Climate Disclosures and Decarbonization along the Supply Chain[*]

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Abstract

This paper examines the spillover effect of climate-related disclosures over global supply chains. Our tests rely on a wide international sample of customer-supplier pairs and exploit the unique features of the CDP, the world-leading platform of corporate climate risk disclosures. We find a strong positive association between customer and supplier disclosures to the CDP. A battery of tests aimed at tightening identification supports the interpretation that the association is driven by customers actively demanding climate-related information and suppliers responding to this demand. We also observe that supplier CDP disclosures likely induced by customers' demand are associated with subsequent lower carbon emissions. Moreover, customers are more (less) likely to terminate relationships with the most (least) polluting suppliers and with those not meeting their disclosure demands. Taken together, our results shed light on the role of global supply chains in propagating climate disclosure and decarbonization efforts.

JEL classification : G30, M41, Q53.
Key Words: Climate Disclosure, Supply Chains, Carbon Emissions

1.   Introduction

The transition toward a more sustainable economy requires the disclosure of climate-related information (Christensen et al., 2021). Nonetheless, due to the unique nature of climate-related data, the provision of such information faces several difficulties. One of these challenges is obtaining high-quality sustainability information along supply chains. For example, firms issuing net-zero carbon pledges need information not only about direct emissions, but also about those associated with their energy consumption and their supply chain – commonly referred to as "Scope 2" and "Scope 3", respectively. In fact, several firms have launched initiatives to coordinate environmental information sharing with their suppliers.[1] The difficulty lies in the potentially high coordination costs of these initiatives, which raises the more general question of whether suppliers respond to the (sustainability-related) informational demands of their customers.

This paper addresses this question. That is, we explore whether corporate customer demand for climate-related data induces suppliers to disclose such information. In addition, we examine whether these disclosures have implications in terms of climate-related corporate decision-making. For suppliers, we analyze decarbonization efforts. For customers, we analyze the decision to terminate supply relationships based on supplier emissions and/or on supplier willingness to provide environmental information.

Our empirical tests rely on the world's largest platform of voluntary climate risk disclosure: the CDP (formerly known as the Carbon Disclosure Project). CDP offers its signatories (and the public) access to climate-related disclosures, collected by the platform on their behalf. A key advantage of the CDP setting is that it allows us to directly observe corporate customers' demand for their suppliers' climate-related disclosures, as corporate customers may request this

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[1] These initiatives include the creation of a common set of reporting rules combined with a digital infrastructure for information sharing (BASF, 2011; TfS, 2022).

information through the "CDP Supply Chain program". The voluntary nature of CDP disclosures is also an advantage given our research question, as we seek to examine suppliers' response to customer demand for climate information in the absence of regulation.

Our first hypothesis is that corporate customers' demand for climate-related information induces supplier firms to disclose climate-related information to the CDP. Corporate customers could demand climate-related information for three non-mutually exclusive reasons: (i) they consider that suppliers' climate-related performance affects their future cash flows, (ii) their environmental objectives extend to the supply chain (for example, in the case of net-zero pledges),[2] and (iii) their environmental reporting scope includes the whole supply chain (for example, in the case of reporting Scope 3 emissions).[3] For a customer firm, demanding climate disclosures through the CDP platform involves a lower cost than collecting the information directly, because CDP internalizes some disclosure preparation costs such as contacting the supplier, providing a standardized reporting framework, and processing/aggregating the collected information.

Several considerations suggest that the above hypothesis might not hold. First, the three drivers of customer demand for disclosures mentioned above might not be first order. Second, whether a supplier caters to a customer's demand to disclose information to CDP depends not only on the cost of the disclosure for the supplier, but also on whether the customer has enough bargaining power to elicit the disclosure from the supplier. Finally, corporate customers might

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[2] Consistent with this possibility, some executive compensation packages include incentives to foster engagement with suppliers in advancing transparency and driving emission-reduction initiatives. For example, Mastercard's compensation policies reward executives for encouraging suppliers' participation in the CDP (Mastercard proxy Statement, 2023). Similarly, Walmart's Project Gigaton™ encourages its suppliers to disclose their climate-related information through the CDP (for more details visit: Project Gigaton).

[3] Several sustainability disclosure frameworks include the reporting of information about the supply chain. One prominent example is the disclosure of Scope 3 emissions based on the GHG Protocol (WRI/WBCSD GHG Protocol, 2022). The CDP questionnaire also includes information about the supply chain (CDP, 2021).

obtain climate-related information directly from suppliers, bypassing public disclosure on platforms like CDP to reduce proprietary costs.

Our second hypothesis is that supplier CDP disclosures induced by corporate customer demand affect climate-related corporate decision-making. Corporate customers could use these disclosures to effectively manage the carbon footprint of their supply chain. That is, corporate customers could push high-polluting suppliers to decarbonize or even terminate supply relationships if the suppliers do not respond to climate-related requests. In turn, suppliers could lower emissions to avoid costly contract renegotiations or customer losses. That said, whether these effects are first order remains an open question.

Our analyses rely on a unique combination of datasets covering a large and comprehensive sample of global supply chain links from 2007 to 2022, comprising 238,156 (8,263) unique suppliers (customers) from 54 countries and all major industries in the world economy. We first examine whether corporate customer climate-related disclosures, which broadly capture customers' demand for climate-related information, spill over into the supply chain, inducing supplier firms to disclose climate-related information. We document that the likelihood that a supplier discloses to the CDP increases as the fraction of its customers disclosing to the CDP increases. As the share of customers disclosing to the CDP increases from zero to the sample average (11%), the likelihood of supplier disclosure rises by 0.88 percentage points.

The positive association between supplier and customer disclosures to CDP also holds when we perform the analysis at the customer-supplier-year level using our unique sample of customer-supplier pairs of more than 11 million observations. The granularity of our data allows us to exploit additional sources of variation, including the timing of the initiation of the supply chain link. The tighter fixed effects structure in these tests, specifically supplier-customer and customer-year fixed

effects, allows us to control for key sources of unobserved variation, notably the endogenous two-sided matching between customers and suppliers.

Importantly, the parallel trends assumption holds; we do not find evidence of differences in CDP disclosure practices among suppliers before their customers start disclosing. Rather, we find that the increase in suppliers' CDP disclosures starts right after the initiation of the corresponding customer's CDP disclosure. Conditional on an active customer-supplier relationship, a supplier's likelihood of disclosing to the CDP increases by 0.54 percentage points if the customer also discloses. This is a non-trivial increase considering that the unconditional probability of suppliers disclosing to the CDP is 8.7 percent. Our inferences remain unchanged when we employ a "shift-share" design (i.e., we fix the supply chain network as of 2007), which avoids the endogeneity associated with corporate customers selecting more transparent suppliers. Our inferences are also unaltered when we control for the intensity of the relationship between customers and suppliers, and when we look at the disclosure response of the second-tier suppliers.

Corporate customers' climate-related disclosure decisions may be influenced by unobservable factors that also affect suppliers' disclosure decisions, making it difficult to establish causality. To mitigate this concern, we exploit two sources of plausibly exogenous variation in customers' incentives to demand climate-related disclosures from their suppliers. First, we exploit the 2017 Thomson Reuters (now LSEG) Asset4 expansion of its sustainability rating coverage to firms in the Russell 2000 index (Darendeli, Fiechter, Hitz, and Lehmann, 2022). We find that suppliers are more likely to disclose to the CDP after Asset4 starts covering their corporate customers. Second, we exploit the adoption of country-level ESG disclosure mandates (Krueger, Sautner, Tang, and Zhong, 2024). We find that, after a customer's country adopts an ESG disclosure regulation, suppliers of these treated customers are more likely to disclose to the CDP.

Critically, these results hold when we control for whether suppliers are themselves treated by the Asset4 coverage expansion, or by the adoption of ESG disclosure mandates.

Next, we exploit a unique feature of the CDP platform, the "CDP Supply Chain Program", to directly measure corporate customer demand for climate-related information. Through this program, participating firms delegate to the CDP the task of requesting climate disclosures from their suppliers. To the extent that it allows us to observe explicit customer disclosure demands and supplier responses, this feature of our setting addresses a major challenge in accounting research: disentangling disclosure demand from disclosure supply (in most settings, only equilibrium outcomes are observable). We find a strong association between customer demand and supplier response to the "CDP Supply Chain Program", suggesting that supplier climate-related disclosures are –at least partly– driven by explicit customer demand.

To reinforce our interpretation of the documented association between supplier and customer disclosures to CDP, we explore cross-sectional variation in our main results. Consistent with the link between supplier and customer climate-related disclosures hinging on customers' incentives to gather and produce climate-related information, we find stronger results if corporate customers operate in more competitive industries, experience environmental incidents, have a higher level of institutional ownership, and operate in carbon intensive industries. That is, our results are more pronounced when customers likely face greater scrutiny from shareholders and other stakeholders.

Regarding our second research question, we find that corporate customer demand for climate-related disclosures and suppliers' subsequent disclosures are associated with a decrease in suppliers' carbon emissions. The decline in GHG emissions following supplier CDP disclosure is around 2.3/2.5 percent, a non-trivial figure considering that the analysis is at the supplier-customer level. In addition, we find that corporate customers are more likely to terminate trade relationships

with the most polluting suppliers while maintaining ties with those with lower emissions. Finally, we observe that customers are also more likely to cut ties with suppliers that do not meet their disclosure demands, regardless of their suppliers' emissions levels. Taken together, these results are consistent with the notion that supplier CDP disclosures induced by corporate customer demand affect climate-related corporate decision-making.

Our results contribute to the literature in several ways. Recent work documents that customers induce suppliers to improve sustainability performance, as measured by ESG ratings (Dai et al., 2018; Schiller, 2018), carbon emissions (Cho et al., 2023), and conformity with human rights regulations (She, 2022). Relatedly, Darandelli et al. (2022) show that suppliers with poor ESG ratings face a lower demand once more information about their ESG records becomes available.[4] However, this literature does not study the demand for sustainability disclosures from corporate customers and the provision of such disclosures by suppliers. The unique nature of the economics of disclosure makes it hard to infer our results from this prior literature. We also depart from this previous work by using a wide sample of international firms (most of the prior papers rely on US settings) and a novel and extensive data on supply chain links.

Previous accounting literature has examined how related firms (peers, suppliers, customers) *use* (financial) information released by each other.[5] However, prior studies have rarely addressed the question of whether firms publicly *release* financial information induced by demand from a

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[4] These studies do not examine the spillover effects of customer disclosure along the supply chain. For example, She (2022) argues that customers' disclosure of due diligence in conformity with human rights induces these firms to pressure their suppliers to make improvements in this area. Cho et al. (2023) hypothesize that Scope 3 disclosures induce customer firms to push their suppliers to decarbonize.

[5] For example, prior literature documents that mandatory disclosures are used by other firms, thereby generating information spillover effects that often extend beyond the regulatory perimeter (Badertscher, Shroff, and White, 2013; Breuer, Hombach, and Müller 2022; Shroff, Verdi, and Yost, 2017). Also consistent with the notion that related firms use each other's financial information, Raman and Shahrur (2008) document evidence of earnings management to influence customers' perception of suppliers' prospects. More recently, Bourveau, Kepler, She, and Wang (2024) show that, as firms become more vertically integrated, they reduce their public disclosures on product strategies.

related firm.[6] This void in the literature is understandable, as the release of financial statements is generally mandatory, and when it is not –e.g., private firms in the US– the information is usually not publicly observable. The economic differences between climate and financial disclosures examined in the prior studies are not limited to the voluntary nature of the CDP disclosures. Customer firms use financial information from suppliers to assess the risk of supply chain disruptions. In contrast, climate information relates to externalities.

While we study customers' and suppliers' voluntary disclosure practices, our results provide insights into current regulatory debates. As explained by Christensen, Hail, and Leuz (2021), disclosure regulation is often considered a soft regulatory device that, rather than prohibiting certain behaviours, requires firms to disclose information about their performance to facilitate monitoring by interested parties (e.g., investors, creditors, customers, regulators, and the public) and shape firm behaviour. Consistent with this view, prior research shows that disclosure regulation induces firms to improve sustainability performance (Bonetti, Leuz, Michelon, 2024; Chen, Hung, and Wang, 2018; Tomar, 2023). What is less clear, though, is whether such effect extends beyond the regulatory perimeter. [7] Understanding this potential spillover is crucial considering that many sustainability-regulation requires aggregated information based on complete data (for example, information on global carbon emissions requires data from both regulated and unregulated firms). Our results are consistent with the idea that contractual-based

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[6] In the context of management forecasts, Seo (2021) documents that disclosures made by industry peers induce firm disclosure. However, this prior work focuses on spillover effects from competitors' disclosures rather than on informational demand from customer firms.

[7] We are aware of only two studies examining the spillover effects of sustainability disclosure regulation. Deng et al. (2023) document a decrease in reported Scopes 1 and 2 emissions, but an increase in estimated Scope 3 emissions following the UK carbon disclosure mandate, which required UK publicly traded firms to disclose their Scopes 1 and 2 emissions. Lu et al. (2023) find that, after the introduction of mandatory ESG disclosures, firms are less (more) likely to contract with suppliers located in their country (in countries without mandatory ESG disclosures). We note that, in contrast to our evidence, the take-away from these papers is that spillover effects of sustainability disclosure regulation do not translate into an improvement of sustainability performance.

mechanisms, such as supply chains, can be instrumental in propagating disclosure practices to unregulated firms. Our study is particularly relevant in light of the recent controversy around the requirement to disclose Scope 3 emissions, which effectively is a mandate to disclose supply chain emissions. Our results suggest that imposing such mandate could elicit substantial climate-related disclosures by firms outside the regulatory perimeter.[8]

2. Institutional Background

2.1. The CDP Platform

The CDP (formerly Carbon Disclosure Project) is a global nonprofit established in 2000, aiming to facilitate seamless access for institutional investors to corporate disclosures of environmental information. Since its inception, CDP has pioneered the connection between corporate environmental performance and investor fiduciary duty. In 2003, CDP launched its first questionnaire on behalf of 35 signatory institutional investors, enabling companies within the FTSE 500 to disclose climate-related information. Now CDP houses data from over 23,000 global companies, representing more than two thirds of global market capitalization ($67 trillion).[9] CDP is the largest repository of carbon emissions data and corporate environmental information.

CDP's annual questionnaires are sent typically in January and responded to by July/August. They encompass several topics, such as climate governance, greenhouse gas (GHG) reduction targets and initiatives, and other environmental risks and opportunities. Firms that respond to CDP questionnaires are required to report GHG emissions per the GHG Protocol, including Scopes 1,

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[8] The regulation of the disclosure of Scope 3 emissions exhibits substantial cross-country variation. For example, the requirement to disclose emissions imposed by the 2013 amendment of The Companies Act of 2006 in the UK excluded Scope 3. More recently, the SEC has dropped a requirement for U.S.-listed companies to disclose Scope 3 emissions, which was included in the March 2022 original draft. In contrast, the EU Corporate Sustainability Reporting Directive (CSRD) mandates that large firms publicly traded on EU stock exchanges report their Scope 3 emissions beginning from January 1, 2025.

[9] https://www.cdp.net/en/companies/companies-scores?utm_source

2, and 3. The extensive and detailed nature of the questionnaire requires substantial effort in data collection, estimation, and verification, particularly for first-time respondents.

2.2. The CDP Supply Chain Program

The "CDP Supply Chain Program" was launched in 2008 to increase corporate accountability and sustainability practices within supply chains. Corporate customers signing up for the CDP Supply Chain Program prepare lists of their suppliers to be asked to disclose.[10] The CDP contacts suppliers from the lists and requests them to disclose climate-related information. Suppliers who agree to respond report their data through standardized CDP questionnaires, which cover various aspects of environmental impact and management strategies (see Appendix B).[11]

Corporate customers' disclosure requests are mostly brought within June of each year, while suppliers' responses usually come in September. Suppliers can reject the request in an explicit way, or simply do not respond to the questionnaire. If a supplier has not responded to the CDP request by the end of the disclosure cycle (end of October), the CDP assumes that the request has been rejected.

