economic Modelling* 108, 105737.
- Zingales, L., 2000. In search of new foundations. *The Journal of Finance* 55, 1623–1653.

Appendix I

Table A1: Variable definitions

Variable	Definition	Source
Uncertainty		
<i>EPU</i>	National economic policy uncertainty over the fiscal-year window, scaled by 100	Baker et al. (2016)
<i>EPU_State</i>	State-level economic policy uncertainty over the fiscal-year window, scaled by 100	Baker et al. (2022)
<i>VIX</i>	Yearly average of the daily closing CBOE S&P500 Volatility Index	CBOE Indexes
<i>GUBER</i>	Indicator equal to one for firm-years with a gubernatorial election in the firm's headquarters state, and zero otherwise	CQ Press Electronic Library
CSR Reporting		
<i>CSR</i>	CSR reporting transparency score, summing the indicator variable of Report, OECD, Global, GRI, and Assurance	ASSET4
<i>Report</i>	Indicates (1/0) whether a CSR report is published	ASSET4
<i>OECD</i>	Indicates (1/0) whether the report is compliant with OECD reporting guidelines	ASSET4
<i>Global</i>	Indicates (1/0) whether the report covers a global scope	ASSET4
<i>GRI</i>	Indicates (1/0) whether the report is compliant with GRI reporting	ASSET4
<i>Assurance</i>	Indicates (1/0) whether the report is audited	ASSET4
<i>ESG Score</i>	ASSET4 ESG Rating	ASSET4
<i>ESG Disclosure Score</i>	Overall Bloomberg ESG Disclosure Score	Bloomberg
<i>Uncertainty</i>	Frequency of uncertainty-related terms in the CSR report, scaled per 100 words.	ResponsibilityReports.com
<i>Economy</i>	Frequency of economy-related terms in the CSR report, scaled per 100 words	ResponsibilityReports.com
<i>Policy</i>	Frequency of policy-related terms in the CSR report, scaled per 100 words.	ResponsibilityReports.com
<i>EPU Tokens</i>	Proportion of paragraphs containing both uncertainty and economy/policy keywords, scaled by tokens	ResponsibilityReports.com
<i>Sentiment</i>	Sentiment of the full CSR report text, multiplied by 100	ResponsibilityReports.com
<i>Ln(Words)</i>	Natural logarithm of total CSR report words	ResponsibilityReports.com
<i>Token Ratio</i>	Ratio of model tokens to raw words in the CSR report, multiplied by 100	ResponsibilityReports.com
<i>People Share</i>	Percentage of CSR report text classified as employee- or workforce-oriented CSR disclosure	ResponsibilityReports.com
<i>Climate Share</i>	Percentage of CSR report text classified as climate- or environment-related CSR disclosure	ResponsibilityReports.com
<i>Social Share</i>	Percentage of CSR report text classified as social- or community-related CSR disclosure	ResponsibilityReports.com
<i>Gov Share</i>	Percentage of CSR report text classified as corporate-governance-related CSR disclosure	ResponsibilityReports.com
<i>People Tone</i>	Sentiment of people-related CSR disclosure, multiplied by 100	ResponsibilityReports.com
Glassdoor		
Δ Overall Rating	Change in average overall employer rating from the current to the following fiscal-year window	Glassdoor

Continued on next page

Table A1 continued

Variable	Definition	Source
Δ Recommendation	Change in average recommendation-to-friend measure from the current to the following fiscal-year window	Glassdoor
Δ Business Outlook	Change in average business outlook measure from the current to the following fiscal-year window	Glassdoor
Δ Composite Index	Change in average employee perception index from the current to the following fiscal-year window; the employee perception index is the average of the standardized changes in overall rating, recommendation-to-friend, and business outlook	Glassdoor
Δ CEO Approval	Change in average CEO approval measure from the current to the following fiscal-year window	Glassdoor
Δ Job Satisfaction	Change in average employee satisfaction index from the current to the following fiscal-year window; The satisfaction index is the average of five Glassdoor sub-ratings: career opportunities, compensation and benefits, culture and values, senior leadership, and work-life balance	Glassdoor
Controls		
Tobin	Tobin's Q, calculated as market value of equity plus book assets minus book equity and deferred taxes, scaled by book assets	COMPUSTAT
CFO	Income before extraordinary items plus depreciation and amortization scaled by total asset	COMPUSTAT
Sale	Natural logarithm of one plus the net sales	COMPUSTAT
EBITDA	Earnings before interest, taxes, depreciation and amortization scaled by total asset	COMPUSTAT
Leverage	Book value of debt scaled by book value of total asset	COMPUSTAT
Dividend	Dividend payout scaled by total assets	COMPUSTAT
Ret_Vol	Standard deviation of the firm's daily raw returns during the fiscal year window	COMPUSTAT
Spread	Average daily bid-ask spread during the fiscal year window	COMPUSTAT
GDP State	State-level annual GDP growth rate	BEA
Unemploy State	State-level annual unemployment rate	BEA

Appendix II

Table A2: Curated keyword lists for CSR-report textual analysis

Keyword family	Keywords and phrases
Economic policy uncertainty language	
<i>Uncertainty</i>	unknown; unpredictable; indeterminate; ambiguous; unclear; unsettled; tentative; contingent; volatile; subject to change; risk; risky; volatility; instability; lack of clarity; unreliable; indeterminacy; inconsistency; insecurity; variability
<i>Economy</i>	economy; economic; macroeconomic; unemployment; inflation; GDP; gross domestic product; recession; growth; job market; labor market; monetary policy
<i>Policy</i>	congress; deficit; interest rate; interest rates; Federal Reserve; legislation; regulation; regulatory; White House; the Fed