Beyond disclosure: Can firms be forced to spend their way to social responsibility?

Abstract

While corporate social responsibility (CSR) initiatives are traditionally understood as voluntarism, regulatory intervention into CSR is becoming increasingly common. We examine a unique and controversial regulation in India that (i) mandates the establishment of board-level CSR committees and (ii) mandates 2% of profits to be spent on CSR activities, to ask whether such a mandate can make corporations more socially responsible. We document economically substantial improvement after the law in environmental and social ratings of Indian firms compared to matched firms from the rest of the world, with significant improvement in outcome-based ESG measures that point to "real effects" of the law. Importantly, only firms complying substantively with the spending and governance mandates, by (i) increasing CSR spending substantially and deploying that spending to engaging with stakeholders rather than "tick-the-box" avenues, and (ii) establishing largely independent CSR committees with CSR expertise, experience improved ratings. Despite criticisms that mandated CSR is paradoxical, that it dilutes intrinsic motivations to do good, and even promotes rent-seeking, our study provides the first direct evidence that such mandates can be effective at promoting socially responsible business, under certain conditions.

Keywords: Corporate Social Responsibility, Regulation, CSR committee, CSR spending, ESG

1. Introduction

Traditionally, Corporate Social Responsibility (hereafter, CSR) is regarded as voluntary actions that firms undertake, beyond the requirements of the law, to promote social welfare (McWilliams and Siegel 2001). And yet, governments around the world are introducing explicit legislation on CSR. Mandatory *disclosure* of CSR and environmental, social, and governance (ESG) performance forms the most common approach thus far,[1] making CSR/ESG disclosure regulation a key policy issue of our era (Grewal and Serafeim 2020).

One perspective on CSR disclosure mandates is that they are a policy tool for regulators to "nudge" firms towards undertaking more, or better, CSR activities (Christensen, Hail, and Leuz 2021, Fiechter, Hitz, and Lehmann 2022).[2] These real effects would result from market-based mechanisms: mandating greater transparency on ESG will make ESG information more salient to decision-making by a wide range of stakeholders (customers, supply chain partners, and investors); firms with strong ESG performance will garner competitive advantages and raise more capital, incentivizing the weak performers to catch up (Grewal, Riedl, and Serafeim 2019). To the extent to which regulators seek "real effects" from disclosure mandates, this market-based approach stands in decided contrast to more traditional policy tools: enacting laws (or strengthening enforcement of existing laws) penalizing corporate behavior that is considered harmful to society (e.g., polluting, or failing to provide acceptable working conditions).

[1] A KPMG report identifies 400 sustainability reporting instruments in sixty-four countries, of which more than two-thirds are mandatory (KPMG et at. 2016, Lin 2021). In a historic milestone for CSR policymaking, a 2014 European Union (EU) Directive (2014/95/EU) makes CSR disclosure mandatory for 6,000 large, listed companies operating in its 28 states (European Commission 2014). SEC proposals to enhance climate-related disclosures are also currently being debated; if approved, they would constitute some of the first mandatory ESG-related disclosures for U.S. firms.
[2] For example, the EU Directive's Basis for Conclusions argues that "disclosure of non-financial information is vital for managing change toward a sustainable global economy by combining long-term profitability with social justice and environmental protection" (Directive 2014/95, recital 3). Christensen, Hail, and Leuz (2021) describe the underlying idea thus: "reporting and the resulting transparency are change agents, incentivizing desirable behaviors and discouraging undesirable ones".

Straddling both extremes and defying easy categorization is the approach currently being attempted in India, a move characterized as "exceedingly unusual" (Van Zile 2012) and "decidedly unorthodox" (Rana and Afsharipour 2014), a "unique innovation" (Rana and Afsharipour 2014) and a "grand experiment" (ter Veeme 2016). The Indian government's approach with Section 135 of the Companies Act mandates *spending* on CSR activities (firms meeting certain size thresholds are required to spend 2% of their average net profits on CSR). But it also leaves firms with broad discretion on how and where to spend to achieve social impact, delegating that responsibility to a *board-level CSR committee* that firms must establish, with responsibility for framing CSR policies and planning CSR expenditure. As one of the world's largest and most populous economies, this is an experiment being conducted on a grand scale, expected to affect over 3,000 companies and generate about $2bn in CSR spending. At this moment in history, as regulators contemplate a range of approaches going beyond mandated disclosure to move corporations towards better CSR/ESG performance (Lin 2021), the effectiveness of this experiment begs empirical examination. Accordingly, our study aims to evaluate: in the Indian context, has the CSR law been effective at making corporations more socially responsible?

Criticisms of Section 135 (hereafter, the "Indian CSR law" or "CSR law") have been vocal and numerous, ranging across the political and ideological spectrum. The most fundamental critique is that the law is internally contradictory, aiming to mandate behavior that has been understood so far as voluntarism, e.g., "CSR is fundamentally an inspirational exercise, and it is very difficult to legislate aspirations" (Karnani 2013). If firms lack the intrinsic motivation for CSR, it is unclear whether any law can extract meaningful improvement by fiat. Firms lacking intrinsic motivation could end up complying in form but not in substance (e.g., greenwashing, routing CSR expenditure to opaque avenues that ultimately benefit managers/shareholders).

Worse, firms could direct CSR spending toward visible, government-led projects as a means of currying political favor. Closely related are concerns on whether the spending mandate will repress voluntary behavior: for the firms that *are* inherently motivated, making CSR compulsory may dilute that motivation, instead promoting a “tick-the-box” mentality tailored to just meet legal requirements (Dharmapala and Khanna 2018, Rajgopal and Tantri 2022).

Countervailing arguments exist for why the law will be effective at eliciting more social responsibility. Characterizing the Indian law as a “soft” regulation that obliges firms to engage in CSR while leaving flexibility in implementation, Panwar, Pandey, Suddaby, and Vidal (2022) argue that in the Indian context, CSR is not only nascent but also met with skepticism by a public inured to corruption; firms struggle to reap the business benefits from CSR in such a setting. In such a context, the law can be instrumental in creating a shared understanding of CSR, which helps to make CSR efforts more credible. The increased legitimacy of CSR will in turn motivate firms to engage by making it cost-beneficial for them to do so – invoking market-based mechanisms like those used in predicting the real effects of disclosure regulation. Moreover, the spending mandate garnered much (negative) attention, but the law also mandates CSR governance at the firm level (a requirement that has received little commentary). Integrating CSR into organizational structure could generate internal learning on opportunities to align CSR causes to overall corporate strategy – spurring firms into greater CSR engagement.

With multiple arguments for – and against – the law’s effectiveness, we examine the following specific questions: (i) has the law generated real improvement in Indian firms’ environmental and social performance? and (ii) which of the mechanisms in the law (spending, governance) can those improvements, if any, be attributed to?

To measure socially responsible behavior, we rely on the Environmental, Social, and Governance (ESG) ratings assigned to firms by Sustainalytics. These ratings have been used extensively in prior research to measure CSR performance and quality. Ratings from an independent agency should provide a more objective view of CSR performance than what would be provided by the firm itself through its various disclosures (Graves and Waddock 1994, Sharfman 1996). These ratings also condense the social, environmental, and economic evaluation of a firm's CSR activities into one parsimonious score, allowing meaningful comparisons across entities (Chatterji, Levine, and Toffel 2009).

To identify the effect of the law, we employ a difference-in-differences specification where we compare the difference in ESG ratings of Indian firms (the treatment group) before and after the implementation of the CSR law, to the corresponding difference in ratings of firms drawn from the rest of the world (the control group). Control firms are matched to treated firms based on ex-ante characteristics that are known to determine ESG ratings (Flammer 2015). Our specifications include firm and year-fixed effects to control for unobservable firm characteristics and time trends. Our sample spans 2010–2018, comprising four years before the law (2011–2014) and four years after (2015–2018), and 1,691 firm-year observations from 238 unique firms and 32 countries.

We document an economically significant increase in ESG ratings for Indian firms compared to firms from the rest of the world in the post-law period, consistent with the law engendering more responsible behavior from Indian firms as a whole. This increase persists (i) for the entire post-regulation period we examine; (ii) in comparison to four narrower control groups (China, Brazil, the US, and the European Union); and (iii) when measuring ESG performance using ratings from another independent agency (Refinitiv).

Having documented a meaningful improvement in ESG ratings overall, we drill down into the ratings to understand: where does the improvement come from? The topics listed by Section 135's Schedule VII as likely to qualify as CSR spending map more closely to the Environmental and Social dimensions than to Governance (which is already subject to stringent standards from prior regulation); [3] consistently, we find that ratings on Environmental and Social dimensions (but not Governance) increase significantly. We then ask: to the extent to which we use ratings to proxy for ESG performance, how "real" is the improvement? Parsing Sustainalytics ratings into subgroups that largely reflect inputs (e.g., policies, programs, and targets) versus outcomes (quantitative/qualitative performance), we note that inputs and disclosures improve, but outcome measures also demonstrate improvement post-law, especially on the social dimension. We conclude that the law has translated into real improvements in ESG outcomes for Indian firms.

Having documented that the law is effective at improving Indian firms' environmental and social performance, we then ask: why is it effective? I.e., what mechanisms are responsible for the improved ESG performance? We examine the two fundamental provisions of the law: (i) its spending mandate (which operates on a comply-or-explain basis), and (ii) its (mandatory) governance provisions requiring a board-level committee tasked with formulating CSR policy.

Examining the spending provision, we first document broad increases in spending: of the firms that were originally spending under 2% of profits on CSR (the "low spenders" – these represent almost 95% of our sample), 87% increase CSR spending post-law, and 29% increase CSR spending to at least 2%. Importantly, the low spenders that increase CSR spending achieve a large improvement in ESG ratings post-law; the low spenders that do not increase CSR spending

[3] Schedule VII areas include spending on health and sanitation, poverty eradication, promoting education, reducing gender and other inequalities, environmental sustainability, protecting arts and culture, assisting veterans, funds for technology incubators in Government Academic institutions and to public universities, rural / slum development, disaster relief, and contributions to designated government welfare programs.

experience any improvement in ratings. Further unpacking the quality (as opposed to only the quantity) of spending, the ratings improvement is considerably diluted for firms deploying CSR funds to political venues or (relatively opaque) family trusts.

Turning to the governance provisions, wide variation exists in the committee's independence and expertise. We label a CSR committee as "high quality" if it has (i) mostly independent directors, (ii) an independent director as its chair (both of which speak to the committee's monitoring role), and (iii) a CSR expert (speaking to the committee's advisory role). While 33% of the sample satisfies two or more of these criteria, 43% meet none; substantive implementation of the governance provisions in practice is, therefore, far less uniform. Importantly, we find a strong increase in ESG ratings only for firms with an independent and expert committee.

Our study contributes first to the literature examining the consequences of CSR-related regulations, much of which has focused on CSR disclosure mandates. Studies generally document negative impacts on firm value (Healy and Serafeim 2016; Ioannou and Serafeim 2017; Grewal, Riedl, and Serafeim 2018; Chen, Hung, and Wang 2018; Jouvenot and Krueger 2020) ;[4] however, consistent with "real effects" objectives sought by regulators (sometimes implicitly, and sometimes more explicitly as with the European Union's Directive on Non-Financial Disclosure), researchers are also documenting that disclosure mandates generate those real effects: more

[4] E.g., the EU Mandate on Non-Financial (ESG-related) Disclosure was met with a negative stock market reaction to the tune of –0.79% drop in market value (Grewal, Riedl, and Serafeim 2018), as was Dodd-Frank Act's Section 1504, which mandates disclosure of payments to host governments (Healy and Serafeim 2016), and first-time carbon disclosures under the U.K. mandate, with a more negative reaction for firms that reveal larger emissions (Jouvenot and Krueger 2020). Chen, Hung, and Wang (2018) document a decrease in Chinese firms' profitability after China's 2008 CSR disclosure mandate. One notable departure is Ioannou and Serafeim (2017), who document that mandated CSR disclosure across four countries (China, Denmark, Malaysia, and South Africa) is associated with higher Tobin's Q. Christensen et al. (2021) extensively review the literature on economic consequences of mandatory CSR disclosure.

responsible behavior from firms (Christensen, Floyd, Maffett, and Liu 2017; Chen, Hung, and Wang 2018 Johnson 2020; Jackson et al. 2020; Fiechter, Hitz, and Lehmann 2022).[5]

India's approach goes further than a disclosure-based approach, building on the premise that mandating disclosure alone is not enough to achieve the desired social impacts, and introducing two new policy instruments with which to achieve those impacts: a mandate to spend, and to establish governance in the form of a board-level committee. The passage of India's CSR law marks a new chapter in regulatory interventions on CSR on both these fronts, making India (i) only the second country in the world – and its first large economy – to prescribe minimum spending on CSR (after Mauritius, a small island nation in the Indian Ocean); and (ii) the first country to mandate a board-level CSR committee (South Africa is the forerunner of this approach, but it does not clearly mandate a *board*-level committee).[6] That disclosure mandates can lead to real improvements in environmental and social outcomes is now increasingly accepted; whether spending and governance mandates can also generate real improvements is not, in part due to their relative rarity. By examining whether the law elicits more social responsibility from business, we are hence shedding empirical light on the effectiveness of a regulatory experiment that scholars and practitioners have thus far been very divided over.