The CDP analyzes the data collected from suppliers and provides feedback and scores based on suppliers' environmental performance and disclosure practices. Thus, participating suppliers gain the ability to benchmark their performance against industry standards and identify areas for improvement. At the same time, customers use the CDP's analysis to identify high-risk suppliers, engage with them in improvement programs, and potentially shift procurement practices towards

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[10] The number of CDP Supply Chain Program signatories increased from 44 in 2010 to 154 in 2020. Corporate customers do not usually request CDP to contact all their suppliers. Rather, corporate customers usually decide to focus on their long-standing and strategic suppliers.

[11] In 2020, the CDP Supply Chain Program contacted 15,637 suppliers. Out of these, 8,098 suppliers responded, representing a response rate of approximately 52%. From 2010 to 2020, the response rate to CDP Supply Chain Program requests varied between 39% and 64%.

lower-risk suppliers.[12] In addition, customers may use CDP disclosures to incentivize suppliers through awards or recognition for good environmental performance.

3.   Data and Sample Selection

We collect data from several sources. Customer-supplier links are obtained by combining data from FactSet Revere ("FactSet") and S&P Global Panjiva Supply Chain Intelligence ("Panjiva") databases. FactSet hand-collects supply chain relationship information using various sources: 10-K filings, conference call transcripts, presentations to investors, company press releases, company websites, and major news-media reports. FactSet offers better coverage of customer-supplier links than Compustat Segment, as the information in this latter dataset is limited to disclosures in 10-K filings (Agca, Babich, Birge, and Wu 2022).[13] FactSet covers 123,906 (204,120) unique supplier (customer) firms, comprising 962,878 unique supplier-customer pairs across 122 (128) countries around the world, over the period from 2003 to 2023.

FactSet relies heavily on corporate disclosures, which could induce a bias towards large customers. To overcome this bias, we augment FactSet Revere with information from Panjiva. Panjiva is based on comprehensive data parsed from customs declarations and bills of lading (i.e., shipment-level records of goods transported around the world).[14] The information includes details about shipper and consignee, product descriptions, vessel names, weight, and quantity. Panjiva also provides additional variables, including shipment volume (measured in twenty-foot equivalent units, TEUs) and shipment values in USD. The database contains nearly 2 billion

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[12] For example, Dell annually monitors suppliers to ensure continuous improvement in energy efficiency and carbon emissions reduction: https://www.dell.com/en-us/dt/corporate/social-impact/reporting/esg-frameworks-gri-index-overlay.htm

[13] SEC regulation SFAS No. 131 requires US firms to disclose the list of domestic and foreign principal customers representing more than 10% of the total reported sales.

[14] Panjiva covers around 40% of total international trade because bills of lading and customs declarations are available only for a subset of countries (United States, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, Mexico, Panama, Paraguay, Peru, Uruguay, Venezuela, China, India, Indonesia, Pakistan, Philippines, Sri Lanka, Vietnam).

transaction records starting from 2007. The Panjiva data suffer from two limitations: incomplete shipment values (for about half of the records) and potential redactions of shipper and/or consignee identities by request.[15] That said, the Panjiva data align well with administrative aggregate data on containerized vessel import value from the U.S. Census Bureau, suggesting that the potential biases induced by the above limitations are not first-order.

Based on the supply chain links obtained from FactSet Revere and Panjiva, we define a (corporate) customer as a firm purchasing products from another firm. In parallel, we define a supplier as a firm providing products to another firm. In our main analysis, we focus on direct suppliers (often called "Tier 1"), as corporate customers have less leverage over indirect suppliers (i.e., suppliers of suppliers or "Tier n" suppliers, where n>1). The existence of direct contractual relationships makes it easier to set expectations, enforce disclosure requirements, and track emissions' reductions. In additional analyses, we examine indirect suppliers (Tier 2) and indirect emission outcomes (i.e., Scope 2 and 3 emissions) of direct (Tier 1) suppliers.

Data on GHG emissions come from Trucost, while accounting and market data from Compustat Global, Compustat North America, and Datastream/WorldScope. These datasets provide stock price and accounting data for a large set of international firms. Information on institutional ownership comes from the FactSet/LionShares database.

Table 1, Panel A, outlines the sample selection procedure for the sample of supplier-year observations. We start with 243,840 firm-year observations in the CDP dataset (i.e., firms to which the CDP sent a request to complete the questionnaire). Then, we merge this sample with FactSet

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[15] In the United States, companies have an option to redact their company name and their trading partner name from the public Bill of Lading records. This process is known as manifest confidentiality. All other fields in such records are still published (e.g., Goods Shipped, Weight etc.) but the Shipper and Consignee fields are redacted. Manifest Confidentiality is exclusive to the U.S. Import and Export data sources. Panjiva estimates that manifest confidentiality impacts roughly 20% of U.S. trade records.

Revere and Panjiva and keep only observations for which we can identify customers and suppliers. Lastly, we require non-missing institutional ownership and financial data. The resulting sample consists of 71,296 firm-year observations corresponding to 7,349 unique firms from 54 countries.

Table 1, Panel B, outlines the sample selection procedure for the pair sample. We start with more than 9 million customer-supplier-year observations in FactSet Revere and 64 million in Panjiva. Then, we merge these supplier-customer pairs with the CDP dataset and require non-missing ownership and financial data. This process results in a final sample of 11,554,258 customer-supplier-year observations corresponding to 8,263 unique customers and 238,156 unique suppliers from 2007 to 2022.

Table 2 presents the sample breakdown by year (Panel A), country (Panel B), and industry (Panel C). As shown in Panel A, the number of observations grows over time as the databases expand their coverage. Panel B shows that our sample covers a wide range of countries from Europe, Asia, North and South America, Africa, and the Middle East. The most represented countries are US, Japan, and the United Kingdom. As shown in Panel C, our sample covers all major industries in the world economy.

4. Association Between Customer and Supplier CDP Disclosures

Our first set of tests examines the cross-sectional association between customers' and suppliers' CDP disclosures. Finding a positive relation would be consistent with the notion that customers' disclosure of (and demand for) climate-related information carries over into the supply chain, inducing supplier firms to disclose climate-related information.

4.1. Firm-level Analysis

We start by conducting the analysis at the firm(supplier)-year level by estimating the following OLS model:

Supplier Discloses to CDP$_{it}$ = β_0 + β_1×*Customers Disclosing to CDP$_{it}$*

  + *Controls$_{it-1}$* + *Fixed Effects* +ε (1)

where *Supplier Discloses to CDP$_{it}$* is an indicator variable equal to one if supplier *i* discloses to

the CDP in year *t*, and zero otherwise. The key explanatory variable in Equation (1), *Customers*

Disclosing to CDP$_{it}$, is the fraction of supplier *i*'s corporate customers disclosing to the CDP in

year *t*.[16] To the extent that customers disclosing to the CDP have an incentive to collect climate-

related information from their suppliers, this variable serves as a proxy for the pressure exerted by

customers on their supplier to disclose to the CDP. The coefficient of interest, β_1, captures the

change in the probability of a supplier disclosing to the CDP for a one-unit increase in the fraction

of their customers disclosing to the CDP. If disclosing customers exert pressure on their suppliers

to disclose to the CDP, we expect this coefficient to be positive.

  Controls is a vector of variables controlling for various factors affecting supplier disclosing

behaviour. *Institutional Ownership* is the fraction of the firm's equity owned by institutional

investors. *Log(Total Assets)* is the logarithm of the firm's total assets. *Log(Book-to-Market)* is the

logarithm of the book value of common equity scaled by the market value of equity.[17] *Profitability*

is net income scaled by total assets. *Leverage* is total debt (long-term debt and the debt in current

liabilities) scaled by total assets. *Tangibility* is Property, Plant and Equipment scaled by total assets.

Dividends is the total amount of dividends scaled by net income. *Log(Sales)* is the logarithm of

total sales. All these variables are measured at the beginning of the fiscal year. *Fixed Effects* are

either country, industry, or firm and year fixed effects. We cluster standard errors at the firm-level

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[16] We measure suppliers' and customers' disclosures to the CDP in year *t*, as the purpose of this test is to examine the cross-sectional relationship between suppliers' and customers' climate-related disclosure practices. In additional tests designed to assess whether suppliers *respond* to the customers' pressure or demands for disclosures, we measure suppliers' disclosures to the CDP in year *t* +1 and customers' disclosures in year *t*.
[17] We log-transform the book-to-market ratio to account for the skewness in its distribution. Our results are very similar without this transformation.

to allow for any arbitrary correlation in the error terms within a firm over time (our inferences are unaltered when we cluster standard errors by country, industry, country-industry, industry-year, and country-year).

Table 3, Panel A, presents descriptive statistics for the sample of firm(supplier)-year observations. As shown in Panel A, the frequency of suppliers' disclosure to CDP is 43%, consistent with findings from prior research (Cohen et al. 2023). For an average supplier, 11% of the customers disclose to CDP. Table 3, Panel A, also shows that our sample includes a wide variety of firms in terms of size, leverage, and profitability.

Table 4 reports the results of estimating Equation (1). The coefficient on the variable of interest, *Customers Disclosing to CDP,* is positive and significant across model specifications, suggesting a positive relationship between the proportion of customers disclosing climate-related information and the likelihood of suppliers disclosing climate-related information. These results support the notion that disclosing customers induce suppliers to disclose climate-related information. The magnitude of the coefficient of interest does not vary substantially when we include country and industry fixed effects (Columns (2) and (3)) or firm fixed effects (Columns (4)). This latter result likely holds because our sample offers substantial within firm variation over time in the relationship between customers' and suppliers' climate-related disclosures to the CDP.

4.2. Pair-level Analysis

The previous firm-year analysis has two shortcomings. First, the specification in Equation (1) does not control for customer-specific factors. Second, because the key explanatory variable in Equation (1) is the *fraction* of customers disclosing to CDP, the model does not capture the *direct* influence of a customer's disclosure behaviour on its suppliers' disclosure behaviour. To overcome

these limitations, we conduct an analysis at the customer-supplier-year level. We estimate the following OLS model:

$Supplier\ Discloses\ to\ CDP_{it} = \beta_0 + \beta_1 \times Customer\ Discloses\ to\ CDP_{jt} +$

$\qquad \beta_2 \times Customer\text{-}Supplier\ Relationship_{ijt} +$

$\qquad \beta_3 \times Customer\ Discloses\ to\ CDP_{jt} \times Customer\text{-}Supplier\ Relationship_{ijt} +$

$\qquad Controls_{jt-1} + Fixed\ Effects + \varepsilon$ (2)

where, *Supplier Discloses to CDP*$_{it}$ is an indicator variable that equals one if supplier *i* discloses to the CDP in year *t*, and zero otherwise. *Customer Discloses to CDP*$_{jt}$ is an indicator variable that equals one if the customer *j* discloses to CDP in year *t*, and zero otherwise.[18] *Customer-Supplier Relationship*$_{ijt}$ is an indicator variable that equals one if the supplier *i* is in an active business relationship with a customer *j* in year *t*, and zero otherwise. For each customer-supplier pair with at least one year with an active trade relationship, we include in the panel data all years within our sample period (i.e., 2007-2022). That is, we include the years in which the supplier is not in an active business relationship with the customer. The key explanatory variable in Equation (2) is the interaction between *Customer Discloses to CDP* and *Customer-Supplier Relationship.* This variable captures the direct association between a customer and its suppliers' climate-related disclosures to the CDP. If a disclosing customer exerts pressure on their suppliers to disclose to the CDP, we expect the coefficient β_3 to be positive.

 Controls is defined as in Equation (1) but measured at the customer level, as these control variables are intended to account for factors correlating with the existence of a business relationship between customers and suppliers and with customer disclosure behaviour. We also

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[18] Similar to Equation (1), Equation (2) measures suppliers' and customers' disclosures to the CDP in year t. The purpose of this test is to examine the cross-sectional relationship between suppliers' and customers' climate-related disclosure practices. In subsequent tests designed to assess whether suppliers respond to the customers' demands for disclosures, we measure suppliers' disclosures to the CDP in year t+1 and customers' disclosure demand in year t.

estimate models with the same set of control variables measured at the supplier level, although this inclusion results in a significant sample attrition. *Fixed Effects* are (i) either supplier and customer fixed effects or supplier-customer pair fixed effects, and (ii) either year or customer-year fixed effects. Supplier-customer pair fixed effects control for any source of time-invariant heterogeneity within each customer-supplier pair, including the determinants of the endogenous two-sided matching between the firms (e.g., time-invariant common ownership between suppliers and customers). Customer-year fixed effects control for time-varying factors specific to each customer that affect all its suppliers within a given year. These fixed effects adjust for time-varying shocks and trends that uniquely influence each customer in a particular year, such as firm-specific economic shocks, legal issues, financial conditions, changes in management, operational strategies, and other internal policies.

We cluster standard errors at the corporate customer level to allow for any arbitrary correlation in the error terms within customers over time. Our inferences are unaltered when we cluster standard errors at the country, industry, and country-industry levels. Assessing these alternative clustering strategies is important because suppliers likely serve multiple customers in particular region and/or industry. Table 3, Panel B, presents descriptive statistics for this sample of customer-supplier-year observations, and shows that this sample also includes a wide variety of firms in terms of size, leverage, and profitability.[19]

Table 5, Panel A, reports the results from the estimation of Equation (2). The results tabulated in Columns (1), (2) and (3) show that the interaction term between *Customer Discloses to CDP*

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[19] The probability of supplier disclosure is significantly lower in the customer-supplier-year sample compared to the supplier-year sample. This is likely due to the repeated inclusion of smaller, non-disclosing suppliers across different customers in the customer-supplier-year sample. If we restrict the pair sample to suppliers with available control variables and collapse it at the supplier-year level, the probability of disclosure becomes very similar between the supplier-year sample and the collapsed pair sample.

and *Customer-Supplier Relationship* is positive and significant. This evidence confirms that suppliers are more likely to disclose to the CDP when their customers also do so. The magnitude of the coefficient β_3 (i.e., the coefficient on the interaction between *Customer Discloses to CDP* and *Customer-Supplier Relationship*) ranges from 0.40 to 0.54 percentage points depending on the model specification. This effect is economically sizable considering that the average value of *Supplier Discloses to CDP* is 8.7% and that this magnitude is estimated at the supplier-customer-year level (on average, each supplier in our sample has 14 customers). The magnitudes become stronger once we include in the model Customer-Supplier fixed effects (Table 5, Panel A, Column (2)), and Customer-Year fixed effects (Table 5, Panel A, Column (3)). Adding pair fixed effects controls for time-invariant unobservable features of each pair, for example, cross-ownership linkages between customer and supplier firms.

In Table 5, Panel B, we add to Equation (2) the vector of control variables measured at the supplier level to better account for supplier-specific characteristics. While this inclusion results in substantial sample attrition, we still document a positive association between corporate customers' and suppliers' climate-related disclosures. The magnitude of the coefficient on *Customer Discloses to CDP × Customer-Supplier Relationship* is larger than in Table 5, Panel A. One possible explanation is that these latter results are based on a sub-sample that includes relatively larger suppliers (i.e., suppliers with non-missing data to construct the control variables) and larger firms are more likely to afford the costs of preparing the information demanded by customers.

Our inferences also hold across a battery of additional tests. In Online Appendix OA1, we cluster standard errors at the country, industry, and country-industry levels. In Online Appendix OA2, we use alternative fixed effect structures. In Online Appendix OA3, we use a "shift-share" design where we fix the supply chain network as of 2007 to avoid endogeneity in the composition

of the supply chain (e.g., corporate customers selecting more transparent suppliers). In Online Appendix OA4, we repeat the analysis controlling for the intensity of the customer-supplier relationship.

We next examine the timing of the supplier CDP disclosures relative to the customer CDP disclosures. Specifically, Figure 1 presents a variant of the analysis reported in Table 5 that explores the timing of the suppliers' CDP disclosure relative to the initiation of customers' disclosure to the CDP. We estimate the following model:

$$\textit{Supplier Discloses to CDP}_{it} = \beta_0 + \sum_{n=-4}^{4} \beta_n \times D_{jn} + \textit{Controls}_{jt-1} + \textit{Fixed Effects} + \varepsilon \qquad (3)$$

where D_{jn} is an indicator variable for the years around the year when the customer starts disclosing to the CDP (Year 0). For example, D_{j2} equals one for customer j in year 2 (i.e., two years after the customer starts disclosing to the CDP). The vector of controls is as in Equation (2). We include the fixed effects used in the model shown in Column (2) of Table 5.[20] We restrict the sample to customer-supplier pairs with non-missing 1-year lead and 1-year lag of the interaction term between *Customer Discloses to CDP* and *Customer-Supplier Relationship*.[21] Figure 1 plots coefficients and the 95% confidence intervals from the estimation of D_{jn}. We omit the indicator variable for the year before the initiation of customers' disclosure to CDP (Year -1), as it serves as benchmark.

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[20] Our coding approach considers the timing of a customer's CDP disclosure in relation to a specific supplier. There are three possible scenarios: (1) a customer does not disclose in year *t-1*, but starts disclosing in year *t*, and the customer and supplier are not in an active business relationship in year *t-1*, yet they are in an active relationship in year *t*; (2) a customer does not disclose in year *t-1*, but starts disclosing in year *t*, and the customer and supplier are in an active business relationship both in year *t* and *t-1*; (3) a customer discloses in year *t-1* and continues to disclose in year *t*, and the customer and supplier are not in an active business relationship in year *t-1*, yet they are in an active relationship in year *t*. Because we are interested in the impact of a customer's disclosure initiation for a *given supplier*, these three scenarios are treated in the same way for the purpose of the analysis. However, we also examine the timing of the association between customer and supplier CDP disclosures focusing on scenario 2 only, in which the customer initiates CDP disclosure while maintaining an ongoing relationship with the supplier. This scenario provides a clearer view of disclosure effects within an established relationship. We find similar patterns to those shown in Figure 1, although the statistical significance is somewhat weaker given the smaller number of observations contributing to the estimation of the variables of interest.

[21] We also include leads and lags of *Customer Discloses to CDP* and of *Customer-Supplier Relationship*.

As shown in Figure 1, we do not find significant differences in the pre-trends among suppliers. This suggests that our results do not violate the parallel trend assumption. The figure also shows a statistically significant increase in the likelihood that suppliers disclose after their customers start disclosing to the CDP, which only marginally reverts after 3 years (likely driven by potential terminations of business relationships between suppliers and customers).

4.3. *Higher Levels of the Supply Chain*

We also explore whether customer demand for climate-related information carries over beyond the first link of the supply chain. To do so, we identify Tier 2 suppliers from the supply chain links obtained from FactSet Revere and Panjiva, defining Tier 2 suppliers as the Tier 1 suppliers of corporate customers' Tier 1 suppliers. We then estimate an alternative version of Equation (2) using a sample that includes pairs of corporate customers and their Tier 2 suppliers. We report the results from this analysis in Online Appendix Table OA5, which documents a similar positive association between customers' CDP disclosure and the CDP disclosures of their Tier 2 suppliers. This result is consistent with corporate customers' climate disclosure practices extending through the supply chain, reaching beyond their direct Tier 1 suppliers.

5. Tightening Identification

One potential concern about our interpretation of the prior results is that customer decisions to disclose climate-related information might be correlated with unobservable factors that also affect suppliers' disclosure behavior (e.g., Manski, 1993; Angrist, 2014). Consistent with this concern, prior accounting research documents significant commonalities among firms' disclosure policies within industries. These commonalities are not necessarily related to customers' demand for information from their suppliers (e.g., Botosan and Harris, 2000; Houston et al., 2010; Allee et al., 2021). Several features of our research design mitigate this concern (we exploit within-firm

and within-pair variation over time). Nonetheless, to further sharpen identification we exploit two sources of plausibly exogeneous variation in customers' incentives to demand climate-related information from their suppliers while not directly affecting suppliers' climate-related disclosure choices: (i) Asset4's expansion of the coverage of the ESG rating in 2017 and (ii) the introduction of mandatory ESG disclosures around the world.

5.1. Expansion of the Coverage of Asset4

Following prior literature (Darendeli, Fiechter, Hitz, and Lehmann, 2022) we exploit that in 2017 Thomson Reuters (now LSEG) Asset4 significantly expanded its ESG rating coverage, including for the first time U.S. firms within the Russell 2000 index.[22] The increase in coverage affects roughly 2,000 listed U.S. firms. Newly covered firms likely faced increased scrutiny from market participants and the public regarding their environmental impact, making them more likely to demand climate-related disclosures from their suppliers.[23] The variation induced by Asset4's coverage expansion is plausibly exogenous to corporate customers because it is unlikely that the characteristics of individual Russell 2000 firms directly influenced the timing of the coverage expansion. Moreover, firms covered after the expansion likely experienced an increase in demand for climate-related disclosures independently from the climate-related disclosure practices of their suppliers.

Based on these considerations, we estimate an alternative version of Equation (2) in which we replace *Customer Discloses to CDP* with an interaction of two indicator variables: *Post 2017*, marking the years after the expansion of Asset4's coverage (i.e., after 2017); *Russell 2000,* marking Russell 2000 customer firms as of December 2016 (i.e., these firms were directly affected by the

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[22] Asset4's ratings are derived from an extensive set of ESG input factors collected by more than 150 research analysts from various public sources.
[23] In un-tabulated analyses, we find that corporate customers are more likely to disclose to CDP if they are affected by the Asset4's coverage expansion.

coverage expansion). We further add to the model interaction terms between *Customer-Supplier Relationship* and *Russell 2000, Customer-Supplier Relationship* and *Post 2017,* and the triple interaction *Customer-Supplier Relationship, Russell 2000*, and *Post 2017.* We restrict the sample to six years before and after the Asset4' coverage expansion to make the pre-coverage expansion period comparable with the post-expansion period, and to U.S. corporate customers only.

Table 6 presents the results. We find that, following the expansion of Asset4's coverage, suppliers of customers treated by the expansion exhibit an increase in CDP disclosures (the coefficient on the triple interaction term *Customer-Supplier Relationship, Russell 2000*, and *Post 2017* is positive and significant). This evidence is consistent with the idea that customers' demand for climate information induces suppliers to disclose such information. These results hold when we control for whether suppliers are covered by Asset4 after the expansion (Online Appendix OA6). These results reinforce our inferences about the role of customer demand as a driver in prompting supplier climate-related disclosures.

5.2. Introduction of ESG Disclosure Mandates

Following prior literature (e.g., Krueger, Sautner, Tang, and Zhong, 2024), we exploit country-year variation in country-level ESG disclosure mandates. The requirement to report ESG information likely increases firms' demand for climate-related data from their suppliers.[24] The adoption of ESG disclosure mandates is relatively exogenous in this context, as it is largely driven by national policy decisions. We thus estimate an alternative version of Equation (2) in which we replace *Customer Discloses to CDP* with *Post ESG Disclosure Mandates*, which is an indicator variable for the years after the customer's country adopts an ESG disclosure mandate. We limit the

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[24] In un-tabulated analyses, we find that corporate customers increase their disclosures to CDP after the adoption of the country-level ESG disclosure mandates.

sample to six years before and six years after the adoption year of the disclosure mandate in each country to make the pre- and post-disclosure mandate periods comparable.

Table 7 presents the estimation results. The coefficient on the interaction between *Customer-Supplier Relationship* and *Post ESG Disclosure Mandates* is positive and significant. That is, after the adoption of ESG disclosure regulations in a country, the suppliers of corporate customers incorporated in that country exhibit an increase in CDP disclosures. These results also hold when we control for whether the supplier is also subject to the ESG disclosure mandate (Online Appendix OA7). This evidence further supports the notion that corporate customers' demand for climate-related information induces their suppliers to start disclosing such information.

5.3. CDP Supply Chain Program

One challenge in interpreting the positive association between supplier and customer CDP disclosures as a supplier response to customer demand for climate-related information is that such demand is generally not observable. To address this, we exploit a unique feature of the CDP platform, namely the "CDP Supply Chain Program". As explained in Section 2, corporate customers that sign up for this initiative delegate to CDP the task of reaching out to suppliers and demanding to fill out the "CDP Supply Chain Program" questionnaire. Thus, signing up for the "CDP Supply Chain Program" is a way to explicitly demand climate-related information from suppliers.

We collect data on corporate customers' participation in the "CDP Supply Chain Program" from 2010 to 2020, using customer signatory lists from the annual CDP Supply Chain reports. We obtain the lists of responding suppliers from the annual CDP Supply Chain spreadsheets. Using these data, we estimate an alternative version of Equation (2) using the following two alternative dependent variables. *Supplier Starts Disclosing to the CDP* is an indicator variable that equals one

if a supplier starts disclosing to CDP in year $t+1$, and zero otherwise. *Supplier Discloses to the CDP Supply Chain Program* is an indicator variable that equals one if a supplier submits information directly to the CDP Supply Chain Program in year $t+1$ following a customer demand in year t, and zero otherwise. To measure customers' demand for suppliers' climate-related disclosures, we replace *Customer Discloses to CDP* with an indicator variable, *Customer Disclosure Demand*, that equals one if the customer is a signatory to the CDP Supply Chain Program in year t, and zero otherwise.[25]

Table 8 reports the results. The variable of interest is the interaction term between *Customer Disclosure Demand* and *Customer-Supplier Relationship*. The coefficient on this variable is positive and significant, suggesting that suppliers meet customers' demand either by completing the general CDP questionnaire (Columns (1), (2), and (3)) or by completing the special CDP Supply Chain Program questionnaire (Columns (4), (5), (6)). Overall, the evidence in Table 8 corroborates our inferences that suppliers disclose climate-related information in response to an explicit demand from corporate customers.

5.4. Sources of Customers' Demand for Supplier CDP Disclosures

To further explore the validity of our interpretation of the previous results (i.e., that corporate customers demand climate-related disclosures from their suppliers, and that the suppliers respond to this demand), we now examine whether the documented patterns vary with respect to measures capturing corporate customers' incentives to demand climate-related disclosures from their suppliers. To construct these measures, we assume that corporate customers have stronger incentives to request climate-related information when they receive pressure from stakeholders to

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[25] Note that the variable *Customer Disclosure Demand* captures only whether a customer signs up to the CDP Supply Chain, not whether the customer requests CDP disclosures from a specific supplier. Further, this demand may extend to potential suppliers, because the customer wants to learn more about the prospective supplier's environmental performance. For this reason, the coefficient on the variable, *Customer-Supplier Relationship*, is not subsumed.

improve/report sustainability performance. We consider three types of stakeholders: (i) ultimate consumers; (ii) investors, and (iii) the public.

A firm may exert pressure on its suppliers to disclose climate-related information if its final consumers demand transparency over the firm's environmental impact. For instance, environmentally conscious consumers may prefer products from firms that are environmentally friendly over their entire supply chain. This consumer-driven pressure can create incentives for firms to seek detailed climate-related information from their suppliers.

As shown in Cohen et al. (2023), investor demand for climate-related information may induce disclosure. For example, asset managers could demand climate-related information because they believe that climate-related performance affects prices and/or they believe that improving the environmental performance of their portfolio will help them attract or retain clients who are sensitive to climate risk. Firms may also face pressure to improve the environmental impact of their supply chain from the broader public, including advocacy groups, NGOs, and media outlets. It is thus plausible that, responding to this pressure, firms demand climate-related information from their suppliers to better assess the environmental impact of their supply chain.

We construct four empirical measures to proxy for the above-mentioned incentives. First, we measure the degree of industry competition. Consumer pressure is generally more effective in highly competitive industries, as the threat of switching to competitors is more credible. Consistent with this, Dai et al. (2021) show that customers are less likely to affect their supplier's CSR activities when the supplier is operating in a less competitive industry. Following common practice in the literature (e.g., Gow et al., 2021; Giroud and Mueller, 2011), we measure the degree of competition in each corporate customer industry using the Herfindahl-Hirschman Index (HHI). For each customer, the HHI is calculated as the sum of the squares of the market shares of the

firms in the industry. Market shares are based on annual sales and industry affiliations are based on three-digit SIC codes. We then split the sample using as a threshold the sample median of the HHI distribution.

Second, we construct an indicator variable for whether a corporate customer experiences at least one environmental incident during the previous year. Data on ESG incidents are collected from RepRisk. We consider incidents that fall into the categories of "not unsharp," "medium-very severe," "medium-high reach," and "new" (i.e., not recurring).[26] We then split the sample by whether the corporate customer experiences an environmental incident in the prior year.

Third, we compute the fraction of shares of the customer firm held by institutional shareholders. We refer to this variable as *Institutional Ownership*. We construct this variable to measure the extent to which the customer firm is subject to pressure by institutional investors to demand climate information from their suppliers. We split our sample of customer firm-year observations based on the sample median of *Institutional Ownership*.[27]

Fourth, we create an indicator for whether the customer firm is in an industry with a higher carbon footprint. Firms in industries with more severe environmental externalities –Oil&Gas, mining, chemistry, etc.— may face more pressure than firms in less polluting industries to report and improve their environmental performance. The pressure can come from the final consumers, investors, regulators, and the public. To the extent that managing/reporting such performance requires information about the environmental impact of the supply chain, these firms might have

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[26] An "*unsharp*" incident is defined as "*when the entity is mentioned but the criticism is not precisely defined due to the nature of the report*".

[27] The partition is based on the customer-year sample rather than on the customer-supplier-year sample to avoid assigning greater weight to customers with many suppliers. As a result of this choice, the two subgroups have different sample sizes.

a higher demand for climate-related information from their suppliers. We then conduct the analysis for firms in industries classified as "*dirty*" and for firms in other industries, separately.[28]

Table 9 presents the results from these cross-sectional tests. Panel A shows that firms operating in highly competitive industries are more likely to induce their suppliers to disclose to the CDP. Panel B shows that firms that experienced environmental-related incidents in the past year are more likely to exert pressure on their suppliers to disclose to the CDP. Panel C shows that firms with higher institutional investor ownership are more likely to induce their suppliers to disclose to the CDP. Lastly, Panel D shows that firms operating in industries with higher carbon footprints are more likely to induce their suppliers to disclose to the CDP. Overall, the evidence in Table 9 shows that our results are more pronounced when a corporate customer receives more pressure from the various stakeholders.

6.   Supply Chain Transparency and Suppliers' GHG Emissions

Our second set of tests examines whether the spillover of climate-related disclosures has consequences on firm decision-making related to decarbonization. We contemplate two types of decisions, one on the supplier side and the other on the customer side. On the supplier side, we analyze whether customer demand for supplier climate-related disclosures results in lower suppliers' emissions. On the customer side, we analyze whether customer demand for supplier climate-related disclosures is followed by termination of supply contracts, particularly when the supplier is a top emitter or when the supplier does not respond to the customer's information demand.

6.1. Supplier GHG emissions

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[28] "Dirty" industries are Food (Fama-French 17 Industry 1), Mining (Fama-French 17 Industry 2), Oil & Gas (Fama-French 17 Industry 3), Clothing, Textiles, Apparel & Footwear (Fama-French 17 Industry 6), Chemicals (Fama-French 17 Industry 6), Construction (Fama-French 17 Industry 8), Steel (Fama-French 17 Industry 9), and Automotive (Fama-French 17 Industry 12).

We start by testing whether corporate customers' demand for CDP information is followed by lower carbon emissions from their suppliers. We repeat the analysis in Equation (2) using an alternative dependent variable, *Supplier Scope 1 GHG Emissions*, defined as the logarithm of supplier i's Scope 1 GHG emissions in year $t+1$. We measure supplier GHG emissions in year $t+1$, as firms may need time to reduce emissions. Table 10, Panel A, presents the results. The coefficient on β_3 is negative and significant, suggesting that suppliers' Scope 1 GHG emissions decrease when customers disclose to the CDP. Based on the estimates, the magnitude of the decline in GHG emissions is close to 1 percent. This is not a trivial reduction considering that this magnitude is estimated at the supplier-customer-year level and that, on average, each customer in our sample has 98 suppliers.[29]

Then, we repeat the same analysis replacing *Customer Discloses to CDP* with *Supplier Discloses to the CDP Supply Chain Program* which –as explained in Section 2.2– directly identifies cases where supplier CDP disclosure responds to customer demand. This analysis aims at validating the causal chain starting with customer demand for disclosure, followed by supplier response to this demand and the subsequent emission reductions. The results –presented in Table 10, Panel B– show that supplier disclosure to CDP responding to customer demand is followed by a decline in supplier Scope 1 GHG emissions. The magnitude of the decline in GHG emissions is around 2.5 percent per supplier-customer pair. Taken together, the results in Table 10 support the notion that suppliers' CDP disclosures driven by corporate customers' demand are associated with subsequent reductions in suppliers' carbon emissions.