Much of the extant work on the Indian law focuses on (i) its financial impacts, and (ii) compliance with its spending mandate. The financial impacts are nuanced: Manchiraju and Rajgopal (2017) document negative stock price reactions to eight events leading up to the law's passage, while Panwar et al. (2022) document a positive reaction to the event that marked a shift

[5] Real effects of CSR-related disclosure mandates include drops in Chinese cities' emission levels (Chen et al. 2018); fewer mining-related citations/ injuries after safety records of mines owned by SEC registrants were required to be disclosed on SEC filings (Christensen, Floyd, Maffett, and Liu 2017); fewer occupational injuries following a US government agency's policy of disclosing violations (Johnson 2020). Jackson et al. (2020) document higher CSR activities (measured by KLD ratings) following CSR disclosure mandates in 24 OECD countries. Most recently, Fiechter, Hitz, and Lehmann (2022) document improvements in EU firms' ESG outcomes following the EU Directive.
[6] Systematic empirical evidence on the causal effects of mandates in Mauritius and South Africa is not available.

in the Government's approach from a hard spending mandate to its eventual softer form. Spending outcomes are also mixed: in a presumably unintended consequence, firms that (voluntarily) spent more than 2% of profits pre-law on CSR activities reduced CSR spending to a minimum of 2% post-law (Dharmapala and Khanna 2018, Rajgopal and Tantri 2022). Other studies document substantial increases in spending along the extensive margin: a far greater fraction of firms spend on and disclose CSR post-law (Dharmapala and Khanna 2018, Bansal, Khanna, and Sydlowski 2021). The ultimate objective of the law, however, is to generate improvement in real social/environmental outcomes, and "ensure the distribution of wealth and wellbeing of the communities in which the business operates".[7] Whether increased spending is even capable of generating improved environmental and social performance, at a conceptual level, and whether the spending increases resulting from the law are substantial enough (quantitatively) – and meaningful enough (qualitatively) – to yield any of that possible improvement, at an empirical level, are all open questions; our analysis answers these questions, mostly in the affirmative.

On governance, some studies link (voluntarily established) committees to improved CSR performance, consistent with the idea that committees help to create holistic CSR programs that balance stakeholder interests and manage CSR-related risks; others find no impact, dismissing CSR committees as a symbolic, greenwashing device.[8] Our study, the first systematic investigation of a mandate to establish CSR committees, indicates that (i) not all committees are created equal –quality can vary widely, and (ii) only firms with high-quality committees realize environmental/social performance improvements; highlighting a key role for governance.

[7] The Ministry of Corporate Affairs of the Government of India (2005), in a voluntary code for corporate behavior.
[8] The former group of studies includes Baraibar-Diez and Odriozola, 2019; Derchi, Zoni, and Dossi 2020; and Chu, Li, and Zou 2022; the latter group includes Berrone and Gomez-Mejia 2009; Michelon and Parbonetti 2012; and Rupley, Brown, and Marshall 2012.

Isolating the social/environmental performance improvement to those firms that most substantively comply with the law's provisions helps to increase the internal validity of our conclusions; it is relatively unlikely that some unobserved force boosted ESG ratings specifically for the firms that establish independent and expert CSR committees, increase CSR spending, and direct that spending to substantive engagement with stakeholders rather than the easiest avenues for tick-the-box compliance. However, our inferences on the consequences of spending and governance provisions fall short of causal in that the firms complying in spirit or substance (as opposed to complying only in letter or form) are essentially choosing to do so, thanks to the discretion allowed by the law. We speculate that the law shifts the cost-benefit calculus for CSR and hence encourages more CSR engagement from some firms (e.g., by reducing the public's skepticism toward CSR as argued by Panwar et al. 2022) that we then observe substantive compliance from. Overall, our findings support a nuanced conclusion of the law's effectiveness that justifies claims made by its supporters as well as its detractors: one the one hand, the law translates into improved social/environmental performance for the firms that substantively comply, manifesting in real outcomes as opposed to merely symbolic initiatives. On the other hand, it cannot extract that improvement across the board from every firm, consistent with the critique that one cannot mandate aspirational behavior.

2. Institutional background – The Indian CSR Law

CSR rules were formally enshrined into the law in India with the Indian Parliament's enacting Section 135 of the Companies Act (2013), on August 29, 2013, effective for fiscal years ending March 31, 2015 (FY 2015) or later. Section 135 applies to firms that satisfy any one of three size thresholds in any financial year.[9] All publicly traded and privately held firms operating in India, including foreign firms, are subject to the law if they meet these thresholds; as the thresholds are low, almost all actively traded firms qualify. The provisions of Section 135 (hereafter the "CSR law") are twofold: on governance and spending.

On governance, qualifying firms are required to establish a CSR Committee on their Board of Directors. The CSR committee must have three directors, at least one of whom must be independent. This committee is charged with formulating and recommending to the Board a CSR policy, indicating the kinds of CSR activities the firm is to pursue and planned expenditures on those activities. The Board is then responsible for approving the CSR policy and implementing it.

On spending, the Board is responsible for ensuring that the firm spends at least 2% of its average pretax domestic profit over the last three years, on CSR activities pursuant to its CSR policy. Schedule VII to Section 135 provides an illustrative list of activities that would be considered compliant with the law – e.g., spending on education, health, poverty eradication, environmental sustainability, and reducing inequalities. Moreover, the Ministry of Corporate Affairs' rules does not count as CSR spending those expenditures that would have been undertaken in the normal course of business, that are meant to benefit employees or political parties, or that relate to activities occurring outside of India.[10]

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[9] The thresholds are: net worth (or book value of equity) greater than INR 5 billion (~USD 71 million), turnover (i.e., sales) greater than INR 10 billion (~USD 143 million), or net profits exceeding INR 50 million (~USD 714,000). US dollar totals are based on an exchange rate of 1 USD = 70 INR.

[10] Section 135 requires companies to disclose on their annual reports the composition of their CSR committee; CSR policy; average net profit over the last three financial years and 2% thereof; details of actual CSR spending during the financial year and explanations for not spending the 2% target, if applicable. Firms are also required to detail the CSR projects or activities they have identified, the sectors they cover, their location, and whether the amounts were spent directly or through an implementing agency/partner.

Importantly, the spending provision operates on a comply-or-explain basis, i.e., failure to meet the 2% requirement does not trigger liability as long as an acceptable explanation is provided.[11] If firms fail to provide an acceptable explanation, they face a penalty of INR 10,000 for the first day of the violation, plus an additional INR 1,000 per day if the violation continues. The comply-or-explain flexibility does not extend to the governance provisions; failure to set up the CSR committee straight away triggers liability.

Section 135 may fall short of imposing a hard mandate for spending, but it can be viewed as strengthening the social norm for responsible behavior, by throwing the weight of government expectations behind it. That these expectations are serious has only been reinforced by subsequent events: The Ministry of Corporate Affairs has issued numerous show-cause notices to allegedly noncompliant firms, and charged directors under a Companies Act Section that includes strict penal provisions (Rajgopal and Tantri 2021). The Government has also continuously revised the provisions of Section 135, including – most recently in 2021 – hardening the mandate for 2% spending, with unspent funds to be set aside in a separate account and transferred to a Government CSR fund if remaining unspent within three years.[12] Accordingly, Rajgopal and Tantri (2021) argue that "in practice, it is safer for Indian companies to comply rather than explain".

3. Impact of the Indian CSR law on firms' socially responsible behavior

In this section, we develop arguments for why we would – or would not – expect the law to improve the CSR performance of Indian firms. We first review critiques of the law.

3.1. Why the Indian CSR law will not be effective at improving socially responsible behavior

[11] Panwar at al. (2022) point out that leaders of industry and apex industry bodies such as the Confederation of Indian Industry opposed the spending mandate vehemently when it was originally presented in hard form; these constituents all rallied to support the spending provision once it was revised to a more flexible form. This suggests that the comply-or-explain approach evolved as a feasible consensus between the various interested parties.

[12] For example, "India substantially revamps CSR requirements – The impact on compliance at Indian subsidiaries of US-based Multinationals", available at: https://www.ropesgray.com/en/newsroom/alerts/2021/July/India-Substantially-Revamps-CSR-Requirements-The-Impact-on-Compliance-at-Indian-Subsidiaries

3.1.1. Mandating CSR is paradoxical

Any effort to mandate CSR elicits criticism for being inherently contradictory. This critique goes beyond the Indian law specifically, instead questioning the very idea that governments can mandate behaviors understood so far as largely voluntary.[13]

Much prior research argues that a voluntary approach to CSR is optimal because it allows firms to control and direct their involvement in CSR. Self-regulation is centered on broad principles that guide corporate behavior, often expressed as social norms (Scherer and Palazzo 2011; Kim, Wan, Wang, and Yang 2019; Li and Wu 2020). These principles emerge through the decentralized adoption of practices by firms themselves or through coordinated efforts of various stakeholders (Bowen 2019, Matten and Moon 2008). This offers great flexibility in choosing the nature and extent of CSR efforts so as to generate "win-win" scenarios. Under such a regime, while there is no penalty for not undertaking CSR, firms that do engage in CSR enjoy benefits such as improved terms of engagement with consumers and investors (Chen et al. 2020, Hwang, Titman, and Wang 2021). Much of the CSR engagement we currently observe has arisen under these incentives.

In contrast, when firms adopt CSR policies under external pressure, they may not implement them substantively, lacking motivation, capability, or resources (Bromley and Powell 2012, Fiss and Zajac 2004, Meyer and Rowan 1977, Weber, Davis, and Lounsbury 2009, Zajac and Westphal 1994). The fact that the Government of India had to mandate CSR spending itself suggests that many firms lacked inherent motivation for CSR. The key question then is: will requiring these firms to undertake CSR by law effectively elicit more responsible behavior, absent intrinsic motivation from the firms themselves? Many captains of Indian industry argued that it could not.[14]

[13] Karnani (2013) describes it thus: "…the concept of CSR is controversial and experts do not even agree on how to define it, but both critics and enthusiasts do agree that CSR is voluntary by its nature. If passed, the confused proposal would mandate that companies act voluntarily!"

[14] Azim Premji, philanthropist and Chairman of Azim Premji Foundation (the charity arm of IT services firm Wipro Technologies, which belongs to the global Dow Jones Sustainability Index), said "I don't think you generate CSR by

Firms lacking the intrinsic motivation for CSR can resort to many avenues of compliance in form but not in substance. One such avenue is classifying activities they already undertake as CSR, essentially a form of greenwashing. At the extreme, unscrupulous behavior can result e.g., Rajgopal and Tantri (2022) document that many firms channel their CSR spending through opaque avenues that have limited third-party verification. There are also instances of firms allegedly cheating the system by giving donations to charitable foundations that are routed back to the firm.[15] All these approaches can defeat the law's purpose of encouraging firms to become more socially responsible and in turn, help the government achieve desired social outcomes.