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[29] In the Online Appendix OA8, we re-estimate Equation (2) using as dependent variables either the logarithm of supplier i's Scope 2 GHG emissions measured in year t+1 or the logarithm of supplier i's Scope 3 GHG emissions measured in year $t+1$. For Scope 2 emissions the results are similar to those reported in Table 10, Panel A. For Scope 3 emissions we do not find significant results. The fact that scope 3 emissions do not decrease suggests that suppliers likely do not have enough incentives to push their own suppliers to reduce their carbon emissions. However, the fact that Scope 3 emissions do not increase also suggests that suppliers do not "outsource" their emissions to their respective suppliers.

6.2. Termination of Supply Relationships

We next examine whether corporate customers' demand for climate-related disclosure affects the decision to terminate supply chain relationships. We repeat the analysis in Equation (2) using two alternative dependent variables. *Terminate Relation w/Most Polluting Suppliers* is an indicator variable for whether a corporate customer terminates a business relationship with a supplier in the highest decile of the Scope 1 GHG emissions distribution across that customer's suppliers within each year. *Terminate Relation w/Least Polluting Suppliers* is an indicator variable for whether a corporate customer terminates a business relationship with a supplier in the lowest decile of the Scope 1 GHG emissions distribution across that customer's suppliers within each year. The left-hand side variables are measured in year *t*+1, as we are interested in exploring termination decisions made after the corporate customer disclosure. Table 11, Panel A, presents the results indicating that corporate customer disclosure to the CDP is associated with a higher (lower) probability of terminating business relationships with the most (least) polluting suppliers.

Next, we examine whether corporate customer supply chain termination choices depend on the supplier responses to corporate customer disclosure demand. We estimate an alternative version of Equation (2) with three alternative dependent variables. *Terminate Relation w/Suppliers Not Responding to the CDP Supply Chain Program* is an indicator variable that equals one if the supplier does not answer the disclosure request from the CDP Supply Chain Program, and zero otherwise. *Terminate Relation w/ Most Polluting Suppliers Not Responding to the CDP Supply Chain Program* is an indicator variable that equals one if *Terminate Relation w/Most Polluting Suppliers* equals one and the supplier does not answer the disclosure request from the CDP Supply Chain Program, and zero otherwise. *Terminate Relation w/ Least Polluting Suppliers Not Responding to the CDP Supply Chain Program* is an indicator variable that equals one if *Terminate*

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Relation w/Least Polluting Suppliers equals one and the supplier does not answer the disclosure request from the CDP Supply Chain Program, and zero otherwise. Similar to Table 11, Panel A, the left-hand side variables are measured in year *t*+1, as we are interested in exploring termination decisions made after the customer disclosure demand. The key right-hand side variable of interest is given by the interaction between *Customer Disclosure Demand,* that equals one if the customer is a signatory to the CDP Supply Chain Program in year *t*, and *Customer-Supplier Relationship*. The results are presented in Table 11, Panel B. The results show that corporate customers are more likely to terminate relationships with suppliers who do not respond to their demand for climate-related disclosures, irrespective of supplier Scope 1 GHG emissions, even if the likelihood of terminating relationships is greater for suppliers with a larger carbon footprint.

7.   Additional Analyses

To further explore the validity of our interpretation of the main results, we conduct a battery of additional tests. First, we assess the robustness of our inferences to alternative ways of clustering standard errors. Specifically, we estimate our main tests (Table 5) by clustering standard errors in three alternative ways: country, industry, and country-industry. As shown in Appendix Table OA1, our inferences remain unchanged.

Second, we test whether the results reported in Table 5 are robust to alternative fixed effect structures capturing heterogeneous trends across countries or industries. In particular, we replace the year fixed effects in Table 5 with either Country-Year, Industry-Year, or Country-Industry-Year fixed effects. As shown in Online Appendix OA2, inferences are unaffected.

Third, we explore whether the results reported in Table 5 are driven by corporate customers entering relationships with suppliers that already disclose climate-related information (rather than by corporate customers inducing their suppliers to start disclosing climate-related information).

We estimate Equation (2) replacing *Customer-Supplier Relationship* with *Customer-Supplier Relationship 2007,* an indicator variable for whether the customer-supplier relationship has been active at the start of the sample period (i.e., 2007). By fixing the supply change composition at the start of the sample period, we exclude the possibility that our inferences are confounded by endogenous changes in supply chain composition. Note that this test is in the spirit of the "shift-share design" used in prior literature (e.g., Autor, Dorn, and Hanson 2013; Breuer, 2022). As shown in Table OA3, we obtain similar results using this alternative specification.

Fourth, we test whether the results reported in Table 5 are robust to the inclusion of control variables capturing the intensity of the relationship between customers and suppliers. Panjiva provides information on the weight, quantity, number of containers (measured as "twenty-foot equivalent unit" or "TEU"), and dollar value of goods in each shipment. We aggregate this information at the customer-supplier (ultimate parent) level. We then estimate Equation (2) including these additional control variables, one at a time. The number of observations of this test is lower than that in Table 5 due to missing data for the additional control variables. As shown in Table OA4, our inferences are unaffected.

Fifth, we add to Equation (2) an indicator variable marking whether suppliers are subject to the Asset4 expansion shock. We do so to test whether the results are mechanically driven by suppliers being affected by disclosure incentives other than corporate customers' disclosure demands. We find that our results are not mechanically driven by suppliers being pushed to disclose by the Asset4 expansion shock (Online Appendix Table OA6).

Sixth, we add to Equation (2) an indicator variable marking whether suppliers are subject to ESG disclosure mandates. We do so to test whether the results are mechanically driven by suppliers being subjected to climate-related disclosure mandates rather than being pushed by their corporate

customers. We use the country-level ESG disclosure mandates collected by Krueger et al. (2024) and again find that our results are not mechanically driven by the adoption of ESG disclosure mandates in the countries of the suppliers (Online Appendix Table OA7).

Lastly, we repeat our main analysis without assuming a particular correlation in the error term. We randomly assign the values of zero or one to the variables *Customer Discloses to CDP* and *Customer-Supplier Relationship*. We repeat this randomization 1,000 times and estimate the models presented in Table 5, Panel A, Columns (1)-(3). We save the coefficients of interest given by the interaction between *Customer Discloses to CDP* and *Customer-Supplier Relationship.* We then count how many times these "random" coefficients are greater than the coefficient estimated in Table 5, Panel A, Columns (1)-(3). The distribution of the estimated coefficients on the interaction term in the models closely approximates a normal distribution (centered around zero). Based on this empirical distribution, the probability that the coefficients are higher than those presented in Table 5 is less than 0.001. Thus, we can reject the hypothesis that the average of the estimated coefficients in Table 5, Panel A, Columns (1)-(3) is zero.

8.   Conclusion

This paper examines the spillover effect of climate-related disclosures over global supply chains. Our tests rely on a wide international sample of customer-supplier pairs and exploit the unique features of the CDP, the world-leading platform of corporate climate-related disclosures. Our analysis includes two sets of results. First, we document a positive association between customer and supplier CDP disclosures. This association holds both at the firm(supplier)-year level and at the customer-supplier-year level. In related tests, we find support for the notion that the empirical relation is driven by suppliers responding to customers' demand for CDP disclosures by

exploiting plausible sources of exogenous variation in customers' incentives to demand climate-related disclosures from suppliers, and by levering on to a direct measure of such demand.

Second, we find that corporate customers' demand for climate-related disclosures from their suppliers is followed by a reduction in suppliers' carbon emissions and by a higher probability of terminating the supply relationship when the supplier has a higher carbon footprint or when the supplier fails to respond to the customers' disclosure demand.

Our findings highlight the existence of widespread spillovers in climate-related disclosures across global supply chains. The evidence further suggests that these spillovers have significant implications for firm decision-making, influencing suppliers' efforts to decarbonize and customers' choices to terminate supply contracts. Accordingly, our results underscore the role of global supply chains in promoting environmental transparency and facilitating decarbonization. This is particularly relevant given the increasing number of initiatives designed to address the challenges of coordinating climate-related disclosures within supply chains. Understanding to which extent stakeholders (e.g., investors, customers, the public) have enough clout to elicit environmental disclosures from firms in the absence of disclosure mandates also informs the debate about the economic consequences of sustainability disclosure regulations. Among other things, stakeholder pressure can facilitate enforcement and extend the effect of such disclosure mandates beyond the regulatory perimeter.

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Appendix A – Variables Definition

Customers Disclosing to CDP	Fraction of customers disclosing to the CDP in year t.
Supplier Discloses to CDP	Indicator variable that equals one if the supplier firm discloses to the CDP in year t, and zero otherwise.
Customer Discloses to CDP	Indicator variable that equals one if the customer firm discloses to CDP in year t, and zero otherwise.
Customer–Supplier Relationship	Indicator variable that equals one if the supplier is in an active business relationship with the customer in year t, and zero otherwise.
Institutional Ownership	Fraction of the firm's equity owned by institutional investors in year t-1.
Log(Total Assets)	Logarithm of the firm's total assets in year t-1.
Log(Book-to-Market)	Logarithm of the book value of common equity scaled by the market value of equity in year t-1.
Profitability	Net income scaled by total assets in year t-1.
Leverage	Total debt scaled by total assets in year t-1. Total debt is the sum of long-term debt and the debt in current liabilities in year t-1.
Tangibility	Property, Plant and Equipment (PPE) scaled by total assets in year t-1.
Dividends	Total amount of dividends scaled by net income in year t-1.
Log(Sales)	Logarithm of the book value of sales in year t-1.
Russell 2000	Indicator variable that equals one if the customer is covered by Russell 2000 as of December 2016, and zero otherwise
Post 2017	Indicator variable that equals one after 2017 (the year of Asset4's coverage expansion), and zero otherwise.
Post ESG Disclosure Mandates	Indicator variable marking the years after a customer's country adopts an ESG disclosure regulation.
Supplier Scope 1 GHG Emissions	Logarithm of the supplier's Scope 1 GHG emissions in year t+1.
Supplier Discloses to the CDP Supply Chain Program	Indicator variable that equals one if the supplier discloses to the CDP Supply Chain Program in year t+1, and zero otherwise.
Supplier Starts Disclosing to the CDP	Indicator variable that equals one if a supplier starts disclosing to CDP in year t+1, and zero otherwise.
Customer Disclosure Demand	Indicator variable that equals one if the customer signs up for the CDP Supply Chain Program in year t, and zero otherwise.
Terminate Relation w/Most Polluting Suppliers	Indicator variable that equals one if the customer discontinues business with a supplier in year t+1, and that supplier is in the highest decile of Scope 1 GHG

	emissions (scaled by total assets) among suppliers for that customer-year, and zero otherwise.
Terminate Relation w/Least Polluting Suppliers	Indicator variable that equals one if the customer discontinues business with a supplier in year t+1, and that supplier is in the lowest decile of Scope 1 GHG emissions (scaled by total assets) among suppliers for that customer-year, and zero otherwise.
Terminate Relation w/Suppliers Not Responding to the CDP Supply Chain Program	Indicator variable that equals one if a supplier does not answer the disclosure request from the CDP Supply Chain Program in year t+1 (i.e., following a customer request to disclose in year t), and zero otherwise.
Terminate Relation w/ Most Polluting Suppliers Not Responding to the CDP Supply Chain Program	Indicator variable that equals one if *Terminate Relation w/Most Polluting Suppliers* is equal to one and the supplier does not answer the disclosure request from the CDP Supply Chain Program in year t+1 (i.e., following a customer request to disclose in year t), and zero otherwise.
Terminate Relation w/ Least Polluting Suppliers Not Responding to the CDP Supply Chain Program	Indicator variable that equals one if *Terminate Relation w/Least Polluting Suppliers* is equal to one and the supplier does not answer the disclosure request from the CDP Supply Chain Program in year t+1 (i.e., following a customer request to disclose in year t), and zero otherwise.

Appendix B – Summary of the Questionnaire of the CDP Supply Chain Program

The CDP Supply Chain program helps companies manage environmental risks by engaging their suppliers, pinpoints risks and identifies opportunities. The program was launched in 2008 to increase corporate accountability and sustainability practices within supply chains. By joining the program, CDP Supply Chain signatories can track and report on climate change impacts within their supply chains. Also, they can use the program to set and achieve their science-based targets, zero-deforestation and water security targets. As of 2024 more than 330 signatories are engaging over 47,000 suppliers on environmental issues via CDP Supply Chain. The program works in the following three steps (www.cdp.net/en/supply-chain):

(1) CDP Supply Chain members request key suppliers to report environmental data through CDP's questionnaires.
(2) CDP supports customers and their suppliers throughout the entire disclosure process, sharing supplier engagement strategies and resources.
(3) On an annual basis CDP will then provide to the member its suppliers' data along with analysis and insights.

The CDP Supply Chain questionnaire includes all the sections of the general CDP Climate Change questionnaire and four additional sections that only suppliers are requested to complete. The supply chain section includes the following questions:

Allocating your emissions to your customers
(SC1.1) Allocate your emissions to your customers listed below according to the goods or services you have sold them in this reporting period.
(SC1.2) Where published information has been used in completing SC1.1, please provide a reference(s).
(SC1.3) What are the challenges in allocating emissions to different customers, and what would help you to overcome these challenges?
(SC1.4) Do you plan to develop your capabilities to allocate emissions to your customers in the future?
(SC1.4a) Describe how you plan to develop your capabilities.
(SC1.4b) Explain why you do not plan to develop capabilities to allocate emissions to your customers.

Collaborative opportunities
(SC2.1) Please propose any mutually beneficial climate-related projects you could collaborate on with specific CDP Supply Chain members.
(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to undertake organizational-level emissions reduction initiatives?
(SC2.2a) Specify the requesting member(s) that have driven organizational-level emissions reduction initiatives, and provide information on the initiatives.

Appendix B – Summary of the Questionnaire of the CDP Supply Chain Program (cont'ed)

Action Exchange

(SC3.1) Do you want to enroll in the 2020-2021 CDP Action Exchange initiative?

(SC3.1a) Identify which member(s), if any, have motivated you to take part in Action Exchange this year.

(SC3.1b) Select the types of emissions reduction activities that your company would like support in analyzing or implementing in the next reporting year.

(SC3.1c) As part of Action Exchange, would you like facility level analysis?

(SC3.2) Is your company a participating supplier in CDP's 2019-2020 Action Exchange initiative?

(SC3.2a) Describe how your organization actively considered emissions reduction projects as a result of Action Exchange. If you do not have any emissions reduction activities resulting from Action Exchange at any stage of implementation, please explain why not in the second column.

Product (goods and services) level data

(SC4.1) Are you providing product level data for your organization's goods or services?

(SC4.1a) Give the overall percentage of total emissions, for all Scopes, that are covered by these products.

(SC4.2a) Complete the following table for the goods/services for which you want to provide data.

(SC4.2b) Complete the following table with data for lifecycle stages of your goods and/or services.

(SC4.2c) Please detail emissions reduction initiatives completed or planned for this product.

(SC4.2d) Have any of the initiatives described in SC4.2c been driven by requesting CDP Supply Chain members?

(SC4.2e) Explain which initiatives have been driven by requesting members.

Figure 1. Mapping Out the Association between Customer–Supplier CDP Disclosures

This figure plots coefficients and the respective 95% confidence intervals from the estimation of the following model:

$$Supplier\ Discloses\ to\ CDP_{it} = \beta_0 + \sum_{n=-4}^{4} \beta_n \times D_{jn} + Controls_{jt-1} + Fixed\ Effects + \varepsilon$$

where D_{jn} is an indicator variable for the years around the year on which the customer starts disclosing to the CDP (Year 0). For example, D_{j2} equals one for customer j in year 2 (i.e., two years after the customer starts disclosing to the CDP). The coefficient for D_{j-1}, is omitted and it serves as a benchmark. The dependent variable, *Supplier Discloses to CDP*, is an indicator variable equal to one if supplier i discloses to CDP in year t, and zero otherwise (see Section 4.2 for more details on the specification).

Year Relative to a Customer First Disclosure to CDP
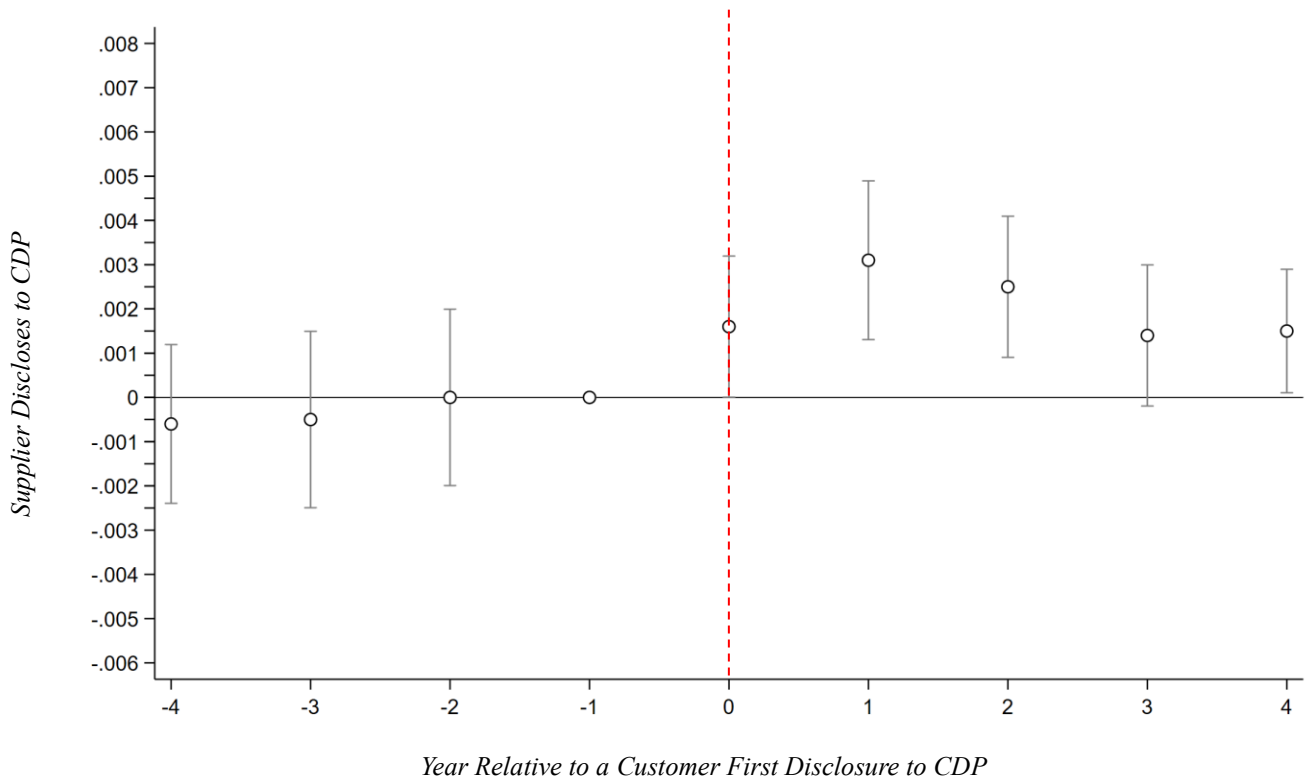
Table 1. Sample Selection

Table 1 outlines the sample selection process for the firm-year analysis sample and pair analysis sample.

Panel A. Supplier-year sample construction

Sample Observations	#Unique Firms	#Firm-Year
Obs. of suppliers covered by CDP from 2003 to 2022	12,192	243,840
Obs. of suppliers and customers covered by CDP from 2003 to 2022	8,238	84,099
Obs. with IO & Financial data	7,349	71,296

Panel B. Customer-supplier-year sample construction (Pair sample)

Sample Observations	#Unique Customers	# Unique Suppliers	#Unique Pairs	#Pair-Year
FactSet Revere	40,038	146,688	970,938	9,634,882
Panjiva	382,820	438,397	3,781,997	64,293,949
FactSet Revere & Panjiva	410,996	575,235	4,739,430	69,985,533
Obs. covered by CDP	9,495	26,1416	115,8628	14,838,053
Obs. with IO & Financial data	8,263	238,156	892,248	11,554,258
Obs. with Trucost data	7,687	19,261	260,377	1,804,276

Table 2. Sample Composition

This table presents the breakdown of the sample by year (Panel A), country (Panel B), and industry (Panel C).

Panel A. Sample Breakdown by Year

| Year | Firm-year Analysis | | Pair Analysis | |
	# Observations	%	# Observations	%
2007	1,526	2.14%	473,124	4.09%
2008	1,938	2.72%	518,869	4.49%
2009	2,503	3.51%	575,586	4.98%
2010	3,485	4.89%	641,487	5.55%
2011	3,864	5.42%	669,046	5.79%
2012	4,281	6.00%	715,907	6.20%
2013	4,511	6.33%	735,380	6.36%
2014	4,835	6.78%	753,846	6.52%
2015	5,100	7.15%	767,314	6.64%
2016	5,262	7.38%	782,116	6.77%
2017	5,315	7.45%	791,146	6.85%
2018	5,373	7.54%	793,890	6.87%
2019	5,668	7.95%	811,514	7.02%
2020	5,791	8.12%	828,539	7.17%
2021	5,797	8.13%	843,244	7.30%
2022	6,047	8.48%	853,250	7.38%
Total	71,296	100%	11,554,258	100.00%

Panel B. Sample Breakdown by Country

| Countries | Firm-year Analysis | | Pair Analysis | |
	# Observations	%	# Observations	%
Argentina	94	0.13%	4,959	0.04%
Australia	2,236	3.14%	114,314	0.99%
Austria	401	0.56%	33,290	0.29%
Belgium	623	0.87%	71,955	0.62%
Brazil	1,181	1.66%	85,921	0.74%
Canada	2,521	3.54%	307,308	2.66%
Chile	414	0.58%	81,080	0.70%
China	4,046	5.67%	235,626	2.04%
Colombia	137	0.19%	40,747	0.35%
Czechia	75	0.11%	3,192	0.03%
Denmark	484	0.68%	88,187	0.76%
Egypt	160	0.22%	6,960	0.06%
Finland	618	0.87%	71,403	0.62%
France	2,943	4.13%	601,618	5.21%
Germany	2,951	4.14%	801,098	6.93%
Greece	154	0.22%	6,494	0.06%
Hong Kong	1,359	1.91%	85,081	0.74%
Hungary	62	0.09%	3,271	0.03%
Iceland	-	0.00%	135	0.00%
India	3,634	5.10%	662,043	5.73%
Indonesia	1,016	1.43%	55,375	0.48%
Ireland	417	0.58%	65,855	0.57%
Israel	268	0.38%	42,485	0.37%
Italy	1,110	1.56%	78,280	0.68%
Japan	8,153	11.44%	1,307,825	11.32%

Jersey	3	0.00%	-	0.00%
Jordan	-	0.00%	600	0.01%
Luxembourg	12	0.02%	136	0.00%
Malaysia	795	1.12%	39,593	0.34%
Mexico	484	0.68%	201,184	1.74%
Morocco	13	0.02%	752	0.01%
Netherlands	822	1.15%	120,887	1.05%
New Zealand	512	0.72%	22,096	0.19%
Norway	743	1.04%	48,415	0.42%
Pakistan	278	0.39%	70,344	0.61%
Peru	151	0.21%	6,462	0.06%
Philippines	452	0.63%	32,521	0.28%
Poland	809	1.13%	24,961	0.22%
Portugal	296	0.42%	6,961	0.06%
Qatar	91	0.13%	5,903	0.05%
Russia	654	0.92%	29,818	0.26%
Saudi Arabia	147	0.21%	19,618	0.17%
Singapore	417	0.58%	44,996	0.39%
South Africa	1,027	1.44%	63,814	0.55%
South Korea	4,965	6.96%	406,644	3.52%
Spain	998	1.40%	110,499	0.96%
Sweden	1,012	1.42%	146,879	1.27%
Switzerland	1,494	2.10%	293,602	2.54%
Taiwan	2,201	3.09%	166,658	1.44%
Thailand	548	0.77%	42,256	0.37%
Turkey	1,155	1.62%	32,338	0.28%
United Arab Emirates	134	0.19%	8,752	0.08%
United Kingdom	4,643	6.51%	521,940	4.52%
US	11,383	15.97%	4,231,127	36.62%
Total	71,296	100.00%	11,554,258	100.00%

Panel C. Sample Breakdown by Industry

	Firm-year Analysis		*Pair Analysis*	
Industries	*# Observations*	*%*	*# Observations*	*%*
Agriculture	498	0.70%	27,437	0.24%
Food Products	1,823	2.56%	270,238	2.34%
Candy & Soda	444	0.62%	86,992	0.75%
Beer & Liquor	548	0.77%	128,176	1.11%
Tobacco Products	230	0.32%	66,289	0.57%
Recreation	346	0.49%	63,636	0.55%
Entertainment	614	0.86%	37,958	0.33%
Printing and Publishing	142	0.20%	14,534	0.13%
Consumer Goods	1,369	1.92%	353,312	3.06%
Apparel	694	0.97%	164,025	1.42%
Healthcare	382	0.54%	30,192	0.26%
Medical Equipment	885	1.24%	178,518	1.55%
Pharmaceutical Products	2,312	3.24%	454,718	3.94%
Chemicals	2,951	4.14%	468,927	4.06%
Rubber and Plastic Products	501	0.70%	70,820	0.61%
Textiles	294	0.41%	37,949	0.33%
Construction Materials	1,718	2.41%	208,251	1.80%
Construction	2,861	4.01%	189,694	1.64%
Steel Works Etc	2,234	3.13%	272,945	2.36%
Fabricated Products	179	0.25%	13,131	0.11%
Machinery	2,734	3.83%	619,239	5.36%
Electrical Equipment	825	1.16%	244,195	2.11%
Automobiles and Trucks	2,464	3.46%	1,091,352	9.45%

Aircraft	428	0.60%	161,963	1.40%
Shipbuilding, Railroad Equipment	259	0.36%	62,880	0.54%
Defense	29	0.04%	572	0.00%
Precious Metals	664	0.93%	36,174	0.31%
Non-Metallic and Metal Mining	1,125	1.58%	78,800	0.68%
Coal	662	0.93%	17,854	0.15%
Petroleum and Natural Gas	2,531	3.55%	488,914	4.23%
Utilities	4,310	6.05%	281,324	2.43%
Communication	2,313	3.24%	331,465	2.87%
Personal Services	376	0.53%	26,659	0.23%
Business Services	6,226	8.73%	417,451	3.61%
Computers	1,391	1.95%	344,133	2.98%
Electronic Equipment	3,301	4.63%	551,545	4.77%
Measuring and Control Equipment	666	0.93%	135,409	1.17%
Business Supplies	1,109	1.56%	136,783	1.18%
Shipping Containers	278	0.39%	45,310	0.39%
Transportation	3,360	4.71%	685,212	5.93%
Wholesale	2,340	3.28%	555,100	4.80%
Retail	3,285	4.61%	1,055,805	9.14%
Restaraunts, Hotels, Motels	873	1.22%	104,277	0.90%
Banking	3,908	5.48%	577,159	5.00%
Insurance	1,724	2.42%	120,280	1.04%
Real Estate	1,162	1.63%	16,776	0.15%
Trading	1,590	2.23%	81,917	0.71%
Almost Nothing	338	0.47%	147,968	1.28%
Total	71,296	100.00%	11,554,258	100.00%

Table 3. Descriptive Statistics

Table 3 presents the summary statistics for the sample of firm(supplier)-year observations (Panel A) and for the sample of customer-supplier-year observations (Panel B).

Panel A. Descriptive Statistics – Firm-Year Analysis

Variables	N	Mean	p25	p50	p75	SD
Supplier Discloses to CDP	71,296	0.4318	0.0000	0.0000	1.0000	0.4953
Customers Disclosing to CDP	71,296	0.1093	0.0000	0.0000	0.1667	0.1812
Institutional Ownership t-1	71,296	0.2864	0.0768	0.1778	0.3939	0.2859
Log(Total Assets) t-1	71,296	8.2075	6.9892	8.1357	9.3513	1.8277
Log(Book-to-Market) t-1	71,296	-0.7293	-1.1928	-0.5886	-0.0728	1.0440
Profitability t-1	71,296	0.0402	0.0107	0.0376	0.0747	0.0852
Leverage t-1	71,296	0.2487	0.0970	0.2306	0.3654	0.1854
Tangibility t-1	71,296	0.2957	0.0898	0.2463	0.4533	0.2410
Dividends t-1	71,296	0.3843	0.0000	0.2648	0.5324	0.6435
Log(Sales) t-1	71,296	7.6191	6.5435	7.6722	8.7773	1.7365

Panel B. Descriptive Statistics – Pair Analysis

Variables	N	Mean	p25	p50	p75	SD
Supplier Discloses to CDP	11,554,258	0.0874	0.0000	0.0000	0.0000	0.2824
Customer Discloses to CDP	11,554,258	0.7120	0.0000	1.0000	1.0000	0.4528
Customer–Supplier Relationship	11,554,258	0.1963	0.0000	0.0000	0.0000	0.3972
Institutional Ownership t-1	11,554,258	0.4388	0.1745	0.3396	0.7342	0.3064
Log(Total Assets) t-1	11,554,258	9.7469	8.5408	9.7629	10.8645	1.7539
Log(Book-to-Market) t-1	11,554,258	0.0531	0.0192	0.0471	0.0836	0.0602
Profitability t-1	11,554,258	0.2617	0.1534	0.2486	0.3569	0.1539
Leverage t-1	11,554,258	0.2719	0.1176	0.2324	0.3928	0.1944
Tangibility t-1	11,554,258	-0.9325	-1.3641	-0.7981	-0.2594	1.0511
Dividends t-1	11,554,258	0.3888	0.1144	0.2996	0.5177	0.6169
Log(Sales) t-1	11,554,258	9.4321	8.3577	9.5349	10.6904	1.5995
Supplier Scope 1 GHG Emissions	1,913,164	11.3398	9.36413	11.187	13.1904	2.88362

Table 4. Association Between Customer and Supplier CDP Disclosures: Firm-level Analysis

This table presents an analysis of the association between customer CDP disclosures and supplier CDP disclosures at the firm(supplier)-year level. The dependent variable, *Supplier Discloses to CDP*, is an indicator variable that equals one if the supplier discloses to the CDP in year *t*, and zero otherwise. The key explanatory variable, *Customers Disclosing to CDP*, is the fraction of customers disclosing to the CDP in year *t*. See Appendix A for other variable definitions. *t*-statistics (in brackets) are based on cluster standard errors at the firm-level. *, ** and *** denote statistical significance at the 10%, 5%, and 1% (two-tail) levels, respectively.