3.1.2. Firms may spend without substantive improvement in stakeholder engagement

A closely related concern is the law will elicit the mandated spending *without* translating into meaningful improvement in firms' engagement with stakeholders, even in the absence of the unscrupulous behaviors described above. Firms could respond by simply writing a check to support charitable causes that are unmoored from their own impacts on society – a "philanthropic rather than stakeholder model"(Rana and Afsharipour 2014).[16] Firms could also use CSR budgets to back government-led projects, currying some political favor in the process. Anecdotes abound of companies "grabbing at the easiest solutions for their required spend" (ter Veeme 2016) by

putting statutory requirements. I think there is enough social consciousness among the larger companies to drive it on the basis of what they consider their responsibility." (https://economictimes.indiatimes.com/news/company/corporate-trends/azim-premji-against-law-on-mandatory-csr-spending-by-corporates/articleshow/7782555.cms?from=mdr)
Adi Godrej, Chairman of consumer products giant Godrej: "It's good to say that [CSR] is desirable. Then people should decide [what to do] on their own." (https://knowledge.wharton.upenn.edu/article/corporate-social-responsibility-in-india-no-clear-definition-but-plenty-of-debate/)

[15] Accessed through the link: https://www.theguardian.com/sustainable-business/2016/apr/05/india-cs

[16] Rana and Afsharipour (2014) give the example of a firm whose operations are detrimental to the environment, which spends its CSR budget building a school in an un-impacted rural area – rather than on mitigating the adverse environmental impact of its operations, which is likely a more complex and demanding endeavor.

donating to the government's priorities such as the Clean India Mission (Swachh Bharat Kosh), the Clean Ganga Fund, cow shelters, or the Prime Minister's National Relief Fund.[17]

3.1.3. Government mandates will crowd out intrinsic motivation

A final criticism is that for firms that do have the intrinsic motivation for CSR, that motivation could be diluted or crowded out by the government mandate, for many reasons. For one, CSR spending requirements can be viewed as analogous to additional taxes, which add to the cost of doing business, lower margins and potentially dampen firms' interest in (or ability for) CSR (Dharmapala and Khanna 2018, Rajgopal and Tantri 2022). A government mandate can also upset firms' internal cost-benefit calculus that resulted in CSR actions in the purely voluntary era. For example, firms often view CSR as a source of differentiation and competitive advantage (Godfrey, Merrill, and Hansen 2009). But when all or most firms are engaged in CSR by mandate, CSR may cease to be a strong differentiator and become less attractive. This dilution of CSR's benefits could lead to a "tick-the-box" response from firms when complying with the law.

3.2. Why the Indian CSR law could improve socially responsible behavior

Despite the many criticisms of governmental CSR mandates broadly and the Indian law specifically, the idea of the government playing a role in CSR is not without precedent. Panwar et al. (2022) point out that while CSR is often framed as pure voluntarism, CSR adoption in practice is rarely purely discretionary, typically occurring in a more hybrid form that combines voluntary actions with flexible regulatory edicts, or "soft CSR regulations". Fox, Ward, and Howard (2002) place soft regulations on a continuum, beginning with endorsement (the softest form), where governments signal political support for responsible business through public procurement policies

[17] The Companies Act was amended in 2014 to specify that contributions to Swachh Bharat Kosh and Clean Ganga Fund would not only qualify as CSR spend but also receive 100 percent tax exemption. This was seen as a prod to firms to support flagship government programs.

and symbolic actions such as awards (Flammer 2018). A harder form of soft regulation arises when governments encourage responsible behavior by providing tax breaks and subsidies. Legislation enacted to mandate CSR would be the "hardest of soft regulations"; they are not fully coercive, as they usually lack civil or criminal penalties for noncompliance (Panwar et al. 2022). India represents arguably the hardest, and most prominent case of this last approach. We turn next to arguments for why the Indian CSR law could motivate improvements in firms' prosocial behavior.

3.2.1. The law creates an enabling framework for CSR

First, the law could create an enabling framework for social and environmental efforts by corporations. Matten and Moon (2008) describe CSR, in its modern form, as a practice that originated in the United States and diffused globally thanks to the expansion of American corporations. Panwar et al. (2022) argue that when an unfamiliar practice such as CSR is first introduced to a new context, uncertainty and ambiguity can abound as to its meaning. CSR initiatives are likely to be viewed skeptically by society, especially given the rising distrust of corporations partially fueled by very public instances of firms found to have engaged in ethical wrongdoing while they were making vocal commitments to CSR (Connors, Anderson-MacDonald, and Thomson 2017).

In a society like India where corruption is commonplace, that skepticism can be severe (Panwar et al. 2022; Prieto-Carron et al. 2006), in turn stymieing any business benefits that firms hope to reap from CSR. In this "nascent and distrusting" environment (Panwar et al. 2022), the law could act as a framework that reduces ambiguity and introduces a common, shared understanding of CSR. This streamlines firms' CSR efforts and makes them more credible in the eyes of the public. Importantly, the increased credibility enjoyed by CSR efforts will incentivize firms to engage in CSR, as they are more likely to be able to reap the business benefits from those efforts.

3.2.2. The law can generate learning by improving CSR infrastructure

Second, while the spending mandate has received much of the (critical) attention in discussions of the law, the law requires fundamental changes to governance as well. Having to constitute a board-level CSR committee and formulate a CSR policy can help to make CSR more salient to senior managers, especially for firms not previously engaged. Accordingly, Fiechter, Hitz, and Lehmann (2022) characterize the formation of a CSR committee as a key element of firms' "CSR infrastructure" that signals their commitment to meaningfully improving CSR.

Having a CSR infrastructure in place can facilitate the internal learning that occurs when managers prepare for new regulations (Shroff 2017). Gathering data and reviewing current and proposed CSR policies can potentially alter managers' information sets and stimulate internal learning that leads to greater focus on, or more efficient and effective approaches to CSR. For example, CSR committees, in the course of their work, could identify CSR causes that align cohesively with overall corporate strategy and create synergies between the firm and society (Kearney 2022). The internal learning that occurs can improve firms' CSR engagement organically.

For firms already engaging in CSR activities pre-law, a formal internal monitoring and advising mechanism can improve the quality and impact of those activities. To the extent to which CSR activities pre-regulation are ridden with agency conflicts or other off-equilibrium behavior (e.g., CSR agendas driven by powerful stakeholders, or by managers interested in extracting private benefits or enhancing their personal reputations/social networks),[18] we would expect the internal monitoring required by the law to remedy some of these inefficiencies. The CSR

[18] See Ferrell, Hao, and Renneboog 2016, Masulis and Reza 2014, Cheng, Hong, and Shue 2014 for manager-driven CSR; Clarkson 1995, Crilly, Zollo, and Hansen 2012 and Mitchell, Agle, and Wood 1997 for stakeholder-driven CSR.

committee could also perform an advisory role, bringing relevant expertise to bear on identifying CSR activities that support the firm's core mission.

3.3. Baseline expectations on the Indian CSR law and CSR performance

Overall, the Indian CSR law provides a unique opportunity to examine the causal effect of a government mandate on firms' CSR performance. Ex-ante, there are many reasons to expect the law to motivate improved social and environmental performance from firms; equally, there are countervailing arguments that CSR cannot be improved by fiat. If the law works as intended, we will observe improved social and environmental performance from Indian firms that implement it.

Equally though, the law is written such that it leaves firms with discretion in implementation; this is to some extent unavoidable, as what constitutes meaningful stakeholder engagement will vary from firm to firm (Lin 2021).[19] As a result, Section 135 places CSR in uncharted territory somewhere between pure social norms on the one hand and hard law on the other hand, immediately suggesting that not all firms will respond uniformly; some firms could respond more substantively than others. In our empirical work, we evaluate substantive implementation along both spending and governance provisions, to understand the mechanisms through which the law operates. To the extent to which CSR performance improves post-law, we would expect those improvements to be concentrated in firms that substantively comply with the law's provisions.

On spending, extant research documents checkered compliance, with some evidence of increasing CSR spending (Dharmapala and Khanna 2018, Bansal, Khanna, and Sydlowski 2021), some evidence of decreasing CSR spending (Dharmapala and Khanna 2018, Rajgopal and Tantri

[19] Lin (2021) argues that CSR mandates have ambitious goals (to hold companies responsible for their behavior in a wide spectrum of areas), which can come only at the price of vague statutory language; this vagueness is necessary to accommodate corporations' diverse needs, which make a one-size-fits-all CSR strategy impossible to conceive.

2022), and a nontrivial fraction of firms choosing to explain rather than comply.[20] On governance, we gather the first systematic data on the composition of CSR committees post-law. We expect that not all CSR committees will be equally effective; committees can vary in independence as well as expertise relevant to the firm's CSR efforts. Observing that CSR performance improves more for firms that (i) increase CSR spending, and/or (ii) institute high-quality CSR committees, would illustrate the mechanisms by which the law operates.

4. Research Design

4.1. Measuring CSR performance

We measure firms' CSR performance using ESG ratings (*ESG_RATING*) provided by Sustainalytics. Sustainalytics has been reporting ESG scores for 15 years and covers around 6,000 firms globally. Importantly, Sustainalytics has broad coverage of Indian firms as well as firms across the world, making it ideal for our analysis. These ratings have been used in many studies across accounting, finance, and management (Christensen et. al 2022, Drempetic et. al 2020, Surroca et al 2010, Surroca et al. 2013, Wolf 2014).[21]

Sustainalytics provides an index measure for each firm ranging from 0 to 100, with ratings based on firms' scores in environmental, social, and governance dimensions. Scores on the three dimensions are based on a comprehensive set of core indicators common to all firms, and sector-specific indicators. Indicators for each dimension are analyzed, scored, and weighted to determine performance. These indicators cover various issues related to a firm's stakeholders, and the ones most relevant for each firm are identified by (1) analysis of the peer group and its broader value

[20] A Conference Board survey of 100 randomly selected companies listed on the Bombay Stock Exchange found wide-ranging explanations: some firms needed more time to conceptualize and implement planned projects or obtain regulatory approvals; some firms had intended to meet their 2% targets but could not because project implementation could occur only in a phased manner; others could not engage in CSR projects due to lack of resources.

[21] While CSR ratings from KLD database are perhaps most extensively used in the literature (Becchetti, Ciciretti, and Hasan 2015; Cho, Lee, and Pfeiffer 2013; Petrenko, Aime, Ridge, and Hill 2016), KLD does not cover Indian firms.

chain, (2) review of business models, and (3) identification of the main activities associated with environmental, social, and governance impacts, and (4) analysis of the business impacts that may result from inadequate management of these factors. Appendix A details rating components.

4.2. Model to identify effects of the Indian CSR Law

We use a difference-in-differences (DID) approach to study the impact of the CSR law on affected firms' CSR performance. The CSR law was passed in 2013, effective for fiscal years starting 1 April 2014 or after. Accordingly, we consider fiscal years 2015–2018 as the post-regulation period (*POST*) and compare it to fiscal years 2011–2014, the pre-regulation period (*PRE*). Our treatment group (*TREAT*) comprises Indian firms that are affected by the law.

Ideally, our control group should include Indian firms that were not subject to the CSR law but were undertaking CSR activities in both the *PRE* and *POST* periods. However, all Indian firms covered in Sustainalytics are required to comply with the CSR law (by virtue of falling within its size thresholds); hence, we lack a natural control group of Indian firms. To overcome this inherent difficulty, we follow the approach in other regulatory impact studies that face similar challenges with control groups (e.g., Agarwal 2018, Goldfarb and Tucker 2011, Matsa and Miller 2013, and most recently Fiechter, Hitz, and Lehmann 2022 who examine the EU disclosure mandate), and construct a control group of firms from countries other than India. We exploit Sustainalytics' coverage of firms from 106 countries for this task.

For each Indian firm in the sample, we identify the closest firm from the rest of the world based on pre-law levels of ESG ratings and key determinants of ESG performance from prior research.[22] The determinants of ESG performance we use in matching include – industry, size (measured as

[22] E.g., Margolis, Elfenbein, and Walsh 2009; Hong, Kubik, and Scheinkman 2012; Flammer 2015; Lys, Naughton, and Wang 2015; Manchiraju and Rajgopal 2017.

natural logarithm of total assets)[23], profitability (measured as *ROA* - operating income before depreciation divided by total assets, *CFO* – cash flow from operations divided by total assets, and *CASH* – cash and equivalents divided by total assets), growth opportunities (proxied by *SGROWTH* – sales growth and *RD* – research and development expenses divided by total assets) and stability (proxied by *LEVERAGE* – long-term debt plus debt in current liabilities divided by total assets, and *ATO* – asset turnover defined as sales divided by total assets).[24] Appendix B lists detailed variable definitions. Larger, more profitable, more stable firms are likely to have the resources necessary for CSR and could therefore attract greater pressure to engage in CSR. Firms with greater growth opportunities are also likely to engage in CSR to build their reputation.

We match firms on these criteria for the year the law was introduced, i.e., 2014. Each treatment firm is matched to the nearest neighbor with the lowest Mahalanobis distance across these 10 matching characteristics. The matching procedure aims to ensure that control firms are as similar as possible to the treated firm, ex-ante, and that they provide a reasonable counterfactual for what would happen to the treated firms absent any CSR regulation.