Dependent variable:	Supplier Discloses to CDP			
	(1)	(2)	(3)	(4)
Customers Disclosing to CDP	**0.08*****	**0.07*****	**0.07*****	**0.03*****
	(6.40)	**(5.10)**	**(5.34)**	**(3.25)**
Controls:				
Institutional Ownership t-1	0.33***	0.29***	0.30***	0.30***
	(11.94)	(10.81)	(11.13)	(9.53)
Log(Total Assets) t-1	0.06***	0.09***	0.09***	0.05***
	(13.56)	(17.37)	(16.78)	(6.71)
Log(Book-to-Market) t-1	-0.03***	-0.03***	-0.03***	-0.01***
	(-8.58)	(-8.62)	(-8.78)	(-4.02)
Profitability t-1	0.12***	0.08**	0.07**	0.08***
	(3.85)	(2.50)	(2.13)	(2.96)
Leverage t-1	-0.06***	-0.07***	-0.08***	-0.03
	(-2.71)	(-3.61)	(-3.74)	(-1.41)
Tangibility t-1	0.06***	-0.00	-0.01	-0.01
	(3.63)	(-0.08)	(-0.25)	(-0.19)
Dividends t-1	0.01***	0.01***	0.01***	0.00
	(3.42)	(3.31)	(4.19)	(1.14)
Log(Sales) t-1	0.07***	0.05***	0.05***	0.02***
	(15.75)	(8.86)	(9.12)	(3.48)
Year FE	No	No	Yes	Yes
Country FE	Yes	Yes	Yes	No
Industry FE	No	Yes	Yes	No
Firm FE	No	No	No	Yes
Observations	71,296	71,296	71,296	70,784
R-squared	0.29	0.31	0.33	0.64

Table 5. Association Between Customer and Supplier CDP Disclosures: Pair-level Analysis

This table presents an analysis of the association between customer and supplier CDP disclosures at the customer-supplier-year level. In Panel A, the dependent variable, *Supplier Discloses to CDP*, is an indicator variable that equals one if the supplier discloses to the CDP in year *t*, zero otherwise. *Customer Discloses to CDP* is an indicator variable that equals one if the customer discloses to CDP in year *t*, zero otherwise. *Customer-Supplier Relationship* is an indicator variable that equals one if the supplier is in an active business relationship with a customer in year t, and zero otherwise. Panel B presents results of repeating the analysis including supplier-level control variables. See Appendix A for other variable definitions. *t*-statistics (in brackets) are based on cluster standard errors at the firm-level. *, ** and *** denote statistical significance at the 10%, 5%, and 1% (two-tail) levels, respectively.

Panel A. Base Pair-level Analysis

Dependent variable:	Supplier Discloses to CDP		
	(1)	(2)	(3)
Customer Discloses to CDP	0.0032***	0.0030***	
	(4.8204)	(4.5434)	
Customer-Supplier Relationship	0.0196***	0.0173***	0.0165***
	(27.7961)	(25.3768)	(25.6508)
Customer Discloses to CDP × Customer-Supplier Relationship	**0.0040***	**0.0052***	**0.0054***
	(3.6160)	**(4.7362)**	**(5.8518)**
Controls:			
Institutional Ownership t-1	0.0070**	0.0070**	
	(2.3395)	(2.3694)	
Log(Total Assets) t-1	0.0005	0.0005	
	(0.4970)	(0.5425)	
Log(Book-to-Market) t-1	0.0010*	0.0011*	
	(1.7709)	(1.8181)	
Profitability t-1	0.0068*	0.0067*	
	(1.8254)	(1.8237)	
Leverage t-1	0.0045*	0.0044*	
	(1.6755)	(1.6579)	
Tangibility t-1	-0.0128***	-0.0129***	
	(-3.5802)	(-3.6223)	
Dividends t-1	0.0001	0.0001	
	(0.4070)	(0.3958)	
Log(Sales) t-1	0.0004	0.0004	
	(0.4298)	(0.4818)	
Year FE	Yes	Yes	No
Customer FE	Yes	No	No
Supplier FE	Yes	No	No
Customer-Supplier FE	No	Yes	Yes
Customer-Year FE	No	No	Yes
Observations	11,554,258	11,538,495	11,536,080
R-squared	0.6882	0.7281	0.7316

Table 5. Association Between Customer and Supplier CDP Disclosures: Pair-level Analysis (cont'ed)

Panel B. Pair-level Analysis Including Supplier-level Control Variables

Dependent variable:	Supplier Discloses to CDP		
	(1)	(2)	(3)
Customer Discloses to CDP	0.0250***	0.0250***	
	(15.0596)	(14.4229)	
Customer-Supplier Relationship	-0.0142***	-0.0174***	-0.0179***
	(-11.1361)	(-10.9520)	(-10.6316)
Customer Discloses to CDP × Customer-Supplier Relationship	**0.0206*****	**0.0262*****	**0.0276*****
	(13.5638)	**(13.7634)**	**(13.6294)**
Controls:			
Institutional Ownership t-1	-0.0055	-0.0050	
	(-0.7464)	(-0.6320)	
Log(Total Assets) t-1	0.0030	0.0032	
	(1.1338)	(1.1730)	
Log(Book-to-Market) t-1	-0.0023***	-0.0024***	
	(-2.6017)	(-2.5827)	
Profitability t-1	0.0318***	0.0352***	
	(3.7618)	(4.0281)	
Leverage t-1	0.0046	0.0045	
	(0.6758)	(0.6319)	
Tangibility t-1	-0.0239***	-0.0240**	
	(-2.7107)	(-2.5743)	
Dividends t-1	0.0002	0.0002	
	(0.3767)	(0.3358)	
Log(Sales) t-1	-0.0014	-0.0014	
	(-0.5809)	(-0.5508)	
Institutional Ownership t-1 (Supplier)	0.1845***	0.1796***	0.1735***
	(25.6331)	(24.1915)	(23.2556)
Log(Total Assets) t-1 (Supplier)	0.0490***	0.0480***	0.0461***
	(23.4995)	(22.2078)	(21.0668)
Log(Book-to-Market) t-1 (Supplier)	-0.0051***	-0.0058***	-0.0045***
	(-6.7932)	(-7.4391)	(-5.6242)
Profitability t-1 (Supplier)	0.0873***	0.0861***	0.0737***
	(12.9314)	(12.5196)	(10.5534)
Leverage t-1 (Supplier)	-0.0817***	-0.0818***	-0.0823***
	(-13.8300)	(-13.3905)	(-13.1936)
Tangibility t-1 (Supplier)	-0.0528***	-0.0573***	-0.0508***
	(-6.9800)	(-7.3597)	(-6.2942)
Dividends t-1 (Supplier)	0.0018***	0.0019***	0.0023***
	(4.2321)	(4.4264)	(5.3011)
Log(Sales) t-1 (Supplier)	0.0363***	0.0361***	0.0350***
	(17.2787)	(16.5351)	(15.7655)
Year FE	Yes	Yes	No
Customer FE	Yes	No	No
Supplier FE	Yes	No	No
Customer-Supplier FE	No	Yes	Yes
Customer-Year FE	No	No	Yes
Observations	1,504,993	1,490,911	1,481,807
R-squared	0.6472	0.6607	0.6765

Table 6. Expansion of the Coverage of Asset4

This table reports the analysis of the association between customer CDP disclosures and supplier CDP disclosures exploiting variation induced by Asset4' coverage expansion in 2017. The analysis is conducted at the customer-supplier-year level. We limit the estimation sample to six years before and after Asset4' coverage expansion. The dependent variable, *Supplier Discloses to CDP*, is an indicator variable that equals one if the supplier discloses to the CDP in year *t*, and zero otherwise. *Customer-Supplier Relationship* is an indicator variable that equals one if the supplier is in an active business relationship with a customer in year *t*, and zero otherwise. *Russell 2000* is an indicator variable that equals one if a customer is covered by Russell 2000 as of December 2016, and zero otherwise. *Post 2017* is an indicator variable that equals one after 2017, the year of Asset4's coverage expansion, and zero otherwise. See Appendix A for other variable definitions. t-statistics (in brackets) are based on cluster standard errors at the firm-level. *, ** and *** denote statistical significance at the 10%, 5%, and 1% (two-tail) levels, respectively.

Dependent variable:	Supplier Discloses to CDP		
	(1)	(2)	(3)
Customer-Supplier Relationship	0.0220***	0.0192***	0.0190***
	(21.7247)	(20.7283)	(20.0772)
Customer-Supplier Relationship × Russell 2000	-0.0114***	-0.0109***	-0.0111***
	(-4.3623)	(-4.7118)	(-4.8505)
Customer-Supplier Relationship × Post 2017	0.0031***	0.0048***	0.0045***
	(3.9543)	(6.1003)	(5.8061)
Russell 2000 × Post 2017	-0.0012	-0.0010	
	(-0.8815)	(-0.8243)	
Customer-Supplier Relationship × Russell 2000 × Post 2017	**0.0087***	**0.0072**	**0.0065**
	(3.0663)	**(2.4531)**	**(2.2889)**
Controls (Customer)	Yes	Yes	NA
Year FE	Yes	Yes	No
Customer FE	Yes	No	No
Supplier FE	Yes	No	No
Customer-Supplier FE	No	Yes	Yes
Customer-Year FE	No	No	Yes
Observations	6,276,111	6,261,011	6,258,920
R-squared	0.7161	0.7569	0.7609

Table 7. Introduction of ESG Disclosure Mandates

This table reports the analysis of the association between customer CDP disclosures and supplier CDP disclosures exploiting variation induced by ESG disclosure regulations. The analysis is conducted at the customer-supplier-year level. We limit the estimation sample to six years before and after the ESG disclosure regulation adoption years. The dependent variable, *Supplier Discloses to CDP*, is an indicator variable that equals one if the supplier discloses to the CDP in year *t*, and zero otherwise. *Customer-Supplier Relationship* is an indicator variable that equals one if the supplier is in an active business relationship with a customer in year t, and zero otherwise. *Post ESG Disclosure Mandates* is an indicator variable marking the years after a customer's country adopts an ESG disclosure regulation. See Appendix A for other variable definitions. t-statistics (in brackets) are based on cluster standard errors at the firm-level. *, ** and *** denote statistical significance at the 10%, 5%, and 1% (two-tail) levels, respectively.

Dependent variable:	*Supplier Discloses to CDP*		
	(1)	(2)	(3)
Customer-Supplier Relationship	0.0220***	0.0205***	0.0197***
	(29.6127)	(28.8624)	(29.8371)
Post ESG Disclosure Mandates	-0.0029***	-0.0027***	
	(-4.2861)	(-4.1038)	
Customer-Supplier Relationship × Post ESG Disclosure Mandates	**0.0039***	**0.0036***	**0.0048***
	(3.2608)	**(3.1023)**	**(4.2583)**
Controls (Customer)	Yes	Yes	NA
Year FE	Yes	Yes	No
Customer FE	Yes	No	No
Supplier FE	Yes	No	No
Customer-Supplier FE	No	Yes	Yes
Customer-Year FE	No	No	Yes
Observations	10,896,617	10,879,034	10,876,869
R-squared	0.6941	0.7355	0.7388

Table 8. Customers Demand for Supplier CDP Disclosures

This table presents an analysis of the association between customer CDP disclosures and supplier CDP disclosures at the customer-supplier-year level. In Columns 1-3, the dependent variable is *Supplier Starts Disclosing to the CDP*, an indicator variable that equals one if a supplier starts disclosing to CDP in year t+1, and zero otherwise. In Columns 4-6, the dependent variable is *Supplier Discloses in the CDP Supply Chain Program*, an indicator variable that equals one if a supplier answers the disclosure request from the CDP Supply Chain Program in year t+1 (i.e., following a customer request to disclose in year t), and zero otherwise. Across all columns, the independent variable, *Customer Disclosure Demand*, is an indicator variable that equals one if a customer signs up as a signatory to the CDP Supply Chain Program in year t, zero otherwise. *Customer-Supplier Relationship* is an indicator variable that equals one if the supplier is in an active business relationship with a customer in year t, and zero otherwise. See Appendix A for other variable definitions. t-statistics (in brackets) are based on cluster standard errors at the firm-level. *, ** and *** denote statistical significance at the 10%, 5%, and 1% (two-tail) levels, respectively.

Dependent variable:	Supplier Starts Disclosing to the CDP			Supplier Discloses to the CDP Supply Chain Program		
	(1)	(2)	(3)	(4)	(5)	(6)
Customer Disclosure Demand	0.0013**	0.0010*		-0.0011	-0.0012	
	(2.3317)	(1.8023)		(-0.6612)	(-0.7592)	
Customer-Supplier Relationship	-0.0087***	-0.0085***	-0.0087***	0.0046***	0.0038***	0.0039***
	(-26.8440)	(-25.3180)	(-25.7620)	(16.2949)	(12.9889)	(16.4891)
Customer Disclosure Demand × Customer-Supplier Relationship	0.0010	**0.0018***	**0.0019***	**0.0062***	**0.0067***	**0.0070***
	(0.9788)	**(1.7626)**	**(1.7062)**	**(2.9739)**	**(3.0010)**	**(3.4050)**
Controls (Customer)	Yes	Yes	NA	Yes	Yes	NA
Year FE	Yes	Yes	No	Yes	Yes	No
Customer FE	Yes	No	No	Yes	No	No
Supplier FE	Yes	No	No	Yes	No	No
Customer-Supplier FE	No	Yes	Yes	No	Yes	Yes
Customer-Year FE	No	No	Yes	No	No	Yes
Observations	9,861,346	9,842,397	9,839,087	11,031,536	11,016,628	11,014,155
R-squared	0.2510	0.2974	0.3033	0.3536	0.3833	0.3937

Table 9. Cross-Sectional Analyses on Customer Disclosure Demand Incentives

This table presents cross-sectional analyses of the association between customer CDP disclosures and supplier CDP disclosures based on four dimensions. In Panel A, *Lower (Higher) Market Concentration* includes customer firms operating in an industry below (above) the sample median of the HHI index. In Panel B, *Yes (No) Recent ENV Incident* includes firms with (without) at least one environmental incident in the previous year. In Panel C, *Higher (Lower) Institutional Ownership* includes customer firms with above- (below-) median values of the percentage of shares owned by institutional owners at the start of the year. In Panel D, *Higher* (*Lower) Carbon Footprint* includes customer firms operating in "dirty" ("clean") industries. The dependent variable, *Supplier Discloses to CDP*, is an indicator variable that equals one if the supplier discloses to the CDP in year *t*, and zero otherwise. *Customer Discloses to CDP* is an indicator variable that equals one if the customer discloses to CDP in year t, and zero otherwise. *Customer-Supplier Relationship* is an indicator variable that equals one if the supplier is in an active business relationship with a customer in year t, and zero otherwise. See Appendix A for other variable definitions. The analysis is conducted at the customer-supplier level. t-statistics (in brackets) are based on cluster standard errors at the firm-level. *, ** and *** denote statistical significance at the 10%, 5%, and 1% (two-tail) levels, respectively.