As in any DID setting, we study the change in ESG performance for treatment firms after the implementation of the law relative to the change in ESG performance for control firms over the comparable period. Specifically, we estimate the following regression model:

$$\boldsymbol{ESG\ Rating_{i,t} = \beta_0 + \beta_1\, TREAT\ X\ POST_{i,t} + \beta_2 Controls_{i,t} + u_i + v_t + e_{i,t}} \qquad \textbf{(1)}$$

where *i,* and *t* denote firm and year, respectively. The dependent variable is the firm's ESG rating from Sustainalytics. *TREAT* is an indicator variable that equals one for firms that belong to India and zero otherwise. *POST* is an indicator variable that equals one for the years 2015–2018

[23] As economies vary in size, we match firms on size decile so that we pick a firm of comparable repute and standing within each economy.
[24] As robustness checks, we run our analysis with matched samples of firms from Brazil, China, USA, and European Union separately. We discuss these tests in Section 5.5.

and zero otherwise. β_1 is the coefficient of interest as it captures the change in the ESG rating of the treatment group (Indian firms) in the post-law period, compared to the change in ESG rating of the control group over the same period. The model includes firm-fixed effects to capture time-invariant, firm-specific unobservable characteristics, and year-fixed effects to control time trends. The model also includes firm-level controls discussed when describing the matching procedure, to account for contemporaneous firm-level changes that can potentially affect ESG performance. We winsorize all continuous variables at the 1st and 99th percentiles of their distribution. We cluster standard errors at the firm, country, and year levels.

When exploring the mechanisms by which the law operates, we expand equation (1) by interacting *TREAT X POST* with measures aiming to capture the extent of substantive implementation of spending and governance mandates. When considering the spending mechanism, we interact *TREAT X POST* with measures of the quantity and quality of CSR spending; we expect a greater improvement in ESG ratings for firms that increase spending more and have a greater quality of that spending. When considering the governance mechanism, we interact *TREAT X POST* with measures of the quality of the CSR committee; we expect greater improvement in ESG ratings for firms with a higher-quality CSR committee. [25]

4.3. Sample and data

We obtain ESG ratings data, accounting data, and CSR spending data from Sustainalytics, Compustat Global, and CMIE Prowess databases respectively. Data from Sustainalytics and Compustat Global databases are merged using the CAPITALIQ_ID – GVKEY linking table provided by S&P's Capital IQ database. The resulting dataset is merged with Prowess using ISIN

[25] CSR spending and CSR committee data are available and collected only for Indian firms. As our focus is the three-way interaction TREAT X POST X Variable of cross-sectional interest, unavailability of this data from control group firms does not affect our inference – the cross-sectional variable is absorbed by firm fixed-effects.

as the unique identifier. We supplement the merged data with hand-collected information on CSR spending and CSR committee composition from annual reports.[26] We start with 946 Indian firm-year observations for 156 unique firms for which we have Sustainalytics ratings available during 2011-2018. [27] We require firms to have at least one observation in each of the pre-and post-law periods, which loses 98 firm-year observations. A further 12 observations lack Compustat Global data for control variables. For each Indian firm, we identify the closest match from the rest of the world (Section 4.2). These procedures yield a sample of 119 unique Indian firms and 119 matched firms, with a total of 1,691 firm-year observations.

Table 1 presents the sample selection and distribution. The firms in the control group are spread across five continents. Sample firms are from eight industry sectors, with manufacturing firms comprising around 46%.

< Table 1 here >

Table 2 presents descriptive statistics (Panel A) and univariate tests of differences (Panel B). The average ESG rating of sample firms is 56.688 on a 0-100 scale, with ratings ranging from 27 to 96. The average ratings on the three dimensions: environmental (ENV), social (SOC), and governance (GOV) are 53.452, 57.449, and 60.028, respectively. Panel B compares the mean and median values of various firm characteristics for the treatment and control groups; the differences in mean ESG performance and all model variables across treatment and control groups are statistically insignificant. In Panel C we note that ESG ratings are positively correlated with *ROA, CFO, CASH*, and *ATO* while negatively correlated with firm size and leverage.

< Table 2 here >

[27] While there are 4437 unique Indian firms on the Compustat Global Database, the coverage of Indian firms on Sustainalytics and other ESG ratings databases is sparse and limited to the top-most firms (by size), which is primarily responsible for our relatively limited sample size.

5. Empirical Results

5.1. Baseline results

Table 3 presents results from estimating Equation (1), where we compare ESG ratings of Indian firms to those of control firms from the rest of the world, around the implementation of the Indian CSR law of 2014. In column (1), the coefficient on *TREAT X POST* is positive (coefficient = 3.095, *t-statistic* = 3.286), supporting the conclusion that the ESG performance of Indian firms improved upon the implementation of the CSR law in India. The improvement in ESG ratings translates into 31% of one standard deviation (25% of the interquartile range) of ratings – an economically significant effect. The coefficients on control variables are mostly insignificant, except for a positive effect on cash flow from operations and a negative effect on sales growth.

In column (2), we present a dynamic panel model to examine the trend in DID coefficients over time, modifying Equation (1) by replacing *TREAT X POST* with *TREAT* interacted with each year separately. Coefficients on *TREAT X YEAR2012* and *TREAT X YEAR2013* are negative, indicating that ESG ratings for Indian treatment firms were lower than those for control firms in the pre-law period; any pre-law trend, therefore, goes against our predictions. In contrast, all coefficients on *TREAT* interacted with 2014 onwards are positive and significant; while our post-law period technically starts with FYE 2015, the law was passed in 2013, raising the possibility of anticipatory behavior from 2014 onwards. Importantly, the size of the coefficients (1.522, 2.470, 2.804, and 3.515 for 2014, 2015, 2016, and 2017 respectively), indicates rising improvement in ESG performance as firms presumably get deeper into implementation. Overall, these results indicate first, that the ESG performance of Indian firms improves relative to control firms primarily in the post-law period; and second, that the improvement is not a temporary change in the immediate wake of regulation that reverts to a lower level as the initial scrutiny fades.

< Table 3 here >

5.2. Drilling down by dimensions of ESG ratings to see where improvements occur

We next drill down by dimensions of ESG performance. To the extent to which the ESG ratings improvement of Indian firms is attributable to the CSR law, we would expect improvement to be concentrated in ratings dimensions that fall within the scope and intent of the law, as illustrated in Schedule VII. Schedule VII has a primarily social focus (e.g., improving access to basic services like health, sanitation, and education, and reducing various types of inequalities) but also includes environmental sustainability; we would hence expect improvements to be concentrated in those areas. Accordingly, we estimate Equation (1) separately on the environmental, social, and governance dimensions of Sustainalytics ratings, and report results in Table 4.

Broadly consistent with these expectations, we observe significant improvement in *ENV_RATING* (*TREAT X POST* = 4.901, *t-statistic* = 3.98) and *SOC_RATING* (*TREAT X POST* = 3.915, *t-statistic* = 3.51), but none for *GOV_RATING* (*TREAT x POST* = 1.301, *t-statistic* = 1.30). That the illustrative spending categories in Schedule VII map more closely to the environmental and social dimensions than to the governance dimension increases our confidence in the internal validity of the findings. The seeming lack of improvement in governance could also arise from our treatment firms being large and well-known; they are already subject to various regulatory requirements that demand high standards of corporate governance.[28] Perhaps more importantly, it is unlikely that these increases reflect mere philanthropy. Sustainalytics' scores are aggregated from many aspects of preparedness, disclosure, and performance (both quantitative and

[28] In 2000, the Securities Exchange Board of India (the regulatory authority that oversees the functioning of Indian capital markets), introduced Clause 49 in the Listing agreement between the Stock Exchange and companies (when companies are listed). Clause 49 mandates greater board independence, enhanced disclosure requirements, and increased the power of audit committees for affected firms. These governance reforms are similar in spirit to the Sarbanes-Oxley Act of 2002 (Dharmapala and Khanna 2012). For more details please see: https://www.sebi.gov.in/sebi_data/commondocs/cir2803an1_p.pdf

qualitative) on environmental and social dimensions (please see Appendix A for details). These criteria cannot be met by simply making charitable donations to external entities; rather, they demand substantive engagement with stakeholders relevant to the core business.

< Table 4 here >

5.3. Parsing ESG ratings into inputs vs. outcomes to gauge how "real" the improvement is

Having established that the Indian CSR law elicits broad improvement in social and environmental ratings for Indian firms, we turn next to a key question: how "real" is the improvement? While third-party ESG ratings have many advantages as an objective, comprehensive, and convenient summary measure of performance, they are subject to many criticisms, chief among which is that they primarily reflect *inputs* into the ESG process – "intentions, efforts, and investments" – rather than *outcomes* on ESG topics (Grewal and Serafeim 2020).[29] Inputs are also susceptible to greenwashing, e.g., through the adoption of policies or codes of conduct that are more symbolic than substantive. As our objective is to understand whether the CSR law has elicited substantive improvement in social/environmental performance, separating out the easily-greenwashed, likely-symbolic components of ESG ratings is crucial to our inference.

Accordingly, we first separate overall ESG scores into sub-groups using Sustainalytics' own classification of indicators into three types: Preparedness (which includes policies, programs, and targets, signatory status to ESG frameworks or standards), Disclosure, and Performance (which includes qualitative performance such as controversies or negative incidents along various dimensions, and quantitative measures such as activities in sensitive countries). Working with these sub-groups, we map Preparedness measures to *inputs* and Performance measures to *outcomes.* We further refine Sustainalytics groupings by separating out programs/targets, on the

[29] Grewal and Serafeim (2020) give the example that social scores reflect dollars spent on diversity and inclusion programs, but not necessarily the extent to which diversity improves within the firm's workforce or management.

premise that these could be either substantive or symbolic (depending on how seriously they are implemented), but we do not have enough information to classify them appropriately. We end up with the following ratings subgroups that we place on a spectrum: Preparedness (mostly policies, e.g., environmental policies, policies against bribery/corruption, largely reflecting inputs), Disclosure, Programs/Targets (both mezzanine groups), and Performance (largely reflecting outcomes). Appendix A provides details of each group.

Accordingly, we estimate Equation (1) on these ratings subgroups, with results presented in Table 5. We note some (marginally significant) improvement in Preparedness in Column (1) (*TREAT x POST* = 0.091, *t-statistic* = 2.12) and stronger improvement in Disclosure in Column (2) (*TREAT x POST* = 0.198, *t-statistic* = 2.95). Indian firms also show strong improvement in the adoption of Programs/Targets compared to control firms (*TREAT x POST* = 0.234, *t-statistic* = 3.33) post-law. At the indicator level, this subgroup comprises whistleblower programs and diversity programs, both important to overall corporate culture. Importantly, we observe some improvement, albeit marginally significant, in overall Performance (*TREAT x POST* = -0.049, *t-statistic* = 2.19), which comprises mostly indicators for controversies and negative incidents along various aspects of firm operations.

We draw the following conclusions. First, we observe a broad-based improvement in preparedness, disclosure, organizational changes such as programs and targets, and performance. Second and importantly, there is a significant improvement in the outcome-based performance measures, which are not only harder to manipulate/greenwash than input-based measures but should also reflect the results of CSR/ESG investments made by the firm. This suggests that the response by Indian firms is not simply symbolic or cheap talk; it reflects “real” improvements. Third and finally, the improvement in inputs (policies/programs/targets) could translate into better outcomes down the road. Therefore, the improvement in outcomes we document in Table 5 could underestimate the overall effect of the law (Fiechter, Hitz, and Lehmann 2022).

< Table 5 here >

5.4. Mechanisms through which the law operates

Having established that the CSR performance of Indian firms improves after the implementation of the Indian CSR law, we turn our attention next to understanding the mechanisms through which the improvements result. As discussed in Sections 2 and 3, the provisions of the law are twofold: a spending mandate, and a requirement to establish a board-level CSR governance committee. We turn to examining the role of these two provisions in explaining the post-law increase in ESG ratings for Indian firms.

5.4.1. The role of the spending mandate in improving ESG performance

Given the comply-or-explain nature of the spending mandate accompanied by the difficulties inherent in enforcing the said mandate, it is not clear that all the firms comply substantively with the spending provisions. We would expect ESG ratings to improve only for Indian firms that comply substantively with this mandate, in terms of the amount and nature of CSR spending.

We first measure (the amount of) CSR spending with *CSRRATIO*, defined as the amount spent on CSR by the firm divided by the average profits of the previous three years. We hand-collect this information from Indian firms' CSR reports (a part of their annual report). We first categorize a firm as *CSRRATIO_HIGH* if it spends more than 2% of its profits on CSR-related activities (as required by the law). To compare CSR spending practices after the law, we categorize firms along two dimensions – (i) pre-versus post-law, and (ii) level of *CSRRATIO*, specifically *CSRRATIO* = 0%, *CSRRATIO* < 2% or *CSRRATIO* > 2%. The resulting 3 X 3 matrix has the following groups: (i) *CSRRATIO_ZZ* – firms with no CSR spending both before and after the law, (ii) *CSRRATIO_ZL*

– firms with no CSR spending pre-law that started spending less than 2% of profits after the law, (iii) *CSRRATIO_LL – firms* spending less than 2% of profits before the law that continued spending less than 2% of profits after the law, (iii) *CSRRATIO_LH* – firms spending less than 2% of profits before the law that increased spending to more than 2% of profits after the law, and (v) *CSRRATIO_HH* – firms spending more than 2% of profits before the law that continued spending more than 2% of profits after the law.[30]

To the extent to which the law incorporated the spending mandate as a means of making firms prioritize responsible behavior, we would expect (i) higher ratings for firms that spend at least 2% of their profits on CSR, compared to firms that do not, and (ii) higher ratings for firms that substantially increase CSR spending after the law. To test this prediction, we modify our baseline equation (1) and interact *TREAT X POST* with our measures classifying CSR spending level and spending increase. We first interact *TREAT X POST* with *CSRRATIO_HIGH,* expecting a positive coefficient on this three-way interaction term to the extent to which the spending provision is effective at improving ESG performance. Second, we expect a positive coefficient on *TREAT X POST X CSRRATIO_LH* as these firms increased CSR spending to a level required by the law; these are the firms that made investments to fully comply. In contrast, we do not expect a significant coefficient on *TREAT X POST X CSRRATIO_ZZ* as these firms do not spend on CSR (this group functions almost as a placebo). We do not have a clear prediction for *TREAT X POST X CSRRATIO_HH* as these firms were spending more than the threshold in both pre- and post-law periods; or for *TREAT X POST X CSRRATIO_ZL* or *TREAT X POST X CSRRATIO_LL* because these firms do increase CSR spending but still fall short of the law's minimum threshold.

[30] While we can potentially classify firms into nine categories, only the five groups described here are populated.

We describe patterns in CSR spending in Table 6, Panel A. Our first observation is that 94.11% of the sample spent less than 2% of its profits on CSR before the law, with about 36% not spending on CSR at all. Hence, the spending mandate is binding for a vast majority of these firms. Our second observation, consistent with prior research, is that a broad-based increase in CSR spending occurs after the law is implemented. 87.12% of our sample firms that spent under 2% on CSR pre-law increased their spending afterward. However, there is significant variation in the extent to which firms increase spending. The *ZL* firms increase spending on average from 0% to 1.38% of profits; the *LL* firms from 0.55% to 1.40% of profits; the *LH* firms show the highest average increase from 0.69% to 3.26% of profits. In contrast, the *HH* firms (that were voluntarily spending more than 2% of their profits pre-law) experience an average decline in *CSRRATIO* from 6.01% to 3.34%. This is the group for which intrinsic motivations for CSR are believed to have been crowded out by the mandate (Dharmapala and Khanna 2018, Rajgopal and Tantri 2022).

We present results from estimating the triple-DID model in Table 6, Panel B, controlling for *CSRRATIO*. In Column (1), with overall ESG rating as the dependent variable, we observe a positive and statistically significant coefficient on *TREAT X POST X CSRRATIO_HIGH* (coeff = 1.491, t-stat = 2.46), indicating that firms spending at least 2% of profits on CSR experience a greater increase in ESG ratings. In column (2), as expected, the coefficient on *TREAT X POST X CSRRATIO_ZZ* is insignificant – there is no improvement in ESG ratings of firms that do not spend on CSR in either period. In contrast, we observe a marginally significant (p-value < 10%) improvement in ratings for the zero-to-low-spending group *TREAT X POST X CSRRATIO_ZL* (coeff = 2.955, t-stat = 2.10) and for the low-to-low-spending group *TREAT X POST X CSRRATIO_LL* (coeff = 1.618, t-stat = 2.30). As both groups experience a significant average increase in CSR spending, this is consistent with increased spending translating into improved

ESG performance. Importantly, we observe a positive and strongly significant coefficient on the term *TREAT X POST X CSRRATIO_LH* (coeff = 5.192, t-stat = 3.23), consistent with our expectation. Translating into an increase of 52.7% of one standard deviation of ESG ratings, this effect is also highly economically significant. Overall, these results indicate a strong correspondence between CSR spending and ESG ratings; they also isolate the ratings improvement to the firms that raise CSR spending the most, allowing us to reasonably attribute that improvement to their increased spending. The spending mandate, therefore, helps to improve ESG performance.

Finally, we note an insignificant coefficient on *TREAT X POST X CSRRATIO_HH.* On the one hand, it can be argued that these firms have cut CSR spending and so their ratings are likely to decline. A more nuanced possibility is that the seeming drop in CSR spending for this group is due at least in part to the stricter filters imposed by the law on what qualifies as CSR expenditure. For example, donations to temples, religious organizations and political parties were often categorized as "CSR" spending pre-law but can no longer be classified as such post-law. If "true" CSR spending has dropped to a lesser extent than what these figures suggest, ESG ratings may not necessarily shift.

< Table 6 here >

5.4.2. Drilling down further into spending quality

Contemplating the nature of CSR spending raises important implications for our analysis: *CSRRATIO* captures only the quantity of spending, not its substance, or quality. For example, two firms could have the same disclosed *CSRRATIO,* but we would evaluate their CSR engagement very differently if one firm, for example, directed its spending towards CSR causes that are aligned to corporate strategy, while the other made donations to politically aligned causes. We systematically investigate the quality of CSR spending next.

To infer the quality of CSR spending, we take the approach of flagging spending avenues that are relatively less likely to reflect meaningful engagement with the firm's own stakeholders. Using spending details hand-collected from CSR reports, we flag spending as – (i) *POLITICAL* – where CSR spending includes donations to the Prime Minister's Relief Fund or other Government-initiated projects; and (ii) *FAMILY_TRUST* – where CSR spending includes donations to a trust owned by the firm's promoters. Each criterion maps into a type of form-over-substance compliance that the law's critics have contemplated: that firms will direct spending towards Government-led causes to curry political favor (*POLITICAL*), or to opaque venues where the eventual use of funds cannot be ascertained (*FAMILY_TRUST).*[31] We expect that ESG rating agencies will take a poorer view of these suspected form-over-substance avenues of spending, where it is not clear that firms have invested to holistically improve CSR/ESG performance.

We provide descriptive statistics on the quality of CSR spending in Table 7, Panel A. We note that 43.79% of our sample firms donate to Government initiated projects or Prime Minister's Relief Fund and 36.30% of firms conduct some CSR spending via donations to a promoter/family-owned trust. In Appendix C, we provide examples of CSR spending avenues that are not flagged under these criteria (and therefore, presumably higher quality). For example, Asian Paints provides large-scale vocational training to professional painters and contractors; Colgate-Palmolive conducts oral hygiene and healthcare camps; Dabur (a manufacturer of Ayurvedic formulations) funds programs to protect endangered species of herbs and plants, promoting biodiversity and as well as farmers'

[31] We acknowledge that these categories are noisy and can mask variation in spending quality. E.g., some firms make donations to government relief funds in good faith and at times of major crises such as natural disasters; however, we examine government donations separately as they do not engage specifically with the firm's stakeholders. Similarly, some family trusts are well regarded for their work with underserved communities. Lacking an empirically feasible way to make these distinctions, we view our analysis as a first pass attempt at evaluating CSR spending quality.

livelihoods. In all these cases, at least some CSR funds are deployed to programs that align cohesively with the core business.

To test our prediction that higher-quality spending will translate into stronger improvement in ESG ratings, we modify our baseline equation (1) and interact *TREAT X POST* with our proxies for (lower) CSR spending quality, presenting results in Table 7, Panel B. Consistent with expectation, the coefficients on *TREAT X POST X POLITICAL* in column (1) and on *TREAT X POST X FAMILY_TRUST* in column (2) are negative and marginally significant. The suspect avenues of spending we examine are hence associated with lower improvement in ESG ratings, demonstrating clearly that the avenues of CSR spending matter.

< Table 7 here >

5.4.3. The role of CSR governance in improving ESG performance

We turn next to examining how ESG rating improvements relate to the implementation of the governance provisions of the law. While the spending mandate garnered the most public attention and criticism, the requirement to set up a board-level CSR committee – a first of its kind across the world – also has the potential for far-reaching impact, by surfacing discussions of societal impact up to board-level and (potentially) incorporating those concerns into overall corporate strategy. As setting up a CSR committee is mandatory (with no comply-or-explain flexibility), we do not necessarily expect to find firms with no committee, but rather contemplate the possibility that committees vary in quality. To the extent to which there is variation in committee quality, we would consider a firm that sets up a higher-quality committee as having implemented the law more substantively than a firm with a more "token" committee. We expect greater CSR performance improvement for the former firm.

Drawing on the extensive prior literature on board and committee quality, we evaluate CSR committees along three criteria – (i) the presence of a CSR expert, classifying a member as an expert if he/she has education or experience in social service / the non-profit sector (*CSR_COM_EXPERT*), (ii) whether the majority of members are independent (*CSR_COM_IND)*; and (iii) whether the chair is independent (*CSR_COM_INDCHAIR)*. We assign one point for every criterion and aggregate the points to determine the overall *CSR_COM_QUAL*, which ranges from 0 to 3; higher values translate to greater quality. We read biographies of committee members in the annual report to code CSR expertise; we provide examples of experts' bios in Appendix C.

We provide descriptive statistics on CSR committee composition in Table 8, Panel A. On average, 45.90% of CSR committee members are independent; 44.73% of committees have an independent Chair; 41.22% of committees have a CSR expert. The average (median) score for CSR committee quality is 0.97 (1) out of a maximum of three points, with 31.62% of the sample scoring a zero and 24.59% of the sample scoring three points on a three-point scale to measure the quality of CSR committee. Therefore, the average CSR committee scores relatively low on quality, but substantial variation exists across committees.

To the extent to which the CSR committee guide firms to prioritize responsible behavior, we expect greater improvement in ESG ratings for firms with better quality CSR committees. To test this prediction, we modify Equation (1) and interact *TREAT X POST* with *CSR_COM_QUAL*, with the results presented in Table 8, Panel B. In Column (1), with the overall ESG rating as the dependent variable, the baseline coefficient on *TREAT X POST* is insignificant, but the three-way interaction term *TREAT X POST X CSR_COM_QUAL* is strongly significant (coeff = 2.363, t-statistic = 4.48). Examining each quality criterion independently generates similar results, with the most economically significant ratings improvement for committees with a CSR expert.

< Table 8 here >

5.4.4. Conclusions from spending and governance tests

We obtain two insights from tests exploring how rating improvement relates to CSR spending and governance. First, being able to narrow down the ratings increase to the firms that establish high-quality CSR committees, increase spending substantially, and direct that spending to engage stakeholders meaningfully, allows us to attribute that ratings increase to the Indian CSR law more confidently. With our cross-country research design in the absence of a within-India control group, correlated omitted factors are always a concern; but isolating the improvement to firms that substantively comply with the spending and governance provisions of the law helps greatly to improve the internal validity of the conclusions.

Second, these tests inform us about the effectiveness of spending and governance mandates, even though they fall short of being causal. That firms establishing high-quality CSR committees experience significant improvement in ESG performance while firms with more tokenistic committees do not, suggests that CSR governance can play a role in changing firm behavior. Similarly, for firms that substantially increase spending compared to those that do not. Spending mandates and governance mandates, therefore, can be useful tools to change firm behavior.

5.5. Robustness tests

We perform two robustness tests to examine the sensitivity of our results. First, we consider multiple alternative control groups in the DID design, each narrower than our baseline control group – specifically, firms from China, Brazil, the USA, and the European Union respectively. Using narrower control groups improves the internal validity of our conclusions by allowing us to investigate whether control regimes also passed CSR-related regulations in our period of interest; using multiple control groups improves the external validity of our conclusions.

We confirm that US firms were not subject to any federal CSR-related regulation (e.g., through securities law) in our period of interest. China and Brazil both enacted CSR disclosure regulations, but China's law precedes the start of our sample period (2008, Chen et al. 2018) while Brazil's law takes effect much after our period ends (2023).[32] However, the EU Directive on Non-Financial Disclosure was issued in 2014 and Fiechter at al. (2022) document that real effects on EU firms' ESG performance materialized as early as 2015, coinciding with our post-law period. Therefore, the India-to-EU comparison serves as an opportunity to compare the unique Indian approach, with its governance and spending mandate, to the now-familiar intervention of mandating disclosure.