Panel A. Variation by Market Concentration

Dependent variable:	Supplier Discloses to CDP			
	Lower Market Concentration		Higher Market Concentration	
	(1)	(2)	(3)	(4)
Customer Discloses to CDP	0.0018**	0.0016*	0.0045***	0.0043***
	(2.1341)	(1.9374)	(5.2959)	(5.1631)
Customer-Supplier Relationship	0.0212***	0.0188***	0.0176***	0.0153***
	(20.7669)	(19.0294)	(18.7564)	(17.3003)
***Customer Discloses to CDP* ×**	**0.0064*****	**0.0075*****	0.0023	**0.0032****
Customer-Supplier Relationship	**(4.7935)**	**(5.8367)**	(1.4791)	**(2.1685)**
F-Test: Lower vs. Higher (p-value)	**0.028**	**0.040**		
Controls (Customer)	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Customer FE	Yes	No	Yes	No
Supplier FE	Yes	No	Yes	No
Customer-Supplier FE	No	Yes	No	Yes
Observations	6,009,793	6,003,326	5,543,322	5,535,169
R-squared	0.6781	0.7188	0.7039	0.7394

Table 9. Cross-Sectional Analyses on Customer Disclosure Demand Incentives (cont'ed)

Panel B. Variation by Previous Environmental Incidents

Dependent variable:	Supplier Discloses to CDP			
	No Recent ENV Incident		Yes Recent ENV Incident	
	(1)	(2)	(3)	(4)
Customer Discloses to CDP	0.0038***	0.0036***	0.0001	-0.0001
	(5.2964)	(5.0924)	(0.0698)	(-0.1357)
Customer-Supplier Relationship	0.0200***	0.0176***	0.0186***	0.0159***
	(27.5277)	(25.2347)	(11.5456)	(8.6834)
Customer Discloses to CDP ×	**0.0037*****	**0.0048*****	**0.0054*****	**0.0064*****
Customer-Supplier Relationship	**(3.5644)**	**(4.6528)**	**(2.6764)**	**(2.8834)**
F-Test: No vs. Yes (p-value)	0.369	0.449		
Controls (Customer)	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Customer FE	Yes	No	Yes	No
Supplier FE	Yes	No	Yes	No
Customer-Supplier FE	No	Yes	No	Yes
Observations	8,287,010	8,252,596	3,239,577	3,126,848
R-squared	0.6938	0.7412	0.6784	0.7325

Panel C. Variation by Institutional Ownership

Dependent variable:	Supplier Discloses to CDP			
	Lower Institutional Ownership		Higher Institutional Ownership	
	(1)	(2)	(3)	(4)
Customer Discloses to CDP	0.0028**	0.0031***	0.0027***	0.0025***
	(2.5483)	(2.9651)	(3.7848)	(3.4649)
Customer-Supplier Relationship	0.0261***	0.0231***	0.0182***	0.0156***
	(17.5220)	(15.9900)	(22.8245)	(20.2436)
Customer Discloses to CDP ×	**0.0053****	0.0038	**0.0050*****	**0.0065*****
Customer-Supplier Relationship	**(2.0946)**	(1.5896)	**(4.3243)**	**(5.6175)**
F-Test: Lower vs. Higher (p-value)	0.923	0.317		
Controls (Customer)	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Customer FE	Yes	No	Yes	No
Supplier FE	Yes	No	Yes	No
Customer-Supplier FE	No	Yes	No	Yes
Observations	1,099,760	1,075,719	10,441,086	10,419,091
R-squared	0.6854	0.7542	0.6906	0.7309

Table 9. Cross-Sectional Analyses on Customer Disclosure Demand Incentives (cont'ed)

Panel D. Variation by Industry Carbon Footprint

Dependent variable:	Supplier Discloses to CDP			
	Lower Carbon Footprint		*Higher Carbon Footprint*	
	(1)	(2)	(3)	(4)
Customer Discloses to CDP	0.0035***	0.0033***	0.0024***	0.0023***
	(4.1379)	(3.9524)	(2.9705)	(2.8319)
Customer-Supplier Relationship	0.0209***	0.0185***	0.0173***	0.0152***
	(23.4897)	(21.9605)	(15.1053)	(13.3595)
Customer Discloses to CDP ×	0.0016	**0.0027***	**0.0087***	**0.0096***
Customer-Supplier Relationship	(1.1503)	**(1.9485)**	**(5.8064)**	**(6.5798)**
F-Test: Lower vs. Higher (p-value)	**0.001**	**0.001**		
Controls (Customer)	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Customer FE	Yes	No	Yes	No
Supplier FE	Yes	No	Yes	No
Customer-Supplier FE	No	Yes	No	Yes
Observations	7,724,592	7,714,759	3,828,636	3,823,736
R-squared	0.6880	0.7290	0.6916	0.7262

Table 10. Suppliers GHG Emissions and CDP Disclosures

This table presents an analysis of the association between customer and supplier disclosures to the CDP and subsequent supplier Scope 1 GHG emissions. The analysis is conducted at the customer-supplier-year level. The dependent variable, *Supplier Scope 1 GHG Emissions*, is the logarithm of the supplier's Scope 1 GHG emissions in year *t*+1. *Customer-Supplier Relationship* is an indicator variable that equals one if the supplier is in an active business relationship with a customer in year t, and zero otherwise. In Panel A, *Customer Discloses to CDP* is an indicator variable that equals one if the customer discloses to CDP in year t, and zero otherwise. In Panel B, *Supplier Discloses to the CDP Supply Chain Program* is an indicator variable that equals one if a supplier answers the disclosure request from the CDP Supply Chain Program in year t+1 (i.e., following a customer request to disclose in year t), and zero otherwise. See Appendix A for other variable definitions. t-statistics (in brackets) are based on cluster standard errors at the firm-level. *, ** and *** denote statistical significance at the 10%, 5%, and 1% (two-tail) levels, respectively.

Panel A. Corporate Customers CDP Disclosure and Suppliers Scope 1 GHG Emissions

Dependent Variable:	Supplier Scope 1 GHG Emissions		
	(1)	(2)	(3)
Customer Discloses to CDP	0.0023	0.0014	
	(0.7478)	(0.4382)	
Customer-Supplier Relationship	0.0277***	0.0344***	0.0271***
	(10.7542)	(10.4195)	(7.6709)
Customer Discloses to CDP × Customer-Supplier Relationship	**-0.0119***	**-0.0127***	-0.0036
	(-3.9198)	**(-3.2517)**	(-0.8621)
Controls (Customer)	Yes	Yes	NA
Year FE	Yes	Yes	No
Customer FE	Yes	No	No
Supplier FE	Yes	No	No
Customer-Supplier FE	No	Yes	Yes
Customer-Year FE	No	No	Yes
Observations	1,804,276	1,784,652	1,777,279
R-squared	0.9481	0.9508	0.9527

Table 10. Suppliers GHG Emissions and CDP Disclosures (cont'ed)

Panel B. Supplier Discloses to the CDP Supply Chain Program and Suppliers Scope 1 GHG Emissions

Dependent variable:	Supplier Scope 1 GHG Emissions		
	(1)	(2)	(3)
Supplier Discloses to the CDP Supply Chain Program	0.0237***	0.0303***	0.0293***
	(14.4823)	(13.9825)	(13.0792)
Customer-Supplier Relationship	-0.0498***	-0.0475***	-0.0455***
	(-18.0614)	(-16.3422)	(-15.4658)
Supplier Discloses to the CDP Supply Chain Program × Customer-Supplier Relationship	**-0.0231***	**-0.0255***	**-0.0249***
	(-7.0344)	**(-6.4717)**	**(-6.1347)**
Controls (Customer)	Yes	Yes	NA
Year FE	Yes	Yes	No
Customer FE	Yes	No	No
Supplier FE	Yes	No	No
Customer-Supplier FE	No	Yes	Yes
Customer-Year FE	No	No	Yes
Observations	1,804,276	1,784,652	1,777,279
R-squared	0.9481	0.9508	0.9527

Table 11. Customer Supply Chain Decisions

This table presents an analysis of the association between customers' decisions to terminate business relationships with suppliers. In Panel A, columns (1)-(3), the dependent variable, *Terminate Relation w/Most Polluting Suppliers*, is an indicator variable that equals one if the customer discontinues business with a supplier in year t+1, and that supplier is in the highest decile of CO_2 emissions (scaled by total assets) among suppliers for that customer-year, zero otherwise. In columns (4)-(6), the dependent variable, *Terminate Relation w/Least Polluting Suppliers*, is an indicator variable that equals one if the customer discontinues business with a supplier in year t+1, and that supplier is in the lowest decile of CO_2 emissions scaled by total assets (scaled by total assets) among suppliers for that customer-year, zero otherwise. In Panel B, columns (1)-(3), the dependent variable, *Terminate Relation w/Suppliers Not Responding to the CDP Supply Chain Program,* is an indicator variable that equals one if a supplier does not answer the disclosure request from the CDP Supply Chain Program in year t+1 (i.e., following a customer request to disclose in year t), zero otherwise, in columns (4)-(6), the dependent variable, *Terminate Relation w/ Most Polluting Suppliers Not Responding to the CDP Supply Chain Program,* is an indicator variable that equals one if *Terminate Relation w/Most Polluting Suppliers* is equal to one and the supplier does not answer the disclosure request from the CDP Supply Chain Program in year t+1 (i.e., following a customer request to disclose in year t), zero otherwise, in columns (7)-(9), the dependent variable, *Terminate Relation w/ Least Polluting Suppliers Not Responding to the CDP Supply Chain Program,* is an indicator variable that equals one if *Terminate Relation w/Least Polluting Suppliers* is equal to one and the supplier does not answer the disclosure request from the CDP Supply Chain Program in year t+1 (i.e., following a customer request to disclose in year t), zero otherwise. *Customer-Supplier Relationship* is an indicator variable equal to one if the supplier is in an active business relationship with a customer in year t. *Customer Discloses to CDP* is an indicator variable that equals one if the customer discloses to CDP in year t. *Customer Disclosure Demand*, an indicator variable that equals one if a customer signs up as a signatory to the CDP Supply Chain Program. See Appendix A for other variable definitions. t-statistics (in brackets) are based on standard errors clustered at the firm-level. *, ** and *** denote statistical significance at the 10%, 5%, and 1% (two-tail) levels, respectively.

Panel A. Customer CDP Disclosure and Supply Chain Decisions Based on Supplier Levels of GHG Emissions

Dependent variable:	Terminate Relation w/Most Polluting Suppliers			Terminate Relation w/Least Polluting Suppliers		
	(1)	(2)	(3)	(4)	(5)	(6)
Customer Discloses to CDP	-0.0005	-0.0011*		0.0015***	0.0009**	
	(-0.8941)	(-1.9198)		(4.1039)	(2.4265)	
Customer-Supplier Relationship	0.0256***	0.0264***	0.0240***	0.0237***	0.0246***	0.0200***
	(40.3356)	(37.0951)	(30.9084)	(43.3306)	(39.9098)	(30.6554)
Customer Discloses to CDP × Customer-Supplier Relationship	**0.0017****	**0.0036****	**0.0047****	**-0.0062****	**-0.0040****	**-0.0002**
	(2.2024)	**(3.9866)**	**(4.6698)**	**(-10.0757)**	**(-5.6209)**	**(-0.2643)**
Controls (Customer)	Yes	Yes	NA	Yes	Yes	NA
Year FE	Yes	Yes	No	Yes	Yes	No
Customer FE	Yes	No	No	Yes	No	No
Supplier FE	Yes	No	No	Yes	No	No
Customer-Supplier FE	No	Yes	Yes	No	Yes	Yes
Customer-Year FE	No	No	Yes	No	No	Yes
Observations	1,912,579	1,892,370	1,884,265	1,912,579	1,892,370	1,884,265
R-squared	0.0994	0.2246	0.2486	0.1416	0.3143	0.3520

Table 11. Customer Supply Chain Decisions (cont'ed)

Panel B. Customer CDP Disclosure Demand and Supply Chain Decisions Based on Supplier Disclosure Response

Dependent variable:	Terminate Relation w/Suppliers Not Responding to the CDP Supply Chain Program			Terminate Relation w/ Most Polluting Suppliers Not Responding to the CDP Supply Chain Program			Terminate Relation w/ Least Polluting Suppliers Not Responding to the CDP Supply Chain Program		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Customer Disclosure Demand	-0.0027***	-0.0027***		-0.0005***	-0.0007***		-0.0004***	-0.0003***	
	(-3.9231)	(-3.9616)		(-2.6378)	(-3.3895)		(-3.4796)	(-3.1353)	
Customer-Supplier Relationship	-0.0018***	-0.0015***	0.0005***	-0.0003***	-0.0005***	0.0002***	-0.0002***	0.0000	0.0001**
	(-6.1553)	(-4.7329)	(3.2056)	(-4.1979)	(-4.8853)	(3.2336)	(-5.2993)	(0.1501)	(2.2299)
Customer Disclosure Demand × Customer-Supplier Relationship	**0.0164***	**0.0165***	**0.0142***	**0.0028***	**0.0033***	**0.0025***	**0.0019***	**0.0019***	**0.0018***
	(7.0969)	**(6.9768)**	**(6.8808)**	**(7.7890)**	**(7.7892)**	**(7.4314)**	**(8.4291)**	**(8.0041)**	**(7.7342)**
Controls (Customer)	Yes	Yes	NA	Yes	Yes	NA	Yes	Yes	NA
Year FE	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No
Customer FE	Yes	No	No	Yes	No	No	Yes	No	No
Supplier FE	Yes	No	No	Yes	No	No	Yes	No	No
Customer-Supplier FE	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Customer-Year FE	No	No	Yes	No	No	Yes	No	No	Yes
Observations	11,554,258	11,538,495	11,536,080	1,912,579	1,892,370	1,884,265	1,912,579	1,892,370	1,884,265
R-squared	0.0854	0.1466	0.2154	0.0313	0.1800	0.2055	0.0513	0.2836	0.2946

Online Appendix

This Online Appendix provides additional analyses supporting the inferences of the main analyses.

OA1. Alternative Clustering of Standard Errors

OA2. Alternative Fixed Effects

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OA7. Controlling for Suppliers' ESG Mandatory Disclosures

OA8. Suppliers Scope 2 and Scope 3 GHG Emissions

OA1. Alternative Clustering of Standard Errors

This table presents an analysis of the association between customers' CDP disclosures and suppliers' CDP disclosures at the customer-supplier-year level using alternative clustering strategies. The dependent variable, *Supplier Discloses to CDP*, is an indicator variable that equals one if the supplier discloses to the CDP in year *t*, and zero otherwise. *Customer Discloses to CDP* is an indicator variable that equals one if the customer discloses to CDP in year t, and zero otherwise. *Customer-Supplier Relationship* is an indicator variable that equals one if the supplier is in an active business relationship with a customer in year t, and zero otherwise. See Appendix A for other variable definitions. *t*-statistics (in brackets) are based on cluster standard errors at the firm-level. *, ** and *** denote statistical significance at the 10%, 5%, and 1% (two-tail) levels, respectively.

Dependent Variable:	Supplier Discloses to CDP								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Customer Discloses to CDP	0.0032***	0.0030***		0.0032***	0.0030***		0.0032***	0.0030***	
	(3.4603)	(3.1678)		(3.1857)	(3.0401)		(3.8994)	(3.5651)	
Customer-Supplier Relationship	0.0196***	0.0173***	0.0165***	0.0196***	0.0173***	0.0165***	0.0196***	0.0173***	0.0165***
	(10.5009)	(8.8546)	(8.6389)	(7.8925)	(7.4656)	(7.5484)	(15.9475)	(14.3756)	(14.2726)
Customer Discloses to CDP × Customer-Supplier Relationship	**0.0040***	**0.0052***	**0.0054***	**0.0040**	**0.0052***	**0.0054***	**0.0040***	**0.0052***	**0.0054***
	(2.6400)	**(3.6461)**	**(4.7752)**	**(2.1071)**	**(2.9169)**	**(3.2127)**	**(3.0565)**	**(4.0516)**	**(4.9141)**
Clustering	Country-Level			Industry-Level			Country- Industry -Level		
Controls (Customer)	Yes	Yes	NA	Yes	Yes	NA	Yes	Yes	NA
Year FE	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No
Customer FE	Yes	No	No	Yes	No	No	Yes	No	No
Supplier FE	Yes	No	No	Yes	No	No	Yes	No	No
Customer-Supplier FE	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Customer-Year FE	No	No	Yes	No	No	Yes	No	No	Yes
Observations	11,554,258	11,538,495	11,536,080	11,554,258	11,538,495	11,536,080	11,554,258	11,538,495	11,536,080
R-squared	0.6882	0.7281	0.7316	0.6882	0.7281	0.7316	0.6882	0.7281	0.7316

OA2. Alternative Fixed Effects

This table presents an analysis of the association between customers' CDP disclosures and suppliers' CDP disclosures at the customer-supplier-year level using alternative fixed effects. The dependent variable, *Supplier Discloses to CDP*, is an indicator variable that equals one if the supplier discloses to the CDP in year *t*, and zero otherwise. *Customer Discloses to CDP* is an indicator variable that equals one if the customer discloses to CDP in year t, and zero otherwise. *Customer-Supplier Relationship* is an indicator variable that equals one if the supplier is in an active business relationship with a customer in year t, and zero otherwise. See Appendix A for other variable definitions. *t*-statistics (in brackets) are based on cluster standard errors at the firm-level. *, ** and *** denote statistical significance at the 10%, 5%, and 1% (two-tail) levels, respectively.

Dependent Variable:	Supplier Discloses to CDP					
	(1)	(2)	(3)	(4)	(5)	(6)
Customer Discloses to CDP	0.0019***	0.0029***	0.0017***	0.0177***	0.0219***	0.0124***
	(3.1660)	(5.4812)	(3.5176)	(11.0149)	(13.1669)	(7.6055)
Customer-Supplier Relationship	0.0178***	0.0173***	0.0175***	-0.0161***	-0.0165***	-0.0162***
	(26.3265)	(25.7713)	(26.4393)	(-10.2726)	(-10.5637)	(-10.4775)
Customer Discloses to CDP × Customer-Supplier Relationship	**0.0045***	**0.0049***	**0.0046***	**0.0250***	**0.0251***	**0.0252***
	(4.2835)	**(4.8837)**	**(4.9542)**	**(13.3349)**	**(13.4027)**	**(13.5391)**
Controls (Customer)	Yes	Yes	Yes	Yes	Yes	Yes
Controls (Supplier)	No	No	No	Yes	Yes	Yes
Year FE	No	No	No	No	No	No
Customer-Supplier FE	Yes	Yes	Yes	Yes	Yes	Yes
Country-Year FE	Yes	No	No	Yes	No	No
Industry-Year FE	No	Yes	No	No	Yes	No
Country-Industry-Year FE	No	No	Yes	No	No	Yes
Observations	11,538,317	11,538,495	11,538,187	1,484,595	1,490,910	1,484,075
R-squared	0.7283	0.7283	0.7290	0.6609	0.6618	0.6649

OA3. Using a Shift-Share Design

This table presents an analysis of the association between customers' CDP disclosures and suppliers' CDP disclosures at the customer-supplier-year level using a shift-share design. The dependent variable, *Supplier Discloses to CDP*, is an indicator variable that equals one if the supplier discloses to the CDP in year *t*, and zero otherwise. *Customer Discloses to CDP* is an indicator variable that equals one if the customer discloses to CDP in year t, and zero otherwise. *Customer-Supplier Relationship*_2007 is an indicator variable that equals one if the supplier was in an active business relationship with a customer at the start of the sample period, i.e., 2007, and zero otherwise. See Appendix A for other variable definitions. *t*-statistics (in brackets) are based on cluster standard errors at the firm-level. *, ** and *** denote statistical significance at the 10%, 5%, and 1% (two-tail) levels, respectively.

Dependent Variable:	Supplier Discloses to CDP					
	(1)	(2)	(3)	(4)	(5)	(6)
Customer Discloses to CDP	0.0020*	-0.0046***		0.0238***	0.0109	
	(1.7644)	(-3.9927)		(4.5121)	(0.9561)	
Customer-Supplier Relationship_2007	0.0288***			-0.0070		
	(20.9650)			(-1.6300)		
Customer Discloses to CDP × Customer-Supplier Relationship_2007	**0.0021***	**0.0089***	**0.0122***	**0.0171****	**0.0215***	**0.0231****
	(1.8722)	**(6.8212)**	**(7.6685)**	**(1.9975)**	**(1.8741)**	**(1.9903)**
Controls (Customer)	Yes	Yes	NA	Yes	Yes	NA
Controls (Supplier)	No	No	No	Yes	Yes	Yes
Year FE	Yes	Yes	No	Yes	Yes	No
Customer FE	Yes	No	No	Yes	No	No
Supplier FE	Yes	No	No	Yes	No	No
Customer-Supplier FE	No	Yes	Yes	No	Yes	Yes
Customer -Year FE	No	No	Yes	No	No	Yes
Observations	11,554,258	11,538,495	11,536,080	1,504,993	1,490,911	1,481,807
R-squared	0.6876	0.7275	0.7310	0.6471	0.6606	0.6764

OA4. Controlling for the Intensity of the Relationship between Customers and Suppliers

This table presents an analysis of the association between customers' CDP disclosures and suppliers' CDP disclosures at the customer-supplier-year level. The dependent variable, *Supplier Discloses to CDP*, is an indicator variable that equals one if the supplier discloses to the CDP in year t, and zero otherwise. *Customer Discloses to CDP* is an indicator variable that equals one if the customer discloses to CDP in year t, and zero otherwise. *Customer-Supplier Relationship* is an indicator variable that equals one if the supplier is in an active business relationship with a customer in year t, and zero otherwise. *Shipment "Twenty-Foot Equivalent Unit (TEU)"* is the TEU of the shipment. TEU stands for Twenty-Foot Equivalent Unit, which is a standardized maritime industry measurement used to describe the capacity of container ships and container terminals. It is based on the volume of a 20-foot-long (6.1 meters) intermodal container. One TEU represents the capacity of one 20-foot container. For example, a 40-foot container is equivalent to 2 TEUs. *Shipment Weight (kg)* is the total weight of the shipment in kilograms. *Shipment USD Value* is the total monetary value of the shipment, measured in United States Dollars (USD). *Shipment Quantity* is the total number of units of goods in the shipment. Panel A (B) presents the results excluding (including) supplier-level control variables. See Appendix A for other variable definitions. *t*-statistics (in brackets) are based on cluster standard errors at the firm-level. *, ** and *** denote statistical significance at the 10%, 5%, and 1% (two-tail) levels, respectively.

Panel A. Pair-level Analysis

Dependent variable:	Supplier Discloses to CDP			
	(1)	(2)	(3)	(4)
Customer-Supplier Relationship	-0.0036***	-0.0040***	-0.0050***	-0.0043***
	(-6.4733)	(-7.1715)	(-9.2031)	(-7.8070)
Customer Discloses to CDP × Customer-Supplier Relationship	**0.0107***	**0.0107***	**0.0107***	**0.0107***
	(15.9057)	**(15.8835)**	**(16.2086)**	**(16.0832)**
Shipment "Twenty-Foot Equivalent Unit (TEU)"	-0.0001			
	(-1.4038)			
Shipment Weight (kg)		0.0000***		
		(2.7394)		
Shipment USD Value			0.0000***	
			(11.5877)	
Shipment Quantity				0.0000***
				(5.4716)
Controls (Customer)	NA	NA	NA	NA
Controls (Supplier)	No	No	No	No
Year FE	No	No	No	No
Customer FE	No	No	No	No
Supplier FE	No	No	No	No
Customer-Supplier FE	Yes	Yes	Yes	Yes
Customer-Year FE	Yes	Yes	Yes	Yes
Observations	10,597,572	10,597,572	10,597,572	10,597,572
R-squared	0.7487	0.7487	0.7487	0.7487

OA4. Controlling for the Intensity of the Relationship between Customers and Suppliers (cont'ed)

Panel B. Pair-level Analysis Including Supplier-level Control Variables

Dependent variable:	*Supplier Discloses to CDP*			
	(1)	(2)	(3)	(4)
Customer-Supplier Relationship	-0.0442***	-0.0452***	-0.0459***	-0.0455***
	(-14.4633)	(-14.6808)	(-14.9424)	(-14.8792)
Customer Discloses to CDP × Customer-Supplier Relationship	**0.0634***	**0.0634***	**0.0634***	**0.0634***
	(18.1243)	**(18.1032)**	**(18.1475)**	**(18.1514)**
Shipment "Twenty-Foot Equivalent Unit (TEU)"	-0.0003**			
	(-1.9878)			
Shipment Weight (kg)		0.0000		
		(0.4833)		
Shipment USD Value			0.0001*	
			(1.8681)	
Shipment Quantity				0.0000
				(1.1609)
Controls (Customer)	NA	NA	NA	NA
Controls (Supplier)	Yes	Yes	Yes	Yes
Year FE	No	No	No	No
Customer FE	No	No	No	No
Supplier FE	No	No	No	No
Customer-Supplier FE	Yes	Yes	Yes	Yes
Customer-Year FE	Yes	Yes	Yes	Yes
Observations	1,215,638	1,215,638	1,215,638	1,215,638
R-squared	0.6729	0.6729	0.6729	0.6729

OA5. Effect on Tier 2 Supplier CDP Disclosure

This table presents an analysis of the association between corporate customer CDP disclosures and Tier 2 supplier CDP disclosures at the customer-Tier 2 supplier-year level. The dependent variable, *Tier 2 Supplier Discloses to CDP,* is an indicator variable that equals one if a Tier 2 supplier discloses to CDP in year t, and zero otherwise. *Customer Discloses to CDP* is an indicator variable that equals one if the customer firm discloses to the CDP in year t, and zero otherwise. *Customer-Tier 2 Supplier Relationship* is an indicator variable that equals one if the customer firm is in an active business relationship with a Tier 2 supplier firm in year t, and zero otherwise. See Appendix A for other variable definitions. t-statistics (in brackets) are based on cluster standard errors at the firm-level. *, ** and *** denote statistical significance at the 10%, 5%, and 1% (two-tail) levels, respectively.

Dependent Variable:	Tier 2 Supplier Discloses to CDP		
	(1)	(2)	(3)
Customer Discloses to CDP	0.0016***	0.0014***	
	(7.6137)	(5.6566)	
Customer-Tier 2 Supplier Relationship	0.0023***	0.0035***	0.0031***
	(10.9830)	(11.4935)	(9.5881)
Customer Discloses to CDP × Customer-Tier 2 Supplier Relationship	-0.0002	**0.0009****	**0.0024****
	(-0.7278)	**(2.2909)**	**(5.3918)**
Controls (Customer)	Yes	Yes	NA
Tier 2 Supplier Controls	Yes	Yes	Yes
Year FE	Yes	Yes	No
Customer FE	Yes	No	No
Tier 2 Supplier FE	Yes	No	No
Customer- Tier 2 Supplier FE	No	Yes	Yes
Customer-Year FE	No	No	Yes
Observations	48,246,663	47,517,168	47,516,058
R-squared	0.6608	0.6634	0.6640

OA6. Controlling for Suppliers' Directly Treated by Asset4 Expansion

This table analyzes the association between customer and supplier CDP disclosures at the customer-supplier-year level, controlling for the impact of the 2017 Asset4 coverage expansion on suppliers. The dependent variable, *Supplier Discloses to CDP*, is an indicator variable that equals one if the supplier discloses to the CDP in year *t*, and zero otherwise. *Customer Discloses to CDP* is an indicator variable that equals one if the customer discloses to CDP in year t, and zero otherwise. *Customer-Supplier Relationship* is an indicator variable that equals one if the supplier is in an active business relationship with a customer in year t, and zero otherwise. *Russell 2000* (*Supplier*) is an indicator variable that equals one if a supplier is covered by Russell 2000 as of December 2016, and zero otherwise. *Post_2017* is an indicator variable that equals one if the year is after 2017, the year of Asset4's coverage expansion, and zero otherwise. See Appendix A for other variable definitions. *t*-statistics (in brackets) are based on cluster standard errors at the firm-level. *, ** and *** denote statistical significance at the 10%, 5%, and 1% (two-tail) levels, respectively.

Dependent Variable:	Supplier Discloses to CDP		
	(1)	(2)	(3)
Customer Discloses to CDP	0.0045***	0.0043***	
	(8.6903)	(8.5852)	
Customer-Supplier Relationship	0.0200***	0.0183***	0.0175***
	(29.4078)	(27.9596)	(27.1608)
Customer Discloses to CDP × Customer-Supplier Relationship	**0.0021****	**0.0027****	**0.0031*****
	(2.0140)	**(2.5531)**	**(3.1871)**
Russell 2000 (Supplier)	0.0183***	0.0196***	0.0200***
	(12.9745)	(12.9934)	(13.2084)
Russell 2000 (Supplier) × Post_2017	0.0419***	0.0412***	0.0396***
	(25.2445)	(24.3021)	(22.9678)
Controls (Customer)	Yes	Yes	NA
Year FE	Yes	Yes	No
Customer FE	Yes	No	No
Supplier FE	Yes	No	No
Customer-Supplier FE	No	Yes	Yes
Customer-Year FE	No	No	Yes
Observations	9,345,167	9,329,405	9,327,303
R-squared	0.7210	0.7600	0.7632

OA7. Controlling for Suppliers' ESG Mandatory Disclosures

This table presents an analysis of the association between customer CDP disclosures and supplier CDP disclosures at the customer-supplier-year level, by controlling for the adoption of ESG disclosure regulations in the suppliers' countries. The dependent variable, *Supplier Discloses to CDP*, is an indicator variable that equals one if the supplier discloses to the CDP in year *t*, and zero otherwise. *Customer Discloses to CDP* is an indicator variable that equals one if the customer discloses to CDP in year t, and zero otherwise. *Customer-Supplier Relationship* is an indicator variable that equals one if the supplier is in an active business relationship with a customer in year t, and zero otherwise. *Post ESG Disclosure Mandates (Supplier)* is an indicator variable marking the years after a supplier's country adopts an ESG disclosure regulation. See Appendix A for other variable definitions. *t*-statistics (in brackets) are based on cluster standard errors at the firm-level. *, ** and *** denote statistical significance at the 10%, 5%, and 1% (two-tail) levels, respectively.

Dependent Variable:	Supplier Discloses to CDP		
	(1)	(2)	(3)
Customer Discloses to CDP	0.0033***	0.0031***	
	(5.6235)	(5.2643)	
Customer-Supplier Relationship	0.0174***	0.0153***	0.0149***
	(26.1058)	(23.6198)	(24.1667)
Customer Discloses to CDP × Customer-Supplier Relationship	**0.0044***	**0.0055***	**0.0054***
	(4.3241)	**(5.4185)**	**(6.1567)**
Post ESG Disclosure Mandates (Supplier)	0.1758***	0.1550***	0.1561***
	(86.4156)	(80.9104)	(80.6570)
Controls (Customer)	Yes	Yes	NA
Year FE	Yes	Yes	No
Customer FE	Yes	No	No
Supplier FE	Yes	No	No
Customer-Supplier FE	No	Yes	Yes
Customer-Year FE	No	No	Yes
Observations	11,554,258	11,538,495	11,536,080
R-squared	0.6927	0.7312	0.7347

OA8. Suppliers Scope 2 and Scope 3 GHG Emissions

This table presents an analysis of the association between customer disclosure to the CDP and subsequent supplier Scope 2 and 3 GHG emissions. The analysis is conducted at the customer-supplier-year level. The dependent variables are either *Supplier GHG Scope 2 Emissions*, which is logarithm of the supplier's GHG Scope 2 emissions in year *t*+1, or *Supplier GHG Scope 3 Emissions*, which is logarithm of the supplier's GHG Scope 3 emissions in year *t*+1. *Customer-Supplier Relationship* is an indicator variable that equals one if the supplier is in an active business relationship with a customer in year t, and zero otherwise. *Customer Discloses to CDP* is an indicator variable that equals one if the customer discloses to CDP in year t, and zero otherwise. See Appendix A for other variable definitions. t-statistics (in brackets) are based on cluster standard errors at the firm-level. *, ** and *** denote statistical significance at the 10%, 5%, and 1% (two-tail) levels, respectively.

Dependent Variable:	Supplier GHG Scope 2 Emissions			Supplier GHG Scope 3 Emissions		
	(1)	(2)	(3)	(4)	(5)	(6)
Customer Discloses to CDP	0.0137***	0.0146***		0.0048*	0.0047*	
	(4.0102)	(3.9960)		(1.9180)	(1.7944)	
Customer-Supplier Relationship	0.0232***	0.0296***	0.0246***	0.0123***	0.0167***	0.0199***
	(8.9669)	(8.8224)	(7.7399)	(7.1776)	(7.5482)	(9.8966)
Customer Discloses to CDP × Customer-Supplier Relationship	**-0.0073****	**-0.0081****	-0.0027	0.0024	0.0032	0.0003
	(-2.4171)	**(-2.0742)**	(-0.7632)	(1.1667)	(1.1903)	(0.1318)
Controls (Customer)	Yes	Yes	NA	Yes	Yes	NA
Year FE	Yes	Yes	No	Yes	Yes	No
Customer FE	Yes	No	No	Yes	No	No
Supplier FE	Yes	No	No	Yes	No	No
Customer-Supplier FE	No	Yes	Yes	No	Yes	Yes
Customer-Year FE	No	No	Yes	No	No	Yes
Observations	1,805,038	1,785,422	1,778,047	1,805,354	1,785,743	1,778,369
R-squared	0.9428	0.9455	0.9482	0.9752	0.9766	0.9779