We present results from estimating equation (1) using alternate control groups in Table 9. The ESG performance of Indian firms improves significantly compared to firms from each of the comparison groups: China (*TREAT X POST* = 5.069, *t-statistic* = 4.43, column 1), Brazil (*TREAT X POST* = 3.090, *t-statistic* = 2.94, column 2), and USA (*TREAT X POST* = 4.842, *t-statistic* = 4.29, column 3) respectively. The ESG performance of Indian firms improves even relative to EU firms but with a smaller coefficient on the interaction term (*TREAT X POST* = 2.480, *t-statistic* = 3.05, column 4). These results provide further confidence in our conclusions – irrespective of the control group, the ESG performance of Indian firms exhibit significant, consistent improvement after the CSR law, and even so compared to firms subject to CSR disclosure mandates.

< Table 9 here >

Our second robustness test relates to the measurement of ESG performance. Prior research (Berg et al. 2022; Christensen et al. 2022) documents divergence between rating agencies in their assessments of firms' ESG performance. Hence, to consider whether our results are sensitive to

[32] The Brazilian Securities Commission (**CVM**) issued, on December 22, 2021, CVM Resolution No. 59 (**RCVM 59**), which mandates ESG disclosure in an annual report effective January 2, 2023. https://conteudo.cvm.gov.br/legislacao/resolucoes/resol059.html.

the choice of ESG rating provider, we replicate our Sustainalytics-based results with ratings from an alternative data provider: Refinitiv ESG – Eikon, which also provides reasonable coverage for Indian firms. The results, presented in Table 10, are strongly consistent with our baseline findings from Tables 3-4: overall ESG performance improves – statistically and economically – for Indian firms compared to matched firms from the rest of the world, with the improvement concentrated in social and environmental (but not governance) dimensions of performance. These results provide confidence that the increase in ESG performance of Indian firms is independent of the choice of ESG data provider.

< Table 10 here >

6. Discussion and conclusion

Regulators all over the world are passing or contemplating CSR disclosure mandates. Christensen, Hail, and Leuz (2021) suggest that disclosure mandates are so popular because they are perceived as less intrusive than traditional regulation (and presumably, easier to pass); after all, they "merely" prescribe disclosure rather than compel specific actions. Michelon, Rodrigue, and Trevisan (2020) also argue that disclosure has become a compromise solution for investors and firms, attenuating the inherent tension between the ideals of the social/environmental justice movement on one hand, and profit-seeking motives on the other hand.

In the meanwhile, India – the world's most populous nation and one of its largest and fastest-growing economies – has taken a decidedly different approach to CSR regulation that goes beyond disclosure. With the implicit premise that disclosure alone is not sufficient to achieve socially responsible business practices, the Indian CSR law of 2013 mandates board-level CSR committees and minimum spending on CSR. By documenting a significant improvement in the social and environmental performance of Indian firms compared to firms from the rest of the world between pre- and post-law periods, we provide some of the first systematic empirical evidence that the policy tools deployed by the Indian CSR law can improve responsible business practices. The improvement is not uniform, though: only firms that substantially raise CSR spending, direct that spending towards engaging stakeholders, and establish independent and expert CSR committees, receive higher ESG ratings.

While far from ideal and subject to legitimate criticism on many fronts, the law can also be viewed as an "innovation born of economic necessity" in a society facing a complex set of economic pressures (Van Zile 2012). On one hand, the law attempts to maintain the competitive advantage of Indian firms by not levying additional taxes or entangling them in burdensome red tape; on the other hand, it attempts to address the need to create a functional network of basic services like schools and hospitals to aid a large concentration of the poor, and mitigate the wealth inequalities that have widened post-economic liberalization. Importantly, while this type of mandate presently remains unique to India, the economic pressures that necessitated it are not. Governments around the world, especially in the Global South, are grappling with similar challenges: ecological damage and income disparities that occur alongside economic growth and are proving increasingly inflammatory in society. Lin (2021) argues that some regional diffusion of CSR spending mandates is likely, especially among developing countries. For those in charge of formulating law and policy, our study provides a nuanced view of when and where spending and governance mandates are effective. Our analysis sets the stage for further exploration: e.g., does better CSR performance at the firm level translate into stronger social and environmental outcomes for society? – which we leave to future research.

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Appendix A – A breakdown of Sustainalytics ratings

Environmental (ENV) Dimension:

Preparedness includes environmental policies, management systems, and certifications; programs for hazardous waste management, water management, greenhouse gas (GHG) reduction, renewable energy, and product stewardship; green procurement policies; suppler environmental programs and certifications; and eco-design.

Disclosure includes participation in the Carbon Disclosure Project and scope of GHG reporting.

Quantitative performance includes environmental fines and penalties; carbon intensity and trend thereof; and renewable energy use.

Qualitative Performance evaluates incidents and controversies in operations, product and service, and environmental supply chain.

Social (SOC) Dimension:

Preparedness includes policies on freedom of association, working conditions, and discrimination; diversity programs; employee health and safety management systems; scope and quality of social supplier standards; signatory status to industry coalitions; conflict minerals policies and programs; supply chain management systems; social supplier certifications; QMS certifications; digital divide programs.

Disclosure includes policies on freedom of association, programs to increase workforce diversity and formal policy on working conditions.

Quantitative Performance includes collective bargaining agreements, employee turnover rate, lost-time incident rate, and activities in sensitive countries.

Qualitative Performance evaluates incidents and controversies relating to social supply chain, employees, customers, society and community.

Governance (GOV) Dimension:

Preparedness incudes bribery and corruption policy; whistleblower programs; signatory status to the United Nations Global Compact; ESG governance and performance targets; board of directors characteristics -- gender diversity, separation of Chairman and CEO, board independence, audit committee independence, compensation committee independence, non-audit to audit fee ratio, political involvement policy, and lobbying / political expenses.

Disclosure includes reporting on taxes paid, ESG reporting and verification, reporting of board of directors' biographies and remuneration.

Qualitative Performance evaluates incidents and controversies relating to business ethics, governance, and public policy.

Appendix B – Variables and their operationalization

Variable	Operationalization	Data Source
TREAT	An indicator variable that equals one if a firm is from India, and zero otherwise	Sustainalytics
POST	An indicator variable that equals one for the years 2015–2018 and zero otherwise	Sustainalytics
ESG_RATING	ESG performance rating measures how well firms proactively manage the environmental, social, and governance (ESG) issues that are most material to their business. The rating is on a scale from 0 (worst) to 100 (best).	Sustainalytics
ENV_RATING	Environmental performance rating measures how well firms proactively manage environmental issues. The final score is rated on a scale from 0 (worst) to 100 (best).	Sustainalytics
SOC_RATING	Social performance rating measures how well firms proactively manage social issues. The final score is rated on a scale from 0 (worst) to 100 (best).	Sustainalytics
GOV_RATING	Governance performance rating measures how well firms proactively manage governance issues. The final score is rated on a scale from 0 (worst) to 100 (best).	Sustainalytics
SIZE	The natural logarithmic of total assets (AT)	Compustat Global
ROA	Operating income before depreciation divided by total assets (OIADP/AT)	Compustat Global
CFO	Cash flow from operations divided by total assets (OANCF/ AT)	Compustat Global
CASH	Cash and equivalents divided by total assets (CHE/AT)	Compustat Global
ATO	Asset turnover ratio measured as sales divided by total assets SALE/AT	Compustat Global
LEVERAGE	The ratio of long-term debt plus debt in current liabilities divided by total assets (DLC + DLTT)/AT	Compustat Global
SGROWTH	One-year change in total sales	Compustat Global
RD	The ratio of research and development expenses divided by total assets XRD / AT	Compustat Global
CSRRATIO	Amount spent on CSR activities / Average profit after tax for the last three years	CMIE Prowess
CSRRATIO_HIGH	An indicator variable that equals one if *CSRRATIO* >2%, and zero otherwise	CMIE Prowess
CSRRATIO_ZZ	An indicator variable that equals one if *CSRRATIO* = 0 in both the pre and post-regulation periods, and zero otherwise	CMIE Prowess
CSRRATIO_ZL	An indicator variable that equals one if *CSRRATIO* = 0 in the pre-regulation period and 0 < *CSRRATIO* < 2% in the post-regulation period, and zero otherwise	CMIE Prowess

CSRRATIO_LL	An indicator variable that equals one if 0 < *CSRRATIO* < 2% in the pre-regulation period and 0 < *CSRRATIO* < 2% in the post-regulation period, and zero otherwise	CMIE Prowess
CSRRATIO_LH	An indicator variable that equals one if 0 < *CSRRATIO* < 2% in the pre-regulation period and *CSRRATIO* > 2% in the post-regulation period, and zero otherwise	CMIE Prowess
CSRRATIO_HH	An indicator variable that equals one if *CSRRATIO* > 2% in the pre-regulation period and *CSRRATIO* > 2% in the post-regulation period, and zero otherwise	CMIE Prowess
POLITICAL	An indicator variable that equals one if a firm makes a donation to the PM relief fund or a CSR project started by the Government and zero otherwise.	Annual report
FAMILY_TRUST	An indicator variable that equals one if a firm makes a donation to a trust owned by the promoter/family members to comply with its CSR requirements.	Annual report
CSR_COM_EXPERT	An indicator variable that equals one if an expert is on the CSR committee of a firm, and zero otherwise. We consider a board member to be an expert in the CSR area if s/he has education or prior experience in areas relating to CSR such as social work, environment sciences, public policy, etc	Annual report
CSR_COM_IND	An indicator variable that equals one if at least 50% of board members on a firm's CSR committee are independent, and zero otherwise.	Annual report
CSR_COM_INDCHAIR	An indicator variable that equals one if the Chairperson of the CSR committee is independent, and zero otherwise.	Annual report
CSR_COM_QTY	*CSR_COM_EXPERT* + *CSR_COM_IND* + *CSR_COM_INDCHAIR*	Annual report

Appendix C – Extracts from CSR reports

C.1. Examples of CSR spending

Asian Paints Limited

In the area vocational training, your Company aspires and continues to provide training programs to painters and contractors across a variety of skills to enhance their skills empower them, provide opportunities, enhance their ability to take better employment and better livelihood. These trainings are offered through Colour Academies set up by the Company across India. During the financial year 2015 – 16, Colour Academies have conducted trainings which were attended by more than 15,000 participants. Your Company is a certified training partner of National Skills Development Corporation (NSDC), set up by the Government of India. All Asian Paints Colour Academies follow courses approved by NSDC for providing vocational training to aspiring painters and professional painters in the trade.

Colgate-Palmolive (India) Limited

One of the most impactful oral health initiatives by Colgate is Colgate Bright Smiles, Bright Futures® - which demonstrates Colgate's commitment to educating children about oral healthcare. A flagship initiative by the Company, it was created with an aim to spread awareness among children about the correct oral health habits, basic hygiene and diet, through use of engaging aids to ensure that the children retain their learning about oral care.

Dabur India Limited

Ensuring Environmental Sustainability: Programmes to protect endangered species of herbs and plants, enhancing livelihood of farmers; developing and supplying seeds and seedlings to local farmers free of cost to enhance their livelihood and also protect endangered species; tree plantation drive; promotion of solar energy.

C.2. Example of CSR Committee members coded as CSR expert

Ms. Yashashree Padmakar Gurjar, Ballarpur Industries Ltd.

Ms. Gurjar is an Executive MBA from the Asian Institute of Management, Manila, Philippines, and a holds Post Graduate certificate in Cross Sector Partnerships from Cambridge University, United Kingdom. She is currently pursuing an Executive certificate program from Harvard's Kennedy School, USA. She is also a Fellow of the India Leadership initiative of Aspen Institute. In a career spanning more than 26 years, she has worked with the Government, NGO and corporates. She has conceptualized and executed sustainable programs on issue such as poverty alleviation through income security, primary health, education and care & support for persons living with HIV for some of the most marginalized communities across the country. Her major professional experience is as follows: Sulochana Thapar foundation- Dec 2009 onwards, Chief Executive Officer and board member; Avantha group- May 2000 - Nov 2009, Group Head CSR; Rio Tinto - 1998-2000, Manager, Community affairs ; Reliance Industries Ltd- 1993-1998, Assistant Manager: Community development

Table 1- Sample Distribution

Panel A – Sample selection

	Firm-year observations
Initial sample - Firm-year observations belonging to India on Sustainalytics database	946
Less: observations relating to firms that do not have at least one observation in both pre and post-CSR law period	98
Less: observations relating to firms with missing control variables on Compustat Global database	12
Less: observations relating to firms without a matched control firm	11
Final sample	
Treatment firm-year observations	815
Control firm-year observations	876
Total	1,691

Panel B - Frequency by Country

	Unique Firms	%	Observations	%
Treatment				
India	119	50.00	815	48.20
Control				
Australia	7	2.94	54	3.19
Belgium	1	0.42	7	0.41
Brazil	2	0.84	13	0.77
Canada	5	2.10	37	2.19
Chile	2	0.84	15	0.89
China	10	4.20	78	4.61
Czech Republic	1	0.42	8	0.47
Denmark	2	0.84	16	0.95
Germany	2	0.84	16	0.95
Greece	1	0.42	5	0.3
Hong Kong	5	2.10	34	2.01
Hungary	1	0.42	8	0.47
Indonesia	2	0.84	15	0.89
Israel	2	0.84	12	0.71
Italy	1	0.42	8	0.47
Japan	17	7.14	121	7.16

Malaysia	3	1.26	24	1.42
New Zealand	2	0.84	14	0.83
Norway	1	0.42	8	0.47
Pakistan	1	0.42	4	0.24
Philippines	1	0.42	7	0.41
Poland	1	0.42	7	0.41
Russia	1	0.42	8	0.47
South Korea	4	1.68	27	1.6
Sweden	2	0.84	13	0.77
Switzerland	1	0.42	8	0.47
Taiwan	6	2.52	45	2.66
Thailand	4	1.68	28	1.66
Turkey	1	0.42	6	0.35
United Kingdom	5	2.10	37	2.19
United States	25	10.5	193	11.41
Total	238	100	1691	100

Panel C - Frequency by Industry

Industry	Unique Firms	%	Observations	%
Mining	12	5.04	83	4.91
Manufacturing	112	48.73	793	46.89
Transportation & Utilities	40	16.80	276	16.32
Wholesale & Retail Trade	2	0.84	16	0.95
Services	70	29.41	510	30.17
Public Administration	2	0.84	13	0.77
Total	238	100.00	1691	100.00

Notes. This table summarizes the sample selection procedure and its distribution. Panel A outlines various filters used in constructing the sample. Treatment group comprises of firms from India and control group are firms from the rest of the world. Firms are matched on industry, ESG rating, and financial characteristics in the year before passage of the Indian CSR Law. The closest matching firm is the nearest neighbor of the treatment firm with the lowest Mahalanobis distance across these matching characteristics. Panel B presents the distribution of firms across countries and Panel C presents distribution across industries.

Table 2: Summary Statistics

Panel A – Descriptive Statistics of Model Variables

Variable	Min	P25	P50	Mean	SD	P75	Max
1. ESG_RATING	27.000	49.550	55.100	56.688	9.849	62.000	96.000
2. ENV_RATING	19.000	42.110	52.000	53.452	14.393	63.000	101.000
3. SOC_RATING	24.000	50.000	57.000	57.449	10.957	64.000	99.180
4. GOV_RATING	30.000	51.000	58.800	60.028	11.912	67.320	100.000
5. SIZE	0.000	10.531	12.161	12.251	2.312	13.855	18.572
6. ROA	-0.846	0.011	0.039	0.054	0.076	0.085	0.524
7. CFO	-0.220	0.009	0.079	0.082	0.077	0.125	0.471
8. CASH	0.000	0.021	0.049	0.079	0.092	0.104	0.686
9. ATO	-0.041	0.161	0.574	0.618	0.574	0.873	4.725
10. LEVERAGE	0.000	0.038	0.161	0.195	0.184	0.302	0.985
11. SGROWTH	-4.087	0.000	0.032	0.083	0.692	0.128	24.897
12. RD	0.000	0.000	0.000	0.006	0.015	0.003	0.125

Panel B: Difference in Mean and Median Values of ESG ratings and Firm Characteristics for Treatment and Control Firms

Variable	Mean			Median		
	TREAT (T)	CONTROL (C)	T-C	TREAT (T)	CONTROL (C)	T-C
1. ESG_RATING	56.773	56.831	-0.058 N.S,	55.000	56.000	-1.000 N.S,
2. ENV_RATING	51.815	53.042	-1.227 N.S,	51.000	52.000	-1.000 N.S,
3. SOC_RATING	57.201	58.168	-0.966 N.S,	57.000	57.000	0.000 N.S,
4. GOV_RATING	60.563	60.756	-0.193 N.S,	59.000	58.000	1.000 N.S,
5. SIZE	9.145	9.529	-0.384 N.S,	10.000	10.000	0.000 N.S,
6. ROA	0.071	0.065	0.006 N.S,	0.039	0.040	-0.001 N.S,
7. CFO	0.083	0.090	-0.008 N.S,	0.075	0.083	-0.008 N.S,
8. CASH	0.159	0.146	0.013 N.S,	0.037	0.058	-0.021 **
9. ATO	0.641	0.642	-0.001 N.S,	0.616	0.595	0.021 N.S,
10. LEVERAGE	0.190	0.200	-0.010 N.S,	0.142	0.166	-0.024 N.S,
11. SGROWTH	0.045	0.037	0.008 N.S,	0.046	0.001	0.045 *
12. RD	0.005	0.006	-0.001 N.S,	0.000	0.000	0.000 N.S,

Panel C: Correlations between Variables Used in Analysis

	1	2	3	4	5	6	7	8	9	10	11	12
1. ESG_RATING	1.000											
2. ENV_RATING	0.860***	1.000										
3. SOC_RATING	0.741***	0.400***	1.000									
4. GOV_RATING	0.753***	0.568***	0.343***	1.000								
5. SIZE	-0.081***	-0.087***	0.100***	-0.271***	1.000							
6. ROA	0.149***	0.215***	-0.051**	0.185***	-0.204***	1.000						
7. CFO	0.238***	0.314***	-0.073***	0.343***	-0.341***	0.610***	1.000					
8. CASH	0.075***	0.117***	-0.016	0.058**	-0.153***	0.293***	0.263***	1.000				
9. ATO	0.288***	0.344***	-0.028	0.361***	-0.295***	0.301***	0.424***	0.178***	1.000			
10. LEVERAGE	-0.104***	-0.123***	-0.071***	-0.013	-0.031	-0.311***	-0.113***	-0.253***	-0.199***	1.000		
11. SGROWTH	-0.026	0.003	-0.068***	0.001	0.002	0.045*	0.031***	-0.005	0.012	-0.005	1.000	
12. RD	0.063***	0.231***	-0.116	0.014	-0.069***	0.176***	0.172***	0.171***	0.096***	-0.068***	0.011	1.000

Notes: This table presents the descriptive statistics and correlations between key variables used in the analysis. Panel A describes distributions for the variables included in the baseline regression analysis. Panel B presents differences in the mean and median values of these variables. Panel C provides pairwise Pearson correlations between these variables. All variables are described in Appendix B. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. N.S. denotes not significant.

Table 3. Impact of Indian CSR Law on ESG ratings - Difference-in-Difference (DID) analysis

Dependent Variable	(1) *ESG_RATING* coef	t-stat	(2) *ESG_RATING* coef	t-stat
TREAT X POST	3.095**	3.28		
TREAT X Year 2012			-0.765*	-2.08
TREAT X Year 2013			-1.337***	-3.68
TREAT X Year 2014			1.522**	3.45
TREAT X Year 2015			2.470***	4.11
TREAT X Year 2016			2.804***	4.47
TREAT X Year 2017			3.515***	4.65
SIZE	-0.028	-0.07	-0.033	-0.09
ROA	-2.090	-1.15	-1.635	-0.91
CFO	10.575**	3.15	10.569**	3.16
CASH	-2.471	-0.97	-1.969	-0.74
ATO	0.681	0.54	0.605	0.49
LEVERAGE	-1.443	-0.52	-1.145	-0.42
SGROWTH	-0.262**	-3.25	-0.225**	-2.69
RD	-1.759	-0.06	-6.601	-0.24
Year FE	Yes		Yes	
Firm FE	Yes		Yes	
Adj. R-Squared	0.863		0.865	
# Observations	1,691		1,691	

Notes: This table provides the results of difference-in-difference regression analyzing the effect of the Indian CSR Law on ESG ratings. The dependent variable is the firm's ESG rating from Sustainalytics. *POST* is an indicator variable that equals one for the years 2015–2018 and zero otherwise. *TREAT* is an indicator variable that equals one for Indian firms and zero otherwise. Indicator variables *Year2012-Year 2017* capture the corresponding year. All other variables are described in Appendix B. Statistical inferences are based on standard errors clustered at firm and year. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

Table 4. Impact of Indian CSR Law on ESG ratings - DID analysis drilling down into Environment, Social and Governance dimensions of ESG ratings

Dependent Variable	(1) *ENV_RATING*		(2) *SOC_RATING*		(3) *GOV_RATING*	
	coef	tstat	coef	tstat	coef	tstat
TREAT X POST	4.901***	3.98	3.915***	3.51	1.287	1.30
SIZE	0.293	0.38	-0.036	-0.08	-0.404	-0.87
ROA	-0.282	-0.09	-4.076	-1.25	-3.224	-1.42
CFO	12.076*	1.96	11.985**	2.76	7.034	1.80
CASH	1.399	0.49	-3.298	-0.99	-5.766	-1.33
ATO	3.184*	1.91	-1.198	-0.57	0.771	0.60
LEVERAGE	-1.235	-0.28	-4.046	-1.18	4.105	1.51
SGROWTH	-0.089	-0.62	-0.473***	-3.64	-0.165	-1.59
RD	18.630	0.49	10.371	0.26	-46.003	-1.30
Year FE	Yes		Yes		Yes	
Firm FE	Yes		Yes		Yes	
Adj. R-Squared	0.863		0.823		0.853	
# Observations	1,691		1,691		1,691	

Notes: This table provides the results of difference-in-difference regression analyzing the effect of the Indian CSR Law on ratings along environment, social, and governance dimensions of Sustainalytics ESG ratings. Accordingly, the dependent variables in columns (1) – (3) are *ENV_RATING, SOC_RATING, and GOV_RATING,* respectively. *POST* is an indicator variable that equals one for the years 2015–2018 and zero otherwise. *TREAT* is an indicator variable that equals one for Indian firms and zero otherwise. All other variables are described in Appendix B. Statistical inferences are based on standard errors clustered at firm and year. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

Table 5. Impact of Indian CSR Law on ESG ratings - DID analysis drilling down into inputs versus outcomes in ESG ratings

Dependent Variable	(1) ESG Preparedness		(2) ESG Disclosures		(3) Programs/Targets		(4) Performance	
	coef	tstat	coef	tstat	coef	tstat	coef	Tstat
TREAT X POST	0.091*	2.12	0.198**	2.95	0.234**	3.33	-0.049*	-2.19
SIZE	0.022	0.60	0.113	3.17	-0.026	-0.23	-0.001	-0.02
ROA	-0.411	-1.76	-0.386	-1.12	-0.432	-1.22	0.406*	1.95
CFO	0.535**	2.45	-0.144	-0.57	0.446	1.42	0.088	0.73
CASH	-0.368*	-1.96	-0.019	-0.10	-0.134	-0.55	0.050	0.45
ATO	0.078	0.75	0.275*	2.00	0.140	1.02	0.008	0.16
LEVERAGE	-0.026	-0.22	-0.271	-1.54	-0.009	-0.04	0.122	0.98
SGROWTH	-0.043	-0.80	-0.095	-1.28	-0.084	-1.00	-0.012	-0.54
RD	1.644	1.27	1.387	0.65	-2.671	-0.85	1.049	0.76
Year FE	Yes		Yes		Yes		Yes	
Firm FE	Yes		Yes		Yes		Yes	
Adj. R-Squared	0.854		0.764		0.750		0.868	
# Observations	1691		1691		1691		1691	

Notes: This table provides the results of difference-in-difference regression analyzing the effect of Indian CSR Law on specific indicators of ESG performance that eventually determine the ratings in the Sustainalytics database. The dependent variables in columns (1) – (4) are indicators that capture a firm's preparedness, disclosures, programs/targets, performance, respectively. *POST* is an indicator variable that equals one for the years 2015–2018 and zero otherwise. *TREAT* is an indicator variable that equals one for firms that belong to India and zero otherwise. All other variables are described in Appendix B. Statistical inferences are based on standard errors clustered at firm and year. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

Table 6. Mechanisms by which ESG ratings improve: the role of CSR spending
Panel A – Descriptive statistics

Mean CSRRATIO	(1) *ZZ*	(2) *ZL*	(3) *LL*	(4) *LH*	(4) *HH*	(4) *Full sample*
N	57	237	240	233	48	815
%	6.99%	29.08%	29.45%	28.59%	5.89%	100.00%
PRE	0.00%	0.00%	0.55%	0.69%	6.01%	0.86%
POST	0.00%	1.38%	1.40%	3.26%	3.34%	1.94%
POST - PRE	0.00%	1.38%***	0.85%***	2.57%***	-2.67%*	1.08%***
T-stat	0.00	18.19	10.37	5.63	1.63	5.18

Panel B – Regression analysis

Dependent Variable	**(1)** *ESG_RATING* coef	tstat	**(2)** *ESG_RATING* coef	Tstat
TREAT X POST	2.358**	2.78		
TREAT X POST X CSRRATIO_HIGH	1.491**	2.46		
TREAT X POST X CSRRATIO_ZZ			-0.209	-0.14
TREAT X POST X CSRRATIO_ZL			2.955*	2.10
TREAT X POST X CSRRATIO_LL			1.618*	2.30
TREAT X POST X CSRRATIO_LH			5.192**	3.23
TREAT X POST X CSRRATIO_HH			1.467	1.10
CSRRATIO	7.463	1.11	1.536	0.24
SIZE	-0.088	-0.24	-0.164	-0.49
ROA	-2.417	-1.42	-2.499	-1.48
CFO	10.738**	3.24	9.971**	3.29
CASH	-1.576	-0.64	-1.669	-0.63
ATO	0.742	0.60	0.968	0.71
LEVERAGE	-1.471	-0.55	-1.886	-0.77
SGROWTH	-0.239**	-2.98	-0.202**	-2.85
RD	2.118	0.07	5.856	0.22

Year FE	Yes	Yes
Firm FE	Yes	Yes
Adj. R-Squared	0.865	0.869
# Observations	1,691	1,691

Notes: This table provides the results of triple difference regression model analyzing the differential impact of the Indian CSR Law on ESG ratings based on the level and increase in CSR spending. The dependent variable is the firm's ESG rating from the Sustainalytics database. *POST* is an indicator variable that equals one for the years 2015–2018 and zero otherwise. *TREAT* is an indicator variable that equals one for firms that belong to India and zero otherwise. *CSRRATIO* is the amount spent on CSR activities divided by average profit after tax for the last three years. *CSRRATIO_HIGH* is an indicator variable that equals one if *CSRRATIO* > 2%, and zero otherwise. *CSRRATIO_ZZ* is an indicator variable that equals one if *CSRRATIO*=0 in both periods before and after implementation of the CSR Law, and zero otherwise. *CSRRATIO_ZL* is an indicator variable that equals one if *CSRRATIO*=0 in the period before and 0 < *CSRRATIO* < 2% in the period after the implementation of the CSR Law, and zero otherwise. *CSRRATIO_LL* is an indicator variable that equals one if 0 < *CSRRATIO* < 2% in both periods before and after implementation of the CSR Law, and zero otherwise. *CSRRATIO_LH* is an indicator variable that equals one if the 0 < *CSRRATIO* < 2% in the period before and *CSRRATIO* > 2% in the period after implementation of the CSR Law, and zero otherwise. *CSRRATIO_HH* is an indicator variable that equals one if *CSRRATIO* > 2% in both periods before and after implementation of the CSR Law, and zero otherwise. All other variables are described in Appendix B. Statistical inferences are based on standard errors clustered at firm and year. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

Table 7. Mechanisms by which ESG ratings improve: the role of CSR spending quality
Panel A – Descriptive statistics on quality of CSR spending

	Freq (N =815)
CSR spending includes donation to Government initiated projects (*POLITICAL*)	43.79%
CSR spending is through a promoter / family-owned trust (*FAMILY_TRUST*)	36.30%

Panel B – Regression analysis

Dependent Variable	(1) *ESG_RATING*		(2) *ESG_RATING*	
	coef	tstat	coef	tstat
TREAT X POST	4.156***	3.91	3.977***	3.57
TREAT X POST X POLITICAL	-2.504*	-2.29		
TREAT X POST X FAMILY_TRUST			-2.427*	-2.36
SIZE	-0.001	-0.00	-0.093	-0.24
ROA	-2.110	-1.29	-2.058	-1.26
CFO	10.840**	3.27	9.963**	3.09
CASH	-1.978	-0.79	-1.940	-0.77
ATO	0.539	0.43	0.745	0.59
LEVERAGE	-1.432	-0.53	-1.467	-0.57
SGROWTH	-0.235**	-3.20	-0.260**	-3.06
RD	1.970	0.08	-5.445	-0.19
Year Fixed Effects	Yes		Yes	
Firm Fixed Effects	Yes		Yes	
Adj. R-Squared	0.865		0.865	
# Observations	1,691		1,691	

Notes: This table provides the results of triple difference regression model analyzing the differential impact of the Indian CSR Law on ESG ratings based on the quality of CSR spending. The dependent variable is the firm's ESG rating from the Sustainalytics database. *POST* is an indicator variable that equals one for the years 2015–2018 and zero otherwise. *TREAT* is an indicator variable that equals one for firms that belong to India and zero otherwise. *POLITICAL* is an indicator variable that equals one if a firm makes donation to the Prime Minister's relief Fund or a CSR project started by the Government and zero otherwise. *FAMILY_TRUST* is an indicator variable that equals one if a firm makes donation to a trust owned by the promoter / family members to comply with its CSR spending requirements. All other variables are described in Appendix B. Statistical inferences are based on standard errors clustered at firm and year. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

Table 8. Mechanisms by which ESG ratings improve: the role of CSR governance quality

Panel A – Descriptive statistics

	Freq (N =815)
CSR expert is on the CSR committee (*CSR_COM_EXPERT*)	41.22%
% of independent members on CSR committee (*CSR_COM_IND*)	45.90%
CSR committee chair is independent (*CSR_COM_INDCHAIR*)	44.73%
CSR_COM_QUAL	
0	31.62%
1	29.51%
2	14.29%
3	24.59%

Panel B – Regression analysis

Dependent Variable	(1) *ESG_RATING* coef	tstat	(2) *ESG_RATING* coef	tstat	(3) *ESG_RATING* coef	tstat	(4) *ESG_RATING* coef	Tstat
TREAT X POST	0.102	0.16	0.885	1.38	1.349*	1.97	1.629*	2.18
TREAT X POST X CSR_COM_QUAL	2.363***	4.48						
TREAT X POST X CSR_COM_EXPERT			5.492***	4.61				
TREAT X POST X CSR_COM_IND					4.039***	3.51		
TREAT X POST X CSR_COM_INDCHAIR							3.374**	3.14
SIZE	-0.169	-0.44	-0.209	-0.56	-0.131	-0.35	-0.032	-0.08
ROA	-1.109	-0.85	-1.557	-1.04	-1.619	-1.08	-1.552	-1.05
CFO	8.645**	2.42	9.930**	2.78	10.071**	2.80	8.714**	2.68
CASH	-0.753	-0.34	-0.627	-0.29	-1.394	-0.61	-2.063	-0.81
ATO	0.998	0.88	0.439	0.39	0.739	0.61	1.232	0.99
LEVERAGE	-0.809	-0.32	-1.153	-0.43	-0.931	-0.37	-1.102	-0.42
SGROWTH	-0.139	-1.89	-0.164*	-2.23	-0.190**	-2.58	-0.206**	-2.66
RD	-3.521	-0.10	6.813	0.21	-4.026	-0.12	-7.404	-0.23
Year Fixed Effects	Yes		Yes		Yes		Yes	
Firm Fixed Effects	Yes		Yes		Yes		Yes	

Adj. R-Squared	0.874	0.874	0.869	0.867
# Observations	1,691	1,691	1,691	1,691

Notes: This table provides the results of triple difference regression model analyzing the differential impact of the Indian CSR Law on ESG ratings based on the quality of CSR committee. The dependent variable is the firm's ESG rating from the Sustainalytics database. *POST* is an indicator variable that equals one for the years 2015–2018 and zero otherwise. *TREAT* is an indicator variable that equals one for firms that belong to India and zero otherwise. *CSR_COM_EXPERT* is an indicator variable that equals one if an expert is on the CSR committee of a firm, and zero otherwise. We consider a board member to be an expert in the CSR area if s/he has education or prior experience in areas relating to CSR such as social work, environment sciences, public policy, etc. *CSR_COM_IND* is an indicator variable that equals one if at least 50% of board members on a firm's CSR committee are independent, and zero otherwise. *CSR_COM_INDCHAIR* is an indicator variable that equals one if the Chairperson of the CSR committee is independent, and zero otherwise. *CSR_COM_QTY* is an aggregate measure of the quality of CSR committee that is obtained by adding *CSR_COM_EXPERT, CSR_COM_IND*, and *CSR_COM_INDCHAIR.* It ranges from 0-3. All other variables are described in Appendix B. Statistical inferences are based on standard errors clustered at firm and year. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

Table 9. Impact of Indian CSR Law on ESG ratings – robustness to different control groups

Dependent Variable	(1) *ESG_RATING* coef	tstat	(2) *ESG_RATING* coef	tstat	(3) *ESG_RATING* coef	tstat	(4) *ESG_RATING* coef	tstat
TREAT X POST	5.069***	4.43	3.090**	2.94	4.842***	4.29	2.480**	3.05
SIZE	0.261	0.46	1.629	1.71	-0.066	-0.1	-0.077	-0.18
ROA	-1.595	-0.24	2.737	0.95	-1.901	-0.41	2.221	0.44
CFO	7.889	1.83	6.460	1.63	3.012	0.98	6.547	1.68
CASH	0.948	0.39	-2.385	-0.68	0.405	0.17	-0.078	-0.02
ATO	-0.257	-0.17	1.391	0.80	0.167	0.22	0.459	0.34
LEVERAGE	-4.954	-1.85	-6.684*	-2.20	-1.723	-0.68	0.443	0.17
SGROWTH	-0.051	-0.08	-0.498	-0.43	-0.083	-0.11	-0.642	-0.95
RD	-16.848	-0.77	46.711	0.85	-2.280	-0.08	9.589	0.51
Year FE	Yes		Yes		Yes		Yes	
Firm FE	Yes		Yes		Yes		Yes	
Adj. R-Squared	0.854		0.868		0.857		0.860	
# Observations	1611		1153		1745		1707	
Treatment Group	India		India		India		India	
Control Group	China		Brazil		USA		EU	

Notes: This table provides the results of difference-in-difference regression analyzing the effect of Indian CSR Law on ESG ratings using different control groups. The alternative control groups comprise firms from – (i) China, (ii) Brazil, (iii) USA and (iv) European Union in columns (1)-(4), respectively. Unlike our main analysis, in this analysis, we drop the caliper distance requirement of 0.1 to identify matches for a greater number of treatment firms. Our conclusions remain the same even with more restrictive conditions. The dependent variable is the firm's ESG rating from the Sustainalytics database. *POST* is an indicator variable that equals one for the years 2015–2018 and zero otherwise. *TREAT* is an indicator variable that equals one for firms that belong to India and zero otherwise. All other variables are described in Appendix B. Statistical inferences are based on standard errors clustered at firm and year. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

Table 10. Impact of Indian CSR Law on ESG ratings – robustness to Refinitiv ESG ratings

Dependent Variable	(1) *ESG_RATING*		(2) *ENV_RATING*		(3) *SOC_RATING*		(4) *GOV_RATING*	
	coef	tstat	coef	tstat	coef	tstat	coef	tstat
TREAT X POST	4.462**	2.52	5.816**	2.68	6.125**	2.65	1.131	0.51
SIZE	2.189**	2.80	0.925	0.71	1.932**	2.85	2.264**	2.73
ROA	-6.575	-0.99	-15.066	-1.41	9.096	1.00	-19.803	-1.82
CFO	-6.432	-0.75	-6.250	-0.41	-0.193	-0.02	-23.068*	-1.97
CASH	-0.777	-0.09	5.652	0.50	-14.282	-1.60	4.604	0.39
ATO	7.739**	3.00	2.060	0.42	5.540	1.88	16.968***	4.10
LEVERAGE	4.214	0.98	6.348	0.88	12.676**	3.41	-3.640	-0.45
SGROWTH	-0.062	-0.29	0.113	0.50	-0.171	-0.62	0.076	0.29
RD	-134.456**	-2.38	-179.411	-1.51	-218.026***	-3.84	83.003	0.81
Year FE	Yes		Yes		Yes		Yes	
Firm FE	Yes		Yes		Yes		Yes	
Adj. R-Squared	0.885		0.826		0.886		0.731	
# Observations	1,329		1,329		1,329		1,329	

Notes: This table provides the results of difference-in-difference regression analyzing the effect of Indian CSR Law on overall ESG ratings as well as ratings along environment, social, and governance dimensions of ESG performance, obtained from the Refinitiv database. Accordingly, the dependent variables in columns (1) – (4) are *ESG_RATING*, *ENV_RATING, SOC_RATING, and GOV_RATING,* respectively. *POST* is an indicator variable that equals one for the years 2015–2018 and zero otherwise. *TREAT* is an indicator variable that equals one for firms that belong to India and zero otherwise. All other variables are described in Appendix B. Statistical inferences are based on standard errors clustered at firm and year. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively.