

# Stakeholder Preference and Strategic Corporate Social Responsibility

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## Abstract

This paper investigates the role of stakeholder preference on corporate social responsibility (CSR) strategies. Using a staggered difference-in-differences approach, we show that Indian firms increase CSR expenses when trade restrictions (Antidumping) are initiated against competing Chinese exports from countries with a high stakeholder preference for CSR. However, when these shocks emanate from countries with a lower stakeholder preference, CSR expenses remain unchanged. Capital expenditure and R&D of Indian firms increase following trade shocks, irrespective of their country of origin. Finally, CSR spending provides these Indian firms with significant real option value only when the demand shocks originate from countries with a higher CSR preference. Collectively, we provide evidence for consumer-driven CSR strategies.

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# 1 Introduction

Firms are under increasing pressure to be socially and environmentally responsible and cater to a broader range of stakeholders who values these externalities. One school of thought argues that corporate social responsibility (CSR) is a strategic investment in the firm's long-term reputation among wider stakeholders and is beneficial for the shareholders (Elfenbein and McManus, 2010; Besley and Ghatak, 2007)<sup>1</sup>. An alternative view is that CSR expenses reflect agency costs arising from managerial entrenchment (Masulis and Reza, 2015; Tirole, 2001). American CEOs' recent Business Roundtable declaration has brought the question of managerial motivations for CSR into even sharper focus. The Roundtable declaration stated that maximizing shareholders' wealth is no longer sufficient and that modern firms need "to create value for all our stakeholders". While some investors and stakeholder groups welcomed the statement, prominent economists like Summers (2019) and Zingales (2019) criticize it as "nothing new" and "at best misleading marketing, at worst a dangerous power grab". Summers (2019) and Zingales (2019) argue that CEOs can dilute their accountability to shareholders by appealing to the cause of broader stakeholders. Therefore, the social and economic desirability of CSR is likely to hinge on why managers incur these expenses (Bebchuk and Tallarita, 2020).

The question of managerial motivation for CSR is a central one, but its empirical investigation is complicated due to two endogenous associations. First, stakeholder preference and managerial motives for CSR can be simultaneously determined by country-level factors such as income, education, employment, and culture (McWilliams and Siegel, 2001; Arora and Gangopadhyay, 1995; Matten and Moon, 2008). Second, financial profitability and CSR are likely to be endogenous (Margolis et al., 2009). One of the best opportunities to investigate managerial motives for CSR is to examine firms' response to exogenous changes in stakeholder preference for CSR following a shock in their export markets. There is evidence that, international trade can affect firm behavior by adding new groups of customers.

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<sup>1</sup> The benefits of these philanthropic investments include building brand loyalty (Kitzmueller and Shimshak, 2012), attracting and retaining highly skilled employees (Turban and Greening, 1997), charging higher rent for buildings (Eichholtz et al., 2010), and insurance from regulatory monitoring (Baron, 2001; Maxwell et al., 2000).

In this paper, we examine Indian firms' CSR expenses following exogenous shocks to competition in the export markets, which differ in their level of stakeholder preference for CSR. We hypothesize that if CSR is motivated by stakeholder preference, positive demand shocks from export markets with a higher stakeholder preference for corporate social practices will increase affected firms' CSR expenses. In contrast, export shocks from countries with a lower stakeholder preference for corporate social practices should not affect the CSR expenses. The preceding argument holds only if CSR expenses are undertaken as a strategic decision. If agency motives drive CSR expenses, a positive demand shock will increase managerial discretion and CSR expenses irrespective of the shock's origin (Blanchard et al., 1994). We use product-level information on antidumping (AD) initiations against Chinese exporters to examine how competing Indian exporters of the same product adjust their CSR expenses.

AD is a commonly used countervailing measure, frequently adopted by developed countries and emerging economies alike (Vandenbussche and Zanardi, 2010)<sup>2</sup>. AD petitions are filed by domestic producers, not by other exporters. Therefore, when AD is initiated against one exporter, it causes a positive exogenous shock to other exporters of the same product and market. In the last two decades, the largest number of AD initiations have been made against Chinese exports. It, in some instances, has benefitted the export-market access and profitability of Indian firms (Bown and Porto, 2010). For example, before 2004, Chinese exports of polyethylene terephthalate products (PET) were 150% that of India. Following an AD petition filed against Chinese PET products by US manufacturers in 2004, Indian exports of PET products to the US increased by almost three times in 2005 and overtook those from China; by 2008, Indian exports were twice China's. This example illustrates how AD can adversely (positively) affect exports for affected (competing) countries. The theoretical underpinning of our quasi-natural experiment is the trade deviation in favour of Indian firms by an exogenous decrease in the competitiveness of Chinese products in the export market (Bown and Porto, 2010). These export shocks

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<sup>2</sup> AD is a form of trade barrier whereby an importing country (e.g., the US) can unilaterally impose import duties on products exported by firms from another country (e.g., China). AD duties are based on the evidence that these exporting firms charge less for their exports than for their domestic sales, and that dumping practices are 'injuring' the interests of the importing countries' domestic producers.

can induce Indian exporters to increase their CSR expenses and gain a higher share of the export market if foreign stakeholders have a strong CSR preference.

We use the information provided by Prowess on the products of the 500 largest Indian firms listed on the Bombay Stock Exchange from 2006 to 2013. We obtain aggregate data on the destination of Indian firms' exports from the Observatory of Economic Complexity<sup>3</sup>. For the period 2006- 2013, the largest importers for Indian products are Argentina, Brazil, the E.U., Japan, Mexico, Saudi Arabia, South Africa, U.A.E., and the U.S.<sup>4</sup>. If an AD investigation is initiated against a Chinese product by any of these export markets, Indian producers of the same product are included in the treatment group. The control group consists of firms in the same industry that do not produce any products for which a Chinese competitor faces an AD investigation.

In a staggered difference-in-differences (DiD) setup, we compare the total exports of the treatment and control groups for the periods before and after the initiation of AD measures on a competing Chinese product<sup>5</sup>. Compared to Indian firms producing goods not affected by AD, we find that the Indian firms' export of the products affected by AD initiation against competing Chinese products increase. On average, exports of the treatment group increase by 5.5% after AD is initiated against Chinese products by the US and the EU. The growth is 3.8% following similar shocks from other major export markets. These results show that AD initiations on Chinese competitors are significant, positive shocks to Indian exporters.

To test our central hypothesis that the CSR response to the export shock will vary with the level of stakeholder preference for corporate philanthropy, we group the main export destinations of Indian firms by stakeholder preference for CSR. Stakeholder preference for CSR varies across countries due to heterogeneities in income and education and consumers' willingness to pay for ethical attributes (Besley and Ghatak, 2007; Arora and Gangopadhyay, 1995). We use the 2010 World Giving Index to

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<sup>3</sup> The Observatory of Economic Complexity (OEC) is a data platform focused on the geography and dynamics of economic activities.

<sup>4</sup> China is not in this list as the source of the trade shock, by definition, cannot originate in China.

<sup>5</sup> AD event dates are staggered for individual firms (products) in the treatment group. The cohorts of treated and control firms for each event is stacked in our empirical design.

classify the stakeholder preference for corporate philanthropy<sup>6</sup>. The ranking on the index has a strong positive correlation with the average income and education of the country's general population. We classify countries with a higher rank, such as the US (rank 5) and the EU (the U.K. ranked 8th, Netherlands 7th, and Germany 18th), as countries with a high stakeholder preference (*High Preference*) for CSR. India's other largest export destinations with lower ranks in the index (UAE ranked 50th, Mexico 67th, Brazil and South Africa 76th) are classified as countries with a low preference for CSR (*Low Preference*). Using this classification, we find that Indian firms affected by AD against competing Chinese products from *High Preference* countries increase CSR expenses in subsequent years. However, there is no statistically significant effect on CSR for Indian firms affected by AD initiations on Chinese products from *Low Preference* countries. The impact on Indian firms' CSR expenses of AD measures imposed on Chinese products are economically meaningful; affected Indian firms increased CSR expenses by 20% in the period following the AD investigation of competing Chinese products. So far, we do not precisely identify if an Indian firm exports the product to the country in which the competing Chinese product is under AD investigation. Data on product-level export destinations are not available for most firms, Indian or otherwise.<sup>7</sup> We obtain information on the product-level export to different countries for a subsample of 161 Indian firms and find that results remain similar to those using the full sample.

In this subsample, we can precisely measure the effect of AD on CSR expenses of treated firms already exporting to the AD initiating country before the shock. We estimate our baseline DiD models with this subsample of firms. Suppose an AD investigation is initiated against a Chinese product from any of India's large export markets. In that case, the Indian exporters of the same product to that specific country are included in the treatment group. In this subsample, we find similar effects of AD shocks -

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<sup>6</sup> The World Giving Index was first published in 2010. Looking at subsequent updates of the index up until 2018, we see a strong time-persistence of the rank. Therefore, the choice of the year is not likely to confound our results.

<sup>7</sup> Indian firms are required, vide section 3(i),(ii), and 4(D) of Part II of section IV of the Companies Act, to disclose annual sales and exports of each product produced or traded. However, there are no legal requirements to disclose product-level exports destinations.

Indian firms increase CSR expenses following AD shocks from *High Preference* countries but do not increase CSR expenses following similar shocks from *Low Preference* countries.

Furthermore, the effect of AD on CSR can depend on the AD-impacted product's importance to the Indian firm. We use the information on the volume of exports for all products to classify firms most impacted by AD imposed on Chinese competitors. If the competing Chinese product under AD investigation forms a significant proportion (20%) of the Indian firm's sales revenue, it has High Exposure to the shock. We find that the CSR response to AD shocks is stronger for firms with High Exposure. Additionally, we see a stronger CSR response for AD shocks on final goods compared to intermediate goods. The results show that CSR's effect is stronger for AD shocks on products more important to the firm and more visible to the stakeholders, consistent with the hypothesis that CSR is motivated by stakeholder preferences.

One concern is that the observed effect on CSR is driven not by the stakeholder preference but by the relative economic importance of the *High Preference* countries to Indian firms<sup>8</sup>. We address this concern by examining other corporate discretionary expenditures, such as capital expenditure (CapEx) and research and development expenses (R&D) following AD initiations from *High Preference* and *Low Preference* countries. CapEx is likely to be associated with positive export shocks because Indian firms will need to increase production capacity to meet the increased export demand, and R&D is expected to be affected due to innovation and efficiency needs (Autor et al., 2017; Newman et al. 2018). We find that Indian firms increase Capex and R&D expenses in response to AD measures on Chinese products from both High- and Low Preference countries. We also compare the effects on CSR of AD initiations from the EU (HP country) and Brazil (LP country), which are very similar in terms of market size for Indian exporters. In line with our baseline estimates, Indian firms increase CSR expenses when the AD shocks originate from the EU, but not when they originate from Brazil. Capex and R&D expenses increase when AD is imposed from either of these markets.

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<sup>8</sup> The share of Indian producers' aggregate exports to the US and the EU, and other main markets are reasonably balanced; Brazil is just as large an export destination for India as the EU, while the UAE is the largest. A detailed overview of the geographic spread of Indian exports is provided later in Table 2.

Finally, we examine the economic consequences of increasing CSR expenses after AD shocks by focusing on the market-to-book valuations of the companies. Firms that increase CSR expenses in response to AD shocks from *High Preference* countries gain value compared to firms that do not increase CSR expenses in similar situations. In contrast, firms that increase CSR expenses when faced with AD shocks from *Low Preference* countries lose value compared to firms that do not increase CSR expenses in similar situations. These results suggest that investors are willing to pay more (compared to its net assets) for firms that increase CSR following AD measures from *High Preference* countries.

An advantage of our approach is that, even if alternative explanations are plausible for individual results, it is difficult to offer one alternative explanation consistent with all of our results. For example, it can be argued that better export prospects (or the anticipation thereof) can induce managers to spend more on CSR projects, even if it reduces profitability (von Bescwitz, 2018; Blanchard et al., 1994). Such an explanation will be consistent with the agency motives for CSR. However, it does not explain why CSR expenses do not increase when AD measures on Chinese products are initiated from Low Preference countries. Additionally, concerns about the relatively more important role the US and the EU play as export markets for Indian products do not explain the increase in Indian firms' Capex and R&D when AD shocks originate from Low Preference countries. One additional result is useful in ruling out the agency explanation. A sizeable proportion of large Indian companies are a part of family-owned and controlled business groups. Managers of these business group firms, often from the controlling family, are highly entrenched in normal circumstances and likely expropriate minority shareholders and spend more on CSR projects favored by themselves (Bertrand et al., 2002). If increased entrenchment drove higher CSR expenses after AD initiations, we would expect the business group affiliates (already highly entrenched) to show weaker or no response to the trade shocks compared to that of unaffiliated firms. We, however, find no statistically significant difference in the CSR response to AD shocks between these two groups of firms.

Our paper makes two main contributions to the literature. First, we provide evidence that firms increase CSR expenses in response to stakeholder preference in export destinations. We use both product-level and aggregate export data to show the causal effect of international trade on CSR activities of emerging economy firms. In contrast, Newman et al. (2018), who use aggregate export data, show that

Vietnamese exporters to the US engage in more CSR compared to exporters to China. They find a statistically weak effect on community-related CSR only for exporters to the U.S. and no effect for exporters to the E.U. This association between CSR and exports can be confounded if firms in certain sectors are more socially responsible and export oriented. In contrast, we use exogenous AD shocks to show that CSR expenses of Indian exporters depend on the stakeholder preference in the export market. Our results are also not confounded by the relative economic importance of the export destination, the type of products exported (final vs intermediate products), and the form of CSR activities (charitable activities, community development, or environmental expenses).

Second, our results contribute to the literature on the firms' motivation to engage in CSR. The evidence on the effect of corporate philanthropy on shareholders' value is inconclusive (Masulis and Reza, 2015; Edmans, 2011; Servaes and Tamayo; 2013; Flammer, 2015), and Krüger (2015) show that the economic effect depends on shareholders' perception of the motives of CSR. Shareholders react positively to CSR news from firms having lower agency concerns. Our results add to this strand by showing that the CSR expenses reflect strategic investment concerns. The value gain from increasing CSR expenses following an AD shock depends on the stakeholder preference at the export market.

## **2 Conceptual Framework**

### **2.1 Variation in stakeholder's preference for CSR**

It has been a long-standing debate as to why companies voluntarily incur CSR expenses. Two broad motives are commonly discussed. First, although it reduces short-term profits, CSR is part of the long-term, profit-maximizing strategy (McWilliams and Siegel, 2001; Baron, 2001; Besley and Ghatak, 2007). The basic premise of this argument is that firms interact with many stakeholders (consumers, employees, regulators, etc.), who may be endowed with social, environmental or ethical preferences. Profit-maximizing firms cannot ignore their stakeholder preference for corporate philanthropy, mainly if they directly affect the demand for the product, the supply of labour, and interactions with regulators (Benabou and Tirole, 2010). Second, CSR reflects agency problems arising from managerial entrenchment (Williamson, 1964; Jensen and Meckling, 1976; Navarro, 1988). Managers' can channel corporate



philanthropic expenses to social causes that generate utility for them, even if detrimental to shareholders' wealth (Baron, 2008).

The financial implications of CSR depend on which of the two motives, profit maximization or agency, dominate. In the first case, CSR initiatives will be undertaken if the present value of the projects' future cash flows is positive. On the other hand, if CSR reflects agency problems, it will reduce shareholders' wealth; money that could be productively employed or redistributed will be invested in pet projects of managers (Masulis and Reza, 2015).

One way of identifying the managerial motives for CSR is to examine if firms change their CSR expenses when the stakeholder preference for CSR changes. The strategic motive of CSR predicts that managers will adjust CSR expenses according to the levels of stakeholder preference for corporate philanthropy. Firms selling their product in a market where stakeholders are more responsive to CSR should spend more on corporate giving (Bagnoli and Watts, 2003). In these markets, consumers' willingness to pay for ethical products will increase the net benefit of CSR (Elfenbein and McManus, 2010; Besley and Ghatak, 2007). However, the problem with an empirical investigation of the stakeholder CSR preference is that such preferences within a country are persistent in the short run and coevolve with managerial preferences.

Therefore, we turn to international trade, which offers an attractive setting to examine if CSR expenses react to heterogeneities in stakeholder preference for corporate philanthropy in overseas markets. There is evidence that international trade affects different forms of firms expenses through expanding the range of stakeholders. Herzfeld et al. (2011) find that firms from developing countries that trade with European countries are more likely to adopt European food quality standards. In the context of CSR expenses, the variation in stakeholder preference across countries is associated with the average income and education levels (Arora and Gangopadhyay, 1995). When a firm enters export markets, it is exposed to a new set of stakeholders with different preferences for corporate philanthropy. However, merely comparing CSR spending of exporting and non-exporting firms is not sufficient to identify the motives for CSR, as the choice of export-destination and CSR initiatives can be co-determined by unobserved factors. For causal predictions, there need to be sufficient variations in stakeholder preference in the different export markets in which a firm sells its products.

India is a good testing ground for this line of enquiry because Indian firms face asymmetric preferences in domestic and export markets. According to the data available from UN Comtrade, the main destinations of Indian exports are the U.S., U.A.E., China, the E.U., Brazil, Mexico, Argentina, South Africa, Saudi Arabia, and Japan. If the stakeholder preference for CSR varies with income and level of education, these export destinations would have a wide dispersion of stakeholder preference, while the domestic preference for CSR remains low. For example, India consistently ranks below 100 in the World Giving Index, whereas the U.S. and the E.U. countries rank in the top 20s.

Against this backdrop, we examine the CSR expenses when export opportunities of Indian firms increase in two sets of countries - one with high and the other with low stakeholder preference for CSR. In our data, CSR expenses consist of charitable donations, investments in social infrastructure, and expenses in environmental causes. Indian firms can increase charitable donations and social expenses to highlight their commitment to the broader stakeholders. Newman et al. (2018) show that Vietnamese firms increase community-related social activities when exporting to the US. Indian firms can also invest in green technology to meet the more stringent environmental regulations in the US and the EU. However, such expenses are often capitalized and not counted as CSR.

A crucial requirement must be met for export shocks to affect CSR expenses: stakeholders in high CSR preference export destinations must be aware of Indian firms' CSR. Market research by Ipsos-Mori shows that 70% of European consumers consider a firm's commitment to CSR as an important determinant of purchasing decisions<sup>9</sup>. In this scenario of high consumer preference for CSR in the E.U., the exporters to E.U. will likely increase CSR expenses. For exporters of intermediate products, there will be demand from the U.S. and the E.U. firms concerned about the ethical and socially responsible business practices along their supply chains (Manasakis et al., 2018). For example, BMW has a section on its website<sup>10</sup> devoted to sustainable and ethical Supply Chain Management. CSR along the supply chain is also mentioned in their annual report<sup>11</sup>. Direct evidence on how consumers in the developed countries

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<sup>9</sup> See [www.mori.com/polls/2003/mori-csr.shtml](http://www.mori.com/polls/2003/mori-csr.shtml).

<sup>10</sup> Please see: <https://www.bmwgroup.com/en/responsibility/supply-chain-management.html>

<sup>11</sup> See van Opijnen and Oldenziel (2011) for a discussion on the social responsibility of EU firms along the supply chain.

perceive foreign companies' CSR signals is scarce<sup>12</sup>. Anecdotal evidence supports the view that Indian exporters engage in CSR activities to cater to the preferences of foreign stakeholders. A case in point is the CSR initiatives of Tetley (owned by the Tata group), which is the fourth largest tea brand in the UK (Nielsen, 2019). Tetley is one of the founding members of the Ethical Tea Partnership, committed to improving the conditions of tea farmers around the world. In October 2014, UNICEF announced that they worked with tea companies and the Ethical Tea Partnership (ETP) to tackle child exploitation in tea communities. Another example is that of Infosys, which is an Indian multinational software company. In 2014, it set up the Infosys Foundation (in the US) with an outlay of USD 5 Million per annum for making computer science and STEM education widely accessible across underprivileged American communities.

## 2.2 AD as an exogenous shock on exports

An approach to examining the causal effect of stakeholder preference on CSR is investigating the change in CSR initiatives following an export shock affecting some firms and not others. One such trade barrier is AD which is usually targeted at narrowly defined products. This trade barrier can affect one product exported by a firm  $i$  to country 1, while the same product exported by firm  $j$  to country  $I$  can remain unaffected. It is also possible that AD targets all exporters of a product from a specific country. There is evidence of widespread adoption of AD across the world. For example, Moore and Zanardi (2009) report that countries using AD doubled between 1980 and 2003. The US and the EU account for about half of the global anti-dumping petitions filed, but Zanardi (2006) shows that emerging countries like Brazil, Mexico, and Argentina increasingly use AD as a trade barrier.

An AD initiation can lead to the imposition of a primary AD measure. Once dumping and damage to the domestic industry are established, a final AD measure is imposed on the goods under investigation. Bown et al. (2020) show that the proportion of AD investigations that lead to a definitive AD duty is

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<sup>12</sup> There is no commonly accepted definition of CSR in the literature. Most studies (for example, Newman et al. (2018)) use a score-based measure of corporate social responsibility.

the highest for the U.S. (89%) but also high for Mexico (78%) and Brazil (74%). In comparison, the proportion of AD initiations from the E.U. that leads to a final duty is only 51%. The mean duration of the duties is also the highest for the U.S. (12 years), followed by Mexico (9 years), Brazil (8 years), and the E.U. (7.5 years).

Importing countries, and not export market competitors, initiate AD to make the targeted foreign firms less competitive than domestic producers. For example, Bièvre and Eckhardt (2011) show that influential domestic producer groups persistently influence AD policies of the EU. Since only domestic producers can lobby to impose AD on an exporter, these shocks are exogenous for all other exporters of the same products to that country<sup>13</sup>. Vandebussche and Zanardi (2010) show that anti-dumping measures significantly depress imports from the targeted country. It also increases the relative competitiveness of the domestic producers and improves the market access for exporters of the same product from other countries. A trade barrier imposed against Chinese manufacturers, for instance, would improve the export-market prospects of Indian firms through trade deviation (Vandebussche et al. 1999; Brenton, 2001). Indeed, Bown and Porto (2010) show that Indian steel manufacturers benefited from higher exports and profits when the US and the EU imposed safeguard trade barriers on Chinese steel imports. The trade effects are substantial even if AD initiations do not lead to a final AD duty (Prusa, 1992).

A large majority of all AD initiations in the last decades has been against Chinese manufacturers, and a large proportion of these AD cases has led to punitive measures (Zanardi, 2006). Between 1995-2001, large proportions of all AD measures in force from the U.S. (15%), the E.U. (21%), Argentina (26.8%), Mexico (36.6%), and South Africa (20.7%) were against China (Messerlin, 2004).

In summary, AD on Chinese manufacturers from one export destination is an exogenous export shock to Indian exporters of the same products to that export destination. Such shocks can lead to higher exports and profits for Indian firms. Since AD shocks on Chinese products can originate from countries with either a high or low CSR preference, it is an excellent setting to examine whether the response of Indian firms to AD shocks varies by stakeholder preference in the export destination.

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<sup>13</sup> For a detailed overview of the process of AD, please see Bown et al., 2020).

## 2.3 AD initiations and the motives for CSR

How do AD initiations relate to exporters' CSR expenses? AD investigations are triggered by very low export market prices. Once AD is initiated against one exporter, it is likely to soften the price competition between other exporters, who can use non-price competition to differentiate themselves (Fernandez-Kranz and Sanalo, 2010). Emerging market firms often use CSR to differentiate themselves in the export markets. Such a product differentiation strategy is likely to be effective if the foreign stakeholders prefer corporate philanthropy (Newman et al., 2018). When AD is initiated against one exporter of a product from the US or the EU (countries with a high preference for corporate philanthropy), other exporters of the product are likely to increase CSR activities. The adaptation to social considerations of the stakeholders is expected to be a source of competitive advantage (Kitzmueller and Shimshack, 2012)<sup>14</sup>. If that is the case, CSR will resemble a strategic investment decision<sup>15</sup>.

On the other hand, if foreign stakeholders have a low preference for corporate philanthropy, an increase in CSR activities are unlikely to generate any strategic advantages. However, higher profitability due to better access to the export market increases the likelihood of higher managerial discretionary spending on CSR, irrespective of the foreign stakeholder preference for corporate philanthropy. In this case, the choice of CSR activities will be driven by managerial, not stakeholder, preference and likely to reflect agency motives.

The association of AD with CSR activities is likely to depend on several factors. First, the economic importance of the export market is expected to play a role. If an AD shock originates from an

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<sup>14</sup> An alternative view is that AD reduces competition in the export market, and remaining firms can spend less on CSR as their potential customers have fewer alternatives. However, Bagnoli and Watts (2003) argue that in the presence of consumers willing to pay a premium for CSR, firms invest in CSR at levels that vary inversely with the degree of competition. Ultimately, what happens when a market leader faces a negative shock is an empirical question. For example, Banerjee et al. (2020) show that when a firm's power is weakened in the product market, competing firms engage in predatory pricing strategies to capture a higher share of the market. In our case, AD weakens the incentive to engage in price competition, and non-price competition (CSR expenses) between remaining exporters (and the domestic producers) can increase.

<sup>15</sup> Several alternative explanations, for example mimicking the strategies of developed country firms by emerging market firms (Potoski and Prakash, 2004), and "escape-competition" motives (Aghion and Griffith, 2008; Aghion et al. 2005) will all have similar empirical predictions. These mechanisms are also consistent with the strategic motive for CSR.

export market where the market potential for the firm is limited, it can confound the effect of AD on CSR. For example, the lack of impact on CSR when AD is initiated against competing exporters from countries with low stakeholder preference for CSR will have inconclusive implications if the firm exports very little to those countries. One way to mitigate this concern is to focus on other corporate expenditures affected by AD shocks, such as CapEx and R&D (Bown and Porto, 2010; Newman et al., 2018). AD shocks from smaller export markets are unlikely to lead to an increase in these expenses.

Next, the effect of AD on CSR is likely to be confounded by the importance of the competing exporter's product, which is under AD investigation and forms a large proportion of a firm's product portfolio. If the export opportunity is related to a product that forms a small fraction of the products produced by the firm, the reaction of CSR to AD initiations is likely to be small, even if the foreign stakeholder preference for corporate philanthropy is high. Also, products sold directly to the end consumer may have a larger impact on the CSR activities than intermediate products due to higher visibility.

Finally, while examining the effect of AD on CSR, it is essential to account for the differences in the institutional context of AD from different countries. Countries have some flexibility in administering AD, but the process must comply with the WTO's Anti-Dumping Agreement of 1995. For example, the US and Canada determine evidence of dumping and injury separately, while the EU and most other countries consider dumping and injury in a single track. Countries also differ on how frequently AD reviews are reviewed and how often they are extended. Bown et al. (2020) provide a detailed discussion on the institutional variations in AD administration.

### **3 Data and Key Variables**

#### **3.1 Sample**

A significant challenge to research on corporate strategy in emerging economies is the availability of reliable and consistent data. India has a mature capital market with internationally comparable financial information and industry classifications. Moreover, market and non-market institutions in India are relatively stable, allowing for comparable results with extant CSR and corporate governance literature, based predominantly on evidence from US and UK firms (Sarkar and Sarkar, 2000). India's financial

system resembles many emerging markets (Gopalan and Gormley, 2013), making our analysis representative of the emerging economies. The primary source of our data is Prowess, maintained by the Centre for Monitoring the Indian Economy (CMIE). Prowess sources the data from the financial filings of Indian firms.

In most cases, Prowess does not report any secondary variables constructed by them. Financial statements of Indian firms are filed with the Securities and Exchange Board of India (SEBI). The most commonly used accounting standard in India is the Indian GAAP which mirrors the International GAAP in all critical attributes. Additionally, Indian Accounting Standards (IAS) are based on, and substantially harmonized with, the International Financial Reporting Standards (Price Waterhouse Coopers, 2006). Therefore, the financial data used in this paper is comparable to generally accepted global standards.

The sample period is from 2006 to 2013. Although data on Indian firms are available before that, the coverage and consistency of the data are superior from 2006 onward. For example, Siegel and Choudhury (2012) note that historical Prowess data had survivor bias, corrected in the later years. Additionally, the Indian Companies Act of 2013 mandates that firms spend a minimum of 2% of the average net profit made during the three immediately preceding financial years on CSR. By limiting our sample period up to 2013, we minimize the potential confounding effects of the enforcement of this act from April 1, 2014<sup>16</sup>.

Our sample consists of the BSE 500 firms, representing over 95% of the total market capitalization. We include firms that are listed at least once in the BSE 500 index within the sample period. We follow these firms for years, even if they drop out of the index. We exclude from the sample 38 state-owned firms as they lend themselves poorly to comparison in our context<sup>17</sup>.

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<sup>16</sup> It is possible that Indian firms anticipated this new regulation and, because of that, decided to increase their CSR spending before 2013. However, as the AD initiatives we use in our empirical analysis are spread over the sample period (2006-2013), this should not qualitatively affect our results. Nevertheless, we check the robustness of our results by limiting our sample up until 2012.

<sup>17</sup> For example, CEOs or Managing Directors (MD) of state-owned firms are fixed-term bureaucratic appointments, and the pay is contingent on tenure and rank. These firms are often of strategic importance to the government and are not as strongly motivated by profit maximization as other listed firms. Notwithstanding these differences, we check the robustness of our results, including the state-owned firms in our sample. The results are discussed in the robustness section.

We also exclude firm-year observations with missing data on ownership and firm performance measures. Our final sample is comprised of 677 unique firms with 3,762 firm-year observations. Table 1A presents the summary statistics on the firm and board characteristics and philanthropic expenses. All monetary values are winsorized at 1% levels and expressed in USD as of the year 2000. Description of key variables is presented in appendix A.

[Insert Tables 1A and 1B around here]

Next, we have information on products exported by Indian firms by the destinations for a subsample of Indian firms. This subset of 161 firms reports details about the products (and amounts) exported to different export markets. It is not a random subsample: large, more export-driven firms are more likely to report this information (see Table 1B).<sup>18</sup>

### **3.2 Corporate Social Responsibility Measures**

Indian firms report CSR expenses to the Securities and Exchange Board of India as part of their audited financial filings. Prowess collects this information from the quarterly and annual financial reports and reports them at the firm level. We measure CSR by aggregating the annual charitable donations, expenses in environmental causes and pollution control, and investments in social infrastructure (e.g., building and maintaining public services such as parks, primary schools, etc.). Our main dependent variable is the natural log of the linear addition of charitable donations, environmental expenses, and expenditure on social and community infrastructure, plus one [ $\ln(1+CSR)$ ]. In the robustness section, we discuss the results using each of the three components of CSR separately as the dependent variable.

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<sup>18</sup> We present the descriptive statistics for the subsample of firms with country-wise export data at the product level in an online appendix.



The median CSR spending is USD 19,054, which is about 3% of net profits<sup>19</sup>. While the nominal values of our sample firms' CSR may seem small relative to studies based on US firms, it is important to view it with respect to the size of the Indian firms and their other corporate investments. Indian firms' mean CSR expenses are of the same order of magnitude as the mean R&D expenses (USD 18,271) and approximately 50% of mean capital expenditure (USD 44,108). In these terms, CSR expenses of Indian firms are significant financial outlays. Donations and community expenses are the most common forms of CSR expenses, and environmental expenses form a small fraction. The mean donations, community expenses and environmental expenses are USD 15,118, USD 8,288 and USD 1,340, respectively<sup>20</sup>.

### **3.3 Anti-Dumping on Chinese products and the Treatment Groups**

The data on AD is obtained from the World Bank's Global Anti-Dumping database (GAD) (Bown, 2016), which provides information on all AD petitions initiated by each country. We use AD initiations as a dummy and not the imposed measures as the different types of AD measures are not directly comparable<sup>21</sup>. We employ two matching procedures to link AD on Chinese products to Indian companies. First, we use aggregate export data for our baseline results. We collect information on AD initiations against Chinese products by India's large export destinations for 2003-2013<sup>22</sup>.

Next, we link the Chinese products under AD investigations with the list of products reported by the Indian firms. All companies registered in India are required to annually disclose quantitative information on the capacity, production, and stocks of all products manufactured or traded by them<sup>23</sup>.

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<sup>19</sup> CSR is zero in 38% of the firm-year observations.

<sup>20</sup> A large proportion of environmental expenses, for example, investments in green technology or low-emission production facilities, are capitalized. Capitalization allows the firms to depreciate the assets related to environmental sustainability. The environmental expenses reported here is usually smaller expenses related to sponsoring garbage disposal, effluent disposal, environment development, etc.

<sup>21</sup> For example, AD penalties can be in the form of ad-valorem tax, minimum import price, quotas, etc. The economic effects of these penalties are not straightforward to compare.

<sup>22</sup> We collect information on AD petitions from 2003, even though our sample period starts at 2006. This is done to identify treated firms at the beginning of the sample period.

<sup>23</sup> Indian firms affected by AD initiations on Chinese competitors are in mostly in the following industry-types: manufacturing of metal and automobile parts (38%), agricultural products (23%) and consumer goods (18%).

This disclosure is required under sections 3(i),(ii) and 4(D) of Part II of section IV of the Companies Act. However, there are no statutory requirements to report product-level export data by destination. If at least one of the products listed by an Indian firm exactly matches the product description reported in the GAD, we include that firm in the treatment group. For this matching, we only know which firms export the product, but we cannot precisely identify whether the specific product is exported to the country where the Chinese product is facing AD investigation. While this matching is imprecise, it gives us some useful insights. Consider the following case where a firm  $F$  produces a product under AD investigation by country  $i$ , but  $F$  only exports the product to country  $j$ .  $F$  may also start exporting to country  $i$ , given that it already produces the same product. Therefore, this classification of the treatment group will capture the effect of export shock on firms exporting the product to the country where the AD is initiated, as well as firms that may enter the more favourable export market (Newman et al., 2018).

We use the 2010 World Giving Index to classify stakeholder preference for CSR in the export market. The ranking is based on Gallup's WorldView World Poll, which surveys representative samples of the population of 153 countries on charitable attributes such as donations, volunteering and helping strangers. The index accounts for a country's GDP and a self-reported measure of wellbeing.

We create two treatment groups depending on the stakeholder preference for CSR in the export market. A country with a higher rank in the 2010 World Giving Index is classified as having a high stakeholder preference for CSR. For example, the U.K., with a GDP per capita of USD 40,798 in 2006 and 8<sup>th</sup> rank in the 2010 World Giving Index is classified as a *High - Preference* country. In comparison, the U.A.E. with a GDP per capita of USD 53,335 in 2006 but a 50<sup>th</sup> rank in the 2010 World Giving Index is classified as a *Low - Preference* country.

*Treated (HP)* is a treatment group that includes Indian firms affected by AD initiation on competing Chinese products from the US and the EU (countries with a high stakeholder preference for CSR). The other treatment group, *Treated (LP)*, includes Indian firms affected by AD initiation on competing Chinese products from the other major export destinations, like the UAE, Saudi Arabia, Brazil, South Africa, Mexico and Argentina (countries with a low stakeholder preference for CSR). Within the sample period, we have 73 AD initiations from the US and the EU on Chinese products that affect Indian

exporters of the same product to the US and the EU. It gives us 722 firm-year observations of Indian firms affected by AD from *High-Preference* countries. In the same period, we have 41 AD investigations by *Low -Preference* countries on Chinese products. These give us 281 firm-year observations on affected Indian firms<sup>24</sup>.

We follow a similar matching protocol for the subsample of Indian firms for which we have country-wise export data at the product level. Indian firms are included in the treatment groups if they export the same product to the country where a competing Chinese product is under AD investigation. The product-level data is available for 161 unique firms: 52 firms exporting to only *High - Preference* countries and 60 firms exporting to only *Low - Preference* countries. Within the sample period, we have 33 events of AD from *High - Preference* countries and 22 events of AD from *Low Preference* countries that affect this subsample of Indian firms. Detailed matching protocols for both the baseline and the subsample are provided in appendix B.

The response to AD will likely depend on the relative importance of the product to a company. We calculate the proportion of total sales turnover contributed by the product affected by AD investigation. We classify firms to have *High Exposure* to AD shocks if the product affected by AD measures on the Chinese competitor forms at least 20% of the total sales turnover for the company for that year. Using this classification, 58 of the 161 (36%) firms in the subsample have *High Exposure* to AD shocks<sup>25</sup>.

A more general concern is that aggregate Indian exports to the *Low Preference* countries are trivial compared to the exports to *High Preference* countries. In the sample period, 18% of total Indian exports went to *High Preference* countries, whereas 23% went to *Low Preference* countries. Figure 1 presents a map of India's export destinations and the stakeholder preference for CSR in those regions. In table 2, we present the volume of India's exports and the number of AD initiations against Chinese products from those countries.

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<sup>24</sup> No firms in our sample are treated by an AD shock from the same source more than once. This is likely due to the short time-series of our sample. There are 12 instances of Chinese products being simultaneously subjected to AD investigations by the U.S./E.U. and India's other major export destinations. We drop these observations to isolate the clean effects of the shocks from High- and Low Preference countries.

<sup>25</sup> The number of firms classified as *High Exposure* increases to 51 and 62 if the thresholds are 15% and 30% of total sales turnover, respectively.

[Table 2 here]

### 3.4 Ownership measures

We use a binary variable, *Business Group*, to account for differences in ownership structures. We expect Business Group affiliates to spend more on CSR activities than stand-alone firms due either to greater access to the capital market (investment motive) or a higher level of entrenchment (agency motive) (Khanna and Palepu, 2000; Bertrand et al., 2002; Siegel and Choudhury, 2012). The *Business Group* dummy equals 1 if the firm is an affiliate of a larger corporate entity.

Prowess provides information to accurately identify the shareholders who control a firm, either directly through their own shareholding or through crossholdings. We also create a variable, %Shareholding-Promoters, which combines the direct shareholding by promoters and the proportion of shares held by persons acting in concert with the controlling shareholders. It is a measure of promoters' direct and indirect control of a firm. Of the 677 firms in our sample, 267 (39.44%) are group affiliates, and 410 (60.56%) are stand-alone firms with dispersed shareholding.

### 3.5 Other control variables

We use the relevant accounting information from annual financial statements reported in Prowess, cross-checked with information collected from Datastream using ISINs and a string-matching algorithm for firms' names. Returns on assets (ROA) measure a firm's profitability, and we control for firm size using the natural log of sales<sup>26</sup>.

Using Prowess, we obtain information on board size and the number of independent directors. Institutional ownership, which is likely to be positively associated with social responsibility, is also controlled for (Shleifer and Vishny, 1997; Siegel and Vitaliano, 2007). For this, we use the information on

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<sup>26</sup> We also check the robustness of our estimates with alternative measures of firm size (total assets) and by including another measure of firm performance (Tobin's Q approximated by Market to Book Value, MTBV).

the percentage of equity shares held by financial institutions, such as mutual funds, banks, insurance companies, and pension funds (%Shareholding-Institution).

Finally, we control for the main industry classification of the firm using the information provided by Prowess. The largest proportion of the sample firms are in the Chemicals and Pharmaceutical industries (18%), consumer goods and textiles (16%), automobiles and automobile parts (11%), steel and other metals (10%), and agricultural and agro-based products (7%).

## **4 Empirical Strategy**

CSR expenses and exports can be potentially endogenous: for example, large firms can have simultaneously higher exports and higher CSR expenses. We use AD shocks to estimate a baseline DiD model to compare the CSR expenses of Indian firms affected by AD measures placed on competing for Chinese products compared to a control group of unaffected firms before and after the AD shocks.

### **4.1 AD as an exogenous shock on exports**

For our empirical design, AD on Chinese products from one market must adversely affect Chinese exports to that market. Vandenbussche and Zanardi (2010) also show that AD measures significantly depress imports from the targeted country. Further, AD imposed against Chinese exporters should increase the market access of firms from other exporting countries. This trade deviation channel is the underlying framework of our empirical design. Bown and Porto (2010) show that Indian steel manufacturers benefited in the forms of higher exports and profits when the US and the EU imposed safeguard trade barriers on Chinese steel imports.

Further, AD needs to be among the preferred trade barrier tools for importing countries. The US and the EU account for about half of the global AD petitions filed (Moore and Zanardi, 2009). Zanardi

(2006) shows that developing countries like Mexico, Brazil, and Argentina increasingly use anti-dumping as a trade barrier. Therefore, AD shocks are similarly likely to originate from both High- and Low Preference countries.

To highlight this point, we use two examples from our data before systematically testing the significance of AD shocks to the firms in the treatment group. First, PET-products exported by Chinese firms were brought under AD investigations in 2004 by the US. As shown in figure 2A, Chinese exports of PET-products were double that of Indian exports in the pre-2004 period. After 2004, Indian exports of PET to the US overtook China's and was twice that of Chinese exports by 2008<sup>27</sup>. Figure 2B shows a similar gain in Indian exports of steel-lined pipes to Brazil, relative to the Chinese exports, in the post-AD period. These examples highlight the trade deviation in favour of Indian exporters following AD shocks on Chinese products.

Table 3A provides preliminary evidence on the effect of AD initiations against Chinese products on Indian exports. We provide the univariate differences for AD shocks on Chinese products from the US and the EU in panel A. In panel B, we demonstrate the effect of AD shocks originating from India's other major export destinations. Indian firms' exports are statistically significantly higher in the post-AD period compared to the pre-AD period, irrespective of the shock's origin. In table 3B, we show the corresponding univariate differences in CSR expenses before and after AD shocks from countries with high and low stakeholder preferences for CSR. In contrast to table 3A, we see that CSR expenses increase for the treated group *only* when the AD shocks are from countries with high stakeholder preferences for CSR<sup>28</sup>. These results provide preliminary support to our hypothesis that emerging market firms increase CSR expenses as an export strategy aimed at stakeholder preferences.

[Tables 3A and 3B here]

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<sup>27</sup> In the post-2004, Chinese exports of PET products to the US increase compared to the pre-AD period. While this may reflect cyclical demand for the product, in relative terms, Indian exports gain with respect to the Chinese competition.

<sup>28</sup> The results are robust to using CSR scaled by assets and log of CSR expenses.

## 4.2 The Difference-in-Differences approach

We estimate a staggered DiD model to examine the effect of AD on CSR expenses. In this setting, AD shocks on a Chinese product affect all Indian producers of that product. Since AD initiations on different products happen at different periods, the shocks are staggered over the sample period, and firms are affected at different years.

We set up DiD models of the following type to estimate the effect of AD on CSR expenses. First, if a Chinese product experiences an AD shock from a country where stakeholders highly prefer CSR (HP), all Indian producers of that product are in the *Treated* group. Firms that do not experience any AD shocks during our sample period are in the control group. Firms that experience AD shocks from countries where stakeholders have a *low preference* for CSR (LP) are excluded from the control group.

$$\ln(1 + CSR)_{it} = \beta_0 + \beta_1 Treated(HP) * Post(HP) + \beta_2 Treated(HP) + \theta X_{it-1} + \epsilon_{it} \quad (1)$$

The dependent variable is the natural log of the annual CSR expenses of a firm  $i$ .  $Treated(HP)$  equals 1 if at least one product of an Indian firm is affected by AD from countries with high stakeholder preferences for CSR. This indicator does not vary with time within a firm: it remains 1 for all years that we observe a treated firm.  $Post(HP)$  is an indicator that equals 1 for all years *after* the AD initiation on a competing Chinese product from *High - Preference* countries and  $X_{it-1}$  is a vector of all firm-level characteristics, including industry dummies and year dummies.  $\beta_1$  is the DiD estimate of the effect of AD on Chinese products from *High - Preference* countries on CSR expenses of Indian firms<sup>29</sup>.

Similarly, we estimate a DiD specification to estimate the effect of AD from India's other large export destinations on the CSR expenses of Indian firms. If a Chinese product experiences an AD shock from *Low - Preference* (LP) countries, then all Indian producers of that product are in the treatment group. The control group includes firms that do not experience any AD shocks during our sample period, and firms that experience AD shocks from *High - Preference* (HP) countries are excluded.

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<sup>29</sup> In our DiD setting, we do not need a stand-alone Post dummy because it is collinear with the year dummies.

$$\ln(1 + CSR)_{jt} = \alpha_0 + \alpha_1 Treated(LP) * Post(LP) + \alpha_2 Treated(LP) + \lambda X_{jt-1} + \varepsilon_{jt} \quad (2)$$

*Treated (LP)* equals 1 if at least one product of an Indian firm  $j$  is affected by AD from countries with high stakeholder preferences for CSR. This indicator does not vary with time within a firm and remains 1 for all years that we observe a treated firm  $j$ . *Post (LP)* is an indicator that equals 1 for all years *after* the AD initiation on a competing Chinese product from *Low - Preference* countries and  $X_{jt-1}$  is a vector of all firm-level characteristics, including industry dummies.  $\alpha_1$  is the DiD estimate of the effect of AD on Chinese products from *Low - Preference* countries on CSR expenses of Indian firms. In alternate specifications, we estimate specifications with firm-fixed effects.

By setting up two equations (1) and (2), we allow the estimate of the covariate-vector to vary between high and low preference countries ( $\theta X_{it-1}$ ) and  $\lambda X_{jt-1}$ . In an alternate specification, we estimate a nested model in which the effect of *Treated (HP)* and *Treated (LP)* is jointly estimated. The control group of this specification is the same as that in specifications 1 and 2 - firms that have never experienced an AD shock in our sample period<sup>30</sup>. The *Post (HP)* and the *Post (LP)* indicators in this specification correspond to the periods after AD shocks from *High Preference* and *Low Preference* countries.

$$\ln(1 + CSR) = \varrho_0 + \varrho_1 Treated(HP) * Post(HP) + \varrho_2 Treated(LP) * Post(LP) + \varrho_3 Treated(HP) + \varrho_4 Treated(LP) + \psi X_{jt-1} + \eta_{jt} \quad (3)$$

Next, we estimate equations (1) and (2) for the subset of firms to more precisely match the Chinese product under AD investigation to the Indian firms exporting the same products to the same markets. The empirical specifications are identical, except for the construction of the *Treated (HP)* and *Treated (LP)* dummies based on the product destination level matched firms. In these specifications,

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<sup>30</sup> In the Online Appendix, we show the results including cases where an Indian firm is exposed to AD shocks on Chinese competitors from both a *High Preference* and a *Low Preference* country simultaneously. The baseline results remain unchanged.



we can precisely identify the firms that export a product to a country where a competing Chinese product faces an AD investigation. These specifications, although with much smaller samples, show a clear effect of AD on CSR expenses.

Further, we examine whether the effect of AD on CSR varies by the importance of the products to the Indian firms. We set up triple difference indicators where the additional difference is between firms with higher and lower volumes of export of the product under AD investigation. We use an indicator, *High-Exposure*<sub>it-1</sub>, if an Indian firm's export of a product to a specific country is at least 20% of its' total sales revenues<sup>31</sup>. We lag the exposure variable by a year.

### 4.3 Tests for confounding channels

The relationship between AD and CSR can be confounded by the relative importance to Indian firms of the export market. For example, suppose the US and EU are among the larger export markets for Indian products and central to the global economy. In that case, the effect on CSR may reflect the magnitude of the cash-flow effect rather than the adjustment to stakeholder preference. Along these lines, the absence of an effect on CSR for AD shocks from non-US/EU countries may reflect the lower economic importance of these countries. If this is true, it will impact the estimated coefficients in a similar way to our baseline model, but the transmission mechanism will be different. We estimate the specifications similar to equations (1) and (2) with natural logs of Capex and R&D as the dependent variables.

The underlying rationale is that if the relative importance of the export market explains our results, then we should see similar effects of AD from different countries for CapEx and R&D. Since CapEx, R&D, and CSR are all discretionary expenses, an increased cash flow should positively affect them. On the other hand, if the effect of AD on CSR reflects stakeholder preference at the export destinations, then we should not expect to see the effect of the export shock on CapEx and R&D vary by the origin

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<sup>31</sup> We use alternative thresholds of 15% and 25% of the sales revenue to classify High Exposure firms. The results remain unchanged.

of the shock because there is no reason to expect that the stakeholder preference for Capex and R&D vary by export destinations.

In further tests, we estimate variants of specifications (1) to (3) to examine how the effect of AD shocks on CSR expenses vary with the type of product (final goods vs intermediate goods), ownership structure (business groups vs standalone firms), and different modes of philanthropic expenses (donations, community expenses, and environmental expenses).

#### 4.4 Effect of CSR on Firm Value

Finally, we estimate specifications to examine the effect on firm value for firms that increase CSR expenses in response to AD shocks. These estimates, although not causal, provide evidence of the market value of companies that engage in strategic CSR activities. In these models, we use triple interactions of the CSR expenses, *Post* dummies and *Treated* dummies. The CSR expense is continuous, while the AD indicator equals 1 for firms affected by at least one AD shock within the sample period. The coefficients  $\mu_1$  and  $\mu_2$  are measures of the change in the value of firms that increase CSR expenses following AD shocks on Chinese competitors. These specifications include the double interactions and the full set of control variables.

$$MTBV_{it} = \mu_0 + \mu_1 Treated(HP) * Post * \ln(1 + CSR)_{it-1} + \mu_2 Treated(HP) + \mu_3 \ln(1 + CSR)_{it-1} + \vartheta X_{it-1} + \epsilon_{it} \quad (4)$$

$$MTBV_{jt} = \phi_0 + \phi_1 Treated(LP) * Post * \ln(1 + CSR)_{jt-1} + \phi_2 Treated(LP) + \phi_3 \ln(1 + CSR)_{jt-1} + \vartheta X_{jt-1} + \epsilon_{jt} \quad (5)$$

## 5 Results

### 5.1 Anti-dumping and CSR expenses

We present the DiD estimates in table 4, where columns (1), (2) and (3) provide estimates of equations 1, 2, and 3, respectively. The dependent variable in all the specifications is  $\ln(1+CSR)$ . In columns 1 and 2, we present the estimates of the aggregate effect on CSR of AD initiations from *High Preference* and *Low Preference* countries, respectively. In column 1, we show that the Indian firms in the *Treated (HP)* group increased CSR expenses by 20% compared to firms that never faced an AD shock after an AD initiation on the Chinese products from countries with high stakeholder preference for CSR. In contrast, there is no statistically significant change in CSR expenses for Indian firms affected by AD initiations on competing Chinese products from countries with low stakeholder preference for CSR.

[Table 4 here]

In column 3, we present the results of the nested model with the indicators for AD from both *High Preference* and *Low Preference* countries. Our results from this specification have the same implications - AD from countries with high stakeholder preference for CSR leads to an increase in affected Indian firms' CSR expenses, but AD from countries with low stakeholder preference for CSR has no effect. These results corroborate the univariate analyses presented in table 3B that the increase in CSR expenses of Indian firms is a strategic response to the stakeholder preferences in a favourable export market. In Appendix C, we use alternate specifications with firm fixed effects to show that our results remain qualitatively similar.

## **5.2 Effect of Demand Shocks on Capital Expenditure and R&D**

We examine whether the effect on CSR is driven by stakeholder preference in the *HP* countries or by the relative economic importance of these countries to Indian firms. It is a salient point, as the countries in the *Treated (HP)* group (the US and the EU) are not only export markets with high stakeholder preference for CSR but are also economically significant for emerging market firms. Besides, suppose only *HP* countries use AD as a trade barrier and not the *LP* countries. In that case, the statistically

insignificant results for CSR will be an artefact of the low statistical power of these tests rather than any underlying economic reasons.

We approach this issue by examining how AD shocks affect other discretionary expenses of Indian firms. We estimate equations 1-3, where the rationale is that if the absence of effect on CSR for shocks from *LP* countries is due to lack of statistical power, there should be a similar absence of an impact for other corporate investments. The results are presented in table 5.

[Table 5 here]

In columns 1 and 2, we present the results for CapEx and R&D of Indian firms when Chinese exports are under AD investigation by *HP* countries. Columns 3 and 4 demonstrate the results of Chinese exports under AD investigation by *LP* countries. We find that Indian firms affected by AD increase CapEx and R&D, irrespective of the source of the AD initiation on Chinese products. The estimates in all the specifications are statistically significant at the 5% level. It contrasts with increasing CSR expenses only when the shock originates from the *HP* countries. Suppose low power is indeed the reason for the statistically insignificant association. In that case, we would expect that low power also to affect the estimates of the effect of AD from *LP* countries on CapEx and R&D. These results indicate a strategic investment motive for CSR expenses, rather than weak shocks from countries with low stakeholder preference for CSR.

### **5.3 Product-level export subsample**

For the subsample where we can more precisely identify the treatment group, we examine the effect on CSR expenses of Indian firms exporting a product to the country where the competing Chinese product faces an AD investigation. The results are presented in table 6. In panel A we show the results for the effect of AD on CSR. In panel B, we show the impact of AD on CapEx and R&D. In these specifications, we also account for the relative importance of the product under AD investigation for

the Indian firm. We estimate a triple difference model by interacting the *High Exposure* indicator with the DiD interaction.

In this subsample, we find that the effect of AD from *High Preference* countries on CSR expenses is stronger than the baseline estimates<sup>32</sup>. There is also no change in CSR expenses of firms affected by AD from countries with low stakeholder preference for CSR. Putting these results together, Indian firms with better access to the export market (due to AD initiations on competing Chinese products by the markets with higher customer preference for corporate philanthropy) increase CSR expenses, compared to unaffected firms.

[Table 6 here]

Additionally, we find that the coefficient of the triple difference estimator is positive and statistically significant at a 5% level for AD shocks from *High Preference* countries<sup>33</sup>. This result implies a more substantial effect on CSR expenses of companies with more exposure to the shock than companies for which the product contributes a smaller proportion to the sales revenue. We also show that AD shocks affect the CSR expenses of Indian companies who have high exposure to the product but do not export. Our results suggest that Indian companies with high exposure to AD shocks from *High Preference* countries increase CSR expenses in the preparation of entering the export market. For AD shocks from *Low Preference* countries, we find no effect of the exposure of Indian firms on CSR expenses.

## 5.4 Firm value effects of increasing CSR

How does the increase in philanthropic expenses in response to the demand shocks affect firm value? We examine the value effects of firms that increase corporate philanthropy during the positive

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<sup>32</sup> We use a Wald test to show that the difference between the coefficients of the DiD estimates in columns 1 of table 4 and column 1 of table 6 is statistically significant at a 5% level.

<sup>33</sup> The results are qualitatively similar if we use different thresholds to classify *High-Exposure* firms. The results are reported in the online appendix.

demand shocks compared to firms that do not. In these models, we compare the average value of firms before and after periods of AD on competing products. The results are presented in columns 1 and 2 of table 7. The dependent variable in all of the specifications is the market-to-book value. The parameter of interest is the interaction of  $\ln(1+CSR)$ , *Treated (HP)* and *Post (HP)*, which is positive and statistically significant in column 1. Firms with higher CSR have additional value gains from the demand shock. When we estimate a similar model for the AD initiations from export destinations with lower stakeholder preference, the parameter estimates of the interaction of  $\ln(1+CSR)$ , *Treated (LP)* and *Post (LP)* is not statistically significant at conventional levels. Although by no means causal, these results seem to reinforce the strategic motives insofar as the value gain reflects the investor perception of CSR.

[Table 7 here]

In columns 3 to 6 of table 7, we also examine the firm value effects of increasing CapEx and R&D expenses during AD shocks from different export destinations. Firms gain in value when they increase capital expenditure and R&D expenses when competing Chinese products are under AD investigation, irrespective of the export market from which the shock originates. These results are consistent with the idea that firms increase capacity and innovation activities to gain a higher share in the export market (Newman et al., 2018; Bown and Porto, 2010). Our results show that the value-enhancing change in CSR expenses is an adjustment to foreign stakeholder preference. In contrast, the increase in CapEx and R&D is a reaction to the economic shock.

Finally, we show that CapEx and R&D expenses increase following AD shocks, irrespective of the origin. The effect on CapEx and R&D is stronger for Indian firms with more exposure to the AD shocks. We also find that unaffected Indian firms with high exposure to the shock increase CapEx, presumably increasing capacity, in preparation for entering the export market.

## **5.5 The effect of ownership structure**

To examine if our results are different for firms with different ownership structures, we regress an indicator for business group affiliates on the primary dependent variable,  $\ln(1+CSR)$ . Business groups are a good proxy for ownership structure because they have different managerial preferences: higher entrenchment through control, incentives to build a long-term reputation, and lower financing constraints through internal capital markets.

We attempt to test if the ownership structure affects the strategic motive of CSR. The results are presented in table 8. In column 1, we test the effect for AD shocks from the US and the EU, where the main variables of interest are the triple interaction term  $Treated(HP) * Post(HP) * Business\ Group$ . The triple interaction is positive and statistically significant at the 10% level. In column 2, we show no statistically significant association of  $Treated(LP) * Post(LP) * Business\ Group$  with CSR expenses. Therefore, it seems that ownership structure is associated with the way Indian firms adjust CSR expenses in response to AD shocks on competing Chinese products only when the shock originates from HP countries.

[Table 8 here]

Suppose corporate philanthropy reflects agency cost, and managers increase consumption of private benefits of corporate philanthropy when the firm's investment financing is more accessible. In that case, we expect to see an increase in CSR expenses irrespective of the source of the AD initiations on Chinese products. The effect should even be stronger for stand-alone firms. That firms seem to systematically differ in their adjustment of corporate philanthropy to the origin of the export-market shock indicates that such spending is aimed to cater to foreign stakeholders' preferences.

## 5.6 Intermediate vs Final Goods

It is plausible that differences in the product market brand image provide an alternate explanation of our results. Firms selling consumer goods and more visible brands may have higher corporate philanthropy (Servaes and Tamayo, 2013) than firms producing intermediate goods. If the product category

and the ownership structure are correlated, our baseline results may be an artefact of the industry classifications. In our baseline specifications, we use a set of industry dummies to control for this possibility. Further, we test the difference in means of CSR for firms producing consumer goods and firms producing intermediate goods, based on the main product category of the firm recorded in Prowess. This difference is not statistically significant at conventional levels. We present these results in table 9.

[Table 9 here]

## 5.7 Disaggregated Measures of CSR

The baseline CSR measure comprises three different kinds of expenses (charitable donations, community-related expenses, and environmental expenses), differentially affected by the AD-related trade openness. For example, Indian firms may engage in community expenses as a way of advertising to foreign stakeholders. Tata Steel's educational scholarships that benefit 2500 Welsh students every year is an example of such an initiative. Indian firms are also likely to face enhanced environmental standards when entering export markets with a high stakeholder preference for CSR.

We estimate separate models similar to our baseline specifications with the three forms of expenses we use to construct the CSR expenses. The results presented in table 10 show that the effect on CSR of AD from *High Preference* countries is positive and statistically significant for donations and community expenses but weakly significant for environmental expenses. The weaker association of AD with environmental expenditures is because significant investments in environmental technology are capitalized. The effect on CSR of AD from *Low Preference* countries is not statistically for all three forms of expenses.

[Table 10 here]

## 5.8 Robustness Checks and Additional Tests

### 5.8.1. Origin of demand shocks



One issue with grouping countries by stakeholder preference is that a single country within a group may drive the effect of AD shocks on CSR expenses. To mitigate that concern, we estimate our baseline DiD specifications separately for the US, the EU, Mexico, Brazil<sup>34</sup>, and other exporting destinations. The results presented in Appendix D show that our baseline results hold in all of these specifications. Of particular interest is comparing the effects on the corporate philanthropy of AD initiations from the EU and Brazil, which are similar in market size for Indian exports. While AD initiations from the EU on Chinese exports increase the CSR expenses of Indian firms, such effects are absent for Brazilian AD initiations on Chinese exports.

We also separately examine effects on CapEx and R&D of different export destinations' AD initiations on competing Chinese products. The results are presented in appendix E and show that Indian firms increase CapEx and R&D in response to AD initiations on Chinese products for every country (country-block). Again, let's compare similarly sized export markets for Indian products, like the EU and Brazil. We find similar increases in CapEx and R&D. These results further support the strategic motives of CSR.

### **5.8.2. Instrumental Variable approach**

We use IV regressions as an alternative estimation method to examine the effect of AD on CSR. The IV is a more stringent empirical specification because it requires the effect of AD on CSR to work only through an actual increase in exports, rather than the general prospect of better export opportunities that the DiD results may capture. In the first stage, we estimate the effect of AD on exports, and in the second stage, we regress the predicted values of exports on CSR expenses. The first stage regression is not identified for firms in the treatment group that do not increase product exports in the year following an AD shock.

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<sup>34</sup> Mexico and Brazil are the heaviest AD users among the Low Preference group.

In the first specification, we use the indicator *Treated (HP)* as the instrumental variable to estimate the effect on CSR of export shocks from export markets with high stakeholder preference for corporate philanthropy:

$$\ln(1 + CSR)_{it} = f(\ln(1 + Exports), X_{it}) \quad (6a)$$

$$\ln(Exports)_{it} = f(Treated (HP), X_{it}) \quad (6b)$$

In a similar specification, we use *Treated (LP)* as the IV to estimate the effect on CSR of export shocks from export markets with low stakeholder preference for corporate philanthropy. The dependent variable in the first stage is  $\ln(1+Exports)$ , and that in the second stage is  $\ln(1+CSR)$ .

We find that AD shocks from both countries with High- and Low preference for corporate philanthropy increase exports, but the effect of CSR is positive and statistically significant only for AD shocks from *High Preference* countries. In both cases, the first-stage F-statistic is over 10, alleviating concerns about weak instrument problems. We present the results in appendix F<sup>35</sup>.

### 5.8.3. Additional robustness checks

Finally, we run a battery of robustness tests. First, we examine a subsample of cases where AD initiation on Chinese products has led to final AD duties being imposed. Approximately 66% of the AD initiations on Chinese products that affect the sample of Indian firms led to a final AD measure being imposed. Our main results (reported in panel A of appendix G) hold when we restrict our treated group to these cases only. We also check the mean-reversion in CSR after AD duties are revoked. We use an alternative indicator for AD, which equals 1 for all years after an AD petition was filed against a Chinese

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<sup>35</sup> We estimate analogous IV estimates for the effect of AD on CapEx and R&D. The results, reported in the online appendix, are similar to the baseline estimates: CapEx and R&D increase following AD shocks from both countries with High- and Low preference for corporate philanthropy.

competitor of an Indian exporter. The indicator is set at 1, even if the duties are revoked. If there is mean reversion in CSR, we will see a smaller positive or no significant effect of AD in this specification. We find similar results to the baseline and find no evidence of a reversion to the mean. This result is consistent with the theories and empirical evidence of hysteresis effects in international trade (Vandenbussche and Zanardi, 2010; Dixit, 1989).

In online appendices, we present a further set of robustness tests. We include the state-owned firms in the sample and estimate our baseline models. The results remain similar to the baseline.<sup>36</sup> We also focus on the non-linear effect of institutional ownership on CSR expenses (Smith, 1996; Shleifer and Vishny, 1997). We partition the data for firms with high (greater than p75) and low (lesser than p25) institutional ownership. Increases in CSR in response to demand shocks are not significantly different between the two groups. We conduct similar tests for foreign shareholding, and our main results persist.

Further, in alternate specifications, we control for the industry competitiveness using the Herfindahl-Hirschman index (HHI). Our main results remain unaltered. Finally, we include the overlapping ADs in the sample, and our results do not change.

## 6 Conclusion

The managerial motivations for CSR are widely debated, particularly in the context of the 2019 Business Roundtable statement by US CEOs about the purpose of a corporation. Despite these debates, there is surprisingly little direct evidence on the motivations for firms to engage in CSR. In this paper, we test the proposition that CSR is a strategic investment decision. To do so, we examine if Indian firms adjust CSR expenses in response to the preference of foreign stakeholders for corporate philanthropy.

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<sup>36</sup> In unreported results, we also estimate the baseline models on only the subsample of state-owned firms. We find no statistically significant increase in CSR expenses for AD shocks from high and low priority countries. Given the small sample size, it is hard to distinguish whether the lack of statistical significance reflects a real zero effect or weak statistical power of the tests.

We exploit trade deviations towards Indian exporters when AD investigations are initiated against competing Chinese products. Our main results are that Indian firms increase CSR expenses when the AD shocks originate from the countries with high stakeholder preferences for CSR (the US and the EU).

In contrast, when the AD shocks originate from the export destinations with low stakeholder preference for corporate philanthropy, like Argentina or Brazil, there is no change in the Indian firms' CSR expenses. When Indian firms increase CSR expenses following AD shocks from the US and the EU, they gain in value. On the other hand, there are value losses for Indian exporters who increase their CSR expenses due to AD shocks from countries with a low stakeholder preference for CSR.

Companies in emerging market countries, such as India, use CSR as strategic investments to cater to stakeholder preferences in the export markets. While Indian exporters' CSR expenses adjust to the stakeholder preference of the export markets, other discretionary expenses, such as CapEx and R&D, increase irrespective of the origin of the AD shocks. The effects of AD shocks on CSR expenses are economically meaningful, and they persist even after AD duties on Chinese products have been revoked. Overall, our results are consistent with the investment motive of CSR and highlight that socially responsible practices are transmitted through international trade.

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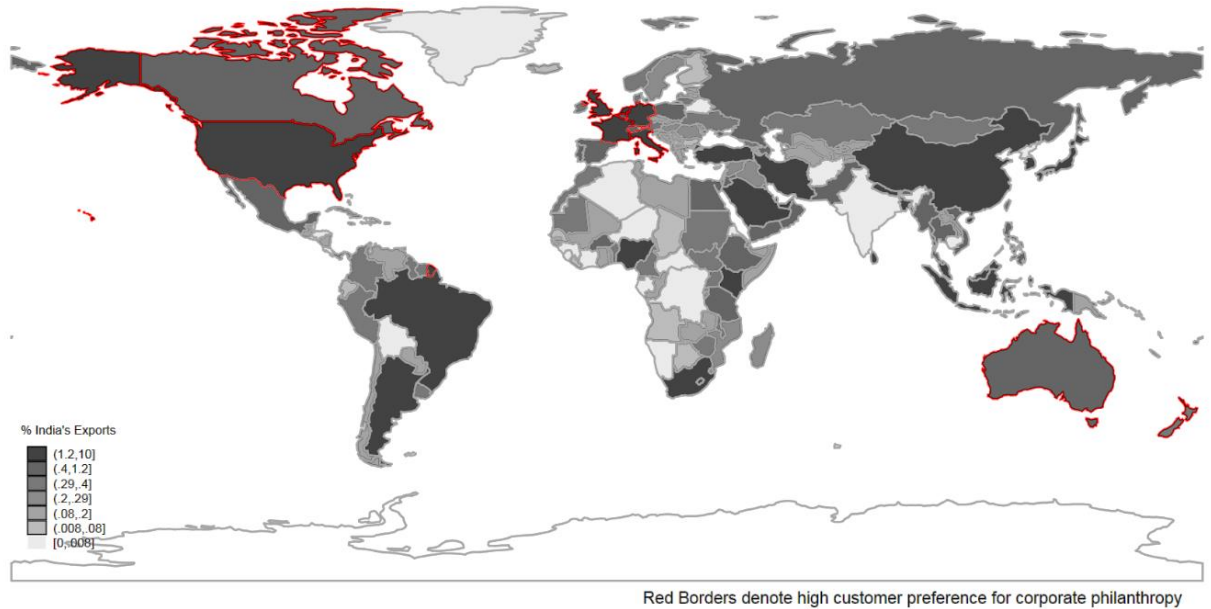
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### FIGURE 1 India's Export Destinations and Foreign Stakeholder Preference for CSR

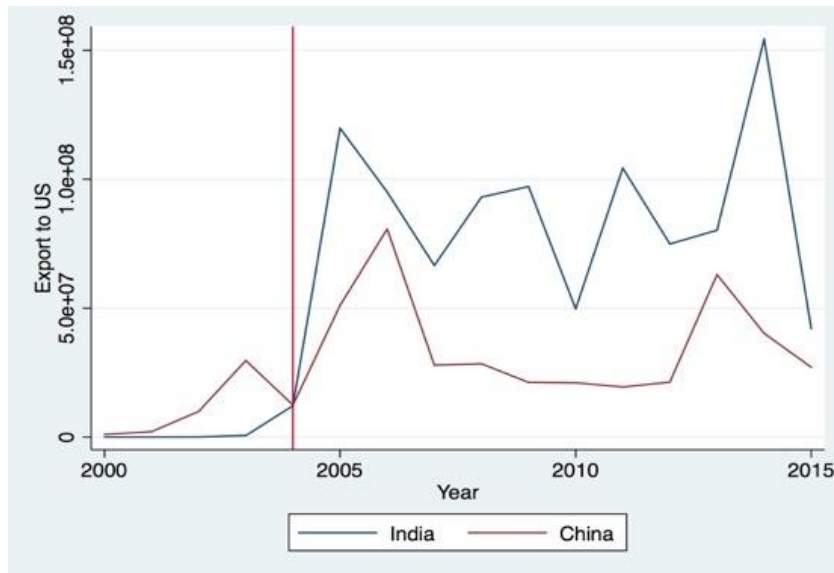
In this figure, darker shades of grey represent the large export destinations of Indian products, and the Red borders show the countries with higher stakeholder preference for CSR. Our empirical analysis attempts to compare the effects of export shocks from comparably large export markets but with different stakeholder preferences for CSR.





**Figure 2A AD on PET products from the US on China and Indian exports**

This figure presents the time-series variation of Indian and Chinese exports of PET products to the US before and after anti-dumping initiations on Chinese exports in 2004. Post-2004, Indian exports of PET to the US overtake China's, becoming twice as large by 2008. The vertical axis denotes the value of Indian exports of PET products to the US.



**Figure 2B AD on Steel-Lined Pipes from Brazil on China and Indian exports**

This figure presents the time-series variation of Indian and Chinese exports of steel-lined pipes to Brazil before and after anti-dumping initiations on Chinese exports in 2011. Post-2011, Indian exports of steel-lined pipes to Brazil overtook that of China's. The vertical axes depict the value of Indian exports of Steel-Lined pipes to Brazil.



**Table 1A**

**Summary Statistics: Full Sample**

This table presents the summary statistics of our sample of listed Indian companies from 2006-2013. Panels A and B present information on CSR expenses and export/antidumping variables. Panels C-E include information on board, director, and company characteristics. All monetary variables are winsorized at the 1% level. The data source for each variable is listed in Appendix A.

Variable	N	Mean	Std Dev	Minimum	Maximum
<i>Panel A: CSR</i>					
CSR Expenses	3,762	19.054	83.173	0.000	87.352
<i>Panel B: Export and Antidumping Variables</i>					
Treated (HP)	3,762	0.161	0.367	0	1
Treated (LP)	3,762	0.023	0.415	0	1
Export (% Sales)	3,762	137.209	168.537	0.000	424.909
<i>Panel C: Ownership Variables</i>					
% Shareholding - Promoters	3,762	41.577	20.847	25.186	74.235
% Shareholding - Institutions	3,762	17.806	14.496	6.000	37.113
<i>Panel D: Board Variables</i>					
Board Size	3,762	9.949	3.328	6.000	33.000
% Independent Directors	3,762	51.799	16.181	16.181	92.487
<i>Panel E: Financial Variables</i>					
Sales (/1,000)	3,762	522.592	229.18	21.401	976.148
ROA	3,762	0.083	0.111	0.0006	0.207
Total Assets (/1,000)	3,762	77.121	264.824	57.100	594.113
MTBV	3,762	1.419	2.542	0.006	5.278
R&D	3,762	18.271	19.670	0.258	69.901
CapEx	3,762	44.108	21.067	0.668	101.68

**Table 1B****Summary Statistics: Product Level Exports Subsample**

This table presents the summary statistics of our sample of listed Indian companies from 2006-2013. Panels A and B present information on CSR expenses and export/antidumping variables. Panels C-E include information on board, director, and company characteristics. All monetary variables are winsorized at the 1% level. The data source for each variable is listed in Appendix A.

Variable	N	Mean	Std Dev	Minimum	Maximum
<i>Panel A: CSR</i>					
CSR Expenses	1,256	23.044	37.208	1.283	87.352
<i>Panel B: Export and Antidumping Variables</i>					
Treated (HP)	1,256	0.129	0.288	0	1
Treated (LP)	1,256	0.096	0.155	0	1
Export (% Sales)	1,256	286.371	127.008	19.676	424.909
<i>Panel C: Ownership Variables</i>					
% Shareholding - Promoters	1,256	40.134	27.202	13.304	74.235
% Shareholding - Institutions	1,256	17.877	15.509	7.434	37.113
<i>Panel D: Board Variables</i>					
Board Size	1,256	9.407	4.500	5.755	33.000
% Independent Directors	1,256	54.625	10.732	38.555	92.487
<i>Panel E: Financial Variables</i>					
Sales (/1,000)	1,256	737.480	239.175	65.592	976.148
ROA	1,256	0.095	0.097	0.013	0.207
Total Assets (/1,000)	1,256	83.366	218.344	84.200	594.113
MTBV	1,256	1.609	1.438	0.044	5.278
R&D	1,256	18.977	20.043	0.270	69.901
CapEx	1,256	49.403	23.122	0.713	101.68

**Table 2****Antidumping (AD) Initiations by India's major trading partners**

This table presents the number of AD initiations on China and India by India's large export destinations and the average value of Indian exports to each country over the sample period 2006-2013.

Countries	Indian Exports (`00,000 US\$)	AD Initiations - All	AD Initiations against Chinese Products	AD Initiations Against Indian Products
USA	286,325.30	445	116	28
EU	25,769.28	288	94	20
UAE	263,704.60	0	0	0
Argentina	4,012.81	218	71	11
Brazil	41,006.48	316	83	16
Mexico	12,302.43	100	48	03
South Africa	36,747.16	99	28	12

**Table 3A****Univariate Comparison of Exports (As % of Sales) of Indian firms**

This table presents the univariate comparison of mean export revenues (as % of sales turnover) for the treatment group (Indian firms facing at least one AD shock in the sample period) compared to a control group of Indian firms facing no AD shocks within the sample period. Panel A provides the comparison of mean exports of the treatment and control group for AD on Chinese products from countries with a high preference for CSR. Panel B provides the comparison of mean exports of the treatment and control group for AD on Chinese products from countries with a low preference for CSR. \*\*\*, \*\*, and \* denotes significance at 1%, 5%, and 10% levels, respectively.

<i>Panel A</i>	Exports -	Exports -	Difference
AD - High Preference	Treated	Control	(Treated - Control)
<i>Before AD</i>	20.87	19.66	1.21
<i>After AD</i>	29.59	19.98	9.61***
<i>After – Before</i>	8.72	0.32	8.40***
<i>Panel B</i>	Exports -	Exports -	Difference
AD - Low Preference	Treated	Control	(Treated - Control)
<i>Before AD</i>	18.54	18.67	-0.13
<i>After AD</i>	23.44	19.09	4.35**
<i>After – Before</i>	4.90	0.42	4.48**

**Table 3B****Univariate Comparison of CSR Expenses (% of Net Profits)**

This table presents the univariate comparison of CSR expenses (as % of net profits) for the treatment group (Indian firms facing at least one AD shock in the sample period) compared to a control group of Indian firms facing no AD shocks within the sample period. Panel A provides the comparison of mean CSR of the treatment and control group for AD on Chinese products from countries with a high preference for CSR. Panel B compares the mean CSR of the treatment and control group for AD on Chinese products from countries with a low preference for CSR. \*\*\*, \*\*, and \* denotes significance at 1%, 5%, and 10% levels, respectively.

<i>Panel A</i>	CSR Expenses -	CSR Expenses -	Difference
AD - High Preference	Treated	Control	(Treated - Control)
<i>Before AD</i>	2.21	1.93	0.28
<i>After AD</i>	3.69	1.98	1.71***
<i>After – Before</i>	1.48	0.05	1.43***
<i>Panel B</i>	CSR Expenses -	CSR Expenses -	Difference
AD - Low Preference	Treated	Control	(Treated - Control)
<i>Before AD</i>	1.54	1.27	0.27
<i>After AD</i>	1.62	1.31	0.43
<i>After – Before</i>	0.08	0.04	0.04

**Table 4**  
**Effect of AD on CSR Expenses**

In this table, we present the Difference-in-Differences estimates for the effect of AD on CSR expenditure. The dependent variable in all columns is  $\ln(1+CSR)$ . Column 1 presents the results for AD against Chinese products from countries with high stakeholder preference for CSR. Column 2 presents the results for AD against Chinese products from countries with low stakeholder preference for CSR. Column 3 presents the estimates from the nested AD model from both sets of countries, as shown in columns 1 and 2. In all specifications, the control group contains firms that have never been exposed to an AD shock within the 2006-2013 sample period. Robust standard errors clustered at the firm level are reported in the brackets. \*\*\*, \*\*, and \* denote statistical significance at 1%, 5%, and 10% levels, respectively.

Dependent Variable	Ln (1+CSR)		
	(1)	(2)	(3)
Treated (HP) * Post (HP)	0.208** (0.087)		0.243**
Treated (LP) * Post (LP)		0.117 (0.082)	0.103 (0.087)
Treated (HP)	0.111 (0.080)		0.098 (0.086)
Treated (LP)		0.069 (0.050)	0.054 (0.045)
Ln (Sales)	0.486*** (0.035)	0.311*** (0.025)	0.548*** (0.081)
ROA	0.390*** (0.045)	0.296*** (0.011)	0.549*** (0.082)
Ln (1+Exports)	0.155** (0.043)	0.033 (0.027)	0.197** (0.084)
%Shareholding-Promoters	0.002** (0.001)	0.002** (0.001)	0.015** (0.007)
%Shareholding-Institutions	0.087*** (0.013)	0.087*** (0.015)	0.175*** (0.060)
Board Size	0.001 (0.003)	0.001 (0.003)	-0.019 (0.015)
% Independent Directors	0.124* (0.057)	0.024 (0.037)	0.178** (0.069)
Year Dummies	Yes	Yes	Yes
Industry Dummies	Yes	Yes	Yes
Observations	3,481	3,040	3,762
Adj R <sup>2</sup>	0.414	0.334	0.446

**Table 5**  
**Effect of AD on CapEx and R&D Expenses**

This table presents the Difference-in-Differences estimates for the effect of AD on capital expenditure (Panel A) and research and development expenditure (Panel B). The dependent variables in panels A and B are  $\ln(1+\text{Capex})$  and  $\ln(1+\text{R\&D})$ , respectively. Columns 1 and 4 present the results for AD against Chinese products from countries with high stakeholder preference for CSR. Columns 2 and 5 present the results for AD against Chinese products from countries with low stakeholder preference for CSR. Columns 3 and 6 present results for the joint estimation of AD against Chinese products from both sets of countries, as shown in columns 1 and 2 and in columns 4 and 5. In all specifications, the control group contains firms that have never been exposed to an AD shock within the 2006-2013 sample period. All specifications include the full set of control variables as shown in Table 4, year dummies and industry dummies. Robust standard errors clustered at the firm level are reported in the brackets. \*\*\*, \*\*, and \* denote statistical significance at 1%, 5%, and 10% levels, respectively.

	Panel A			Panel B		
	Ln (1+Capex)			Ln(1+R&D)		
	(1)	(2)	(3)	(4)	(5)	(6)
Treated (HP) * Post (HP)	0.318*** (0.139)		0.321** (0.140)	0.234*** (0.108)		0.246**
Treated (LP) * Post (LP)		0.199** (0.090)	0.224** (0.102)		0.151** (0.072)	0.173** (0.073)
Treated (HP)	0.211 (0.168)		0.187 (0.159)	0.077 (0.042)		0.060 (0.045)
Treated (LP)		0.167 (0.133)	0.127 (0.099)		0.035 (0.028)	0.022 (0.018)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Industry Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,481	3,040	3,762	3,481	3,040	3,762
Adj. R <sup>2</sup>	0.288	0.267	0.302	0.247	0.259	0.278

**Table 6**  
**Subsample Analysis of Product-Level Exports by Destinations**



This table presents the Difference-in-Differences estimates for the effect of AD on CSR expenditure for a subsample of firms for which we have data on product-level exports to different countries. In Panel A, we show the effect of AD on CSR expenditure and in Panel B, we show the effect of AD on capital expenditure and research and development expenditure. The dependent variable in all columns is  $\ln(1+CSR)$ . Columns 1, 3, and 5 present the results for AD against Chinese products from countries with high stakeholder preferences for CSR. Columns 2, 4, and 6 present the results for AD against Chinese products from countries with low stakeholder preference for CSR. In all specifications, we show the effect of high exposure to AD (the product facing AD shock forms at least 20% of sales turnover). The control group contains firms that have never been exposed to an AD shock within the 2006-2013 sample period. All specifications include the full set of control variables as shown in Table 4, year dummies and industry dummies. Robust standard errors clustered at the firm level are reported in the brackets. \*\*\*, \*\*, and \* denote statistical significance at 1%, 5%, and 10% levels, respectively.

	Panel A		Panel B			
	Ln (1+CSR)		Ln (1+Capex)		Ln (1+R&D)	
	(1)	(2)	(3)	(4)	(5)	(6)
Treated (HP) * Post (HP)	0.103** (0.051)		0.357** (0.173)		0.261** (0.113)	
Treated (LP) * Post (LP)		0.096 (0.087)		0.171** (0.067)		0.145** (0.071)
High Exposure * Treated (HP) * Post (HP)	0.334** (0.164)		0.144** (0.066)		0.065** (0.030)	
High Exposure * Treated (LP) * Post (LP)		0.066 (0.076)		0.047** (0.023)		0.051* (0.026)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Industry Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Observations	742	802	742	802	742	802
Adj. R <sup>2</sup>	0.496	0.300	0.296	0.290	0.222	0.237

**Table 7**  
**Firm Value Effects of AD shocks from Different Export Markets**

This table presents the firm value effects of CSR expenditure following AD on competing Chinese firms from different export markets. The dependent variable in all specifications is the market-to-book value (MTBV). In columns 1, and 2, we show the effect of increasing CSR expenditure following AD shocks; in columns 3 and 4, we show the effect of increasing capital expenditure following AD shocks; in columns 5 and 6, we show the effect of increasing research and development expenditure following AD shocks. The control group contains firms that have never been exposed to an AD shock within the 2006-2013 sample period. All specifications include the full set of control variables as shown in Table 4, year dummies and industry dummies. Robust standard errors clustered at the firm level are reported in the brackets. \*\*\*, \*\*, and \* denote statistical significance at 1%, 5%, and 10% levels, respectively.

	Dependent Variable: MTBV					
	(1)	(2)	(3)	(4)	(5)	(6)
Treated (HP)* Post (HP)*Ln(1+CSR)	0.156** (0.068)					
Treated (LP)* Post (LP)*Ln(1+CSR)		-0.073 (0.049)				
Treated (HP)* Post (HP)*Ln(1+CapEx)			0.074** (0.034)			
Treated (LP)* Post (LP)*Ln(1+CapEx)				0.023** (0.010)		
Treated (HP)* Post (HP)*Ln(1+R&D)					0.059** (0.025)	
Treated (LP)* Post (LP)*Ln(1+R&D)						0.014** (0.006)
Double Interactions	Yes	Yes	Yes	Yes	Yes	Yes
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Industry Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,481	3,040	3,481	3,040	3,481	3,040
Adjusted R <sup>2</sup>	0.341	0.257	0.219	0.197	0.209	0.199

**Table 8**

## Effect of Ownership Structure

This table presents the results for the effect of AD on CSR expenses of Indian firms with different ownership structures. The dependent variable in all columns is  $\ln(1+CSR)$ . In column 1, we present the triple difference estimate for AD against Chinese products from countries with high stakeholder preference on CSR expenditure of Indian business group affiliates compared to unaffiliated stand-alone firms. In column 2, we present the triple difference estimate for AD against Chinese products from countries with low stakeholder preference on CSR expenditure of Indian business group affiliates compared to unaffiliated stand-alone firms. The control group contains firms that have never been exposed to an AD shock within the 2006-2013 sample period. All specifications include the full set of control variables as shown in Table 4, year dummies and industry dummies. Robust standard errors clustered at the firm level are reported in the brackets. \*\*\*, \*\*, and \* denote statistical significance at 1%, 5%, and 10% levels, respectively.

	Dependent Variable: $\ln(1+CSR)$	
	(1)	(2)
Treated (HP)*Post (HP)*Business Group	0.283* (0.146)	
Treated (LP)*Post (LP)*Business Group		0.116 (0.103)
Control Variables	Yes	Yes
Year Dummies	Yes	Yes
Industry dummies	Yes	Yes
Observations	3,481	3,040
Adjusted R <sup>2</sup>	0.428	0.357

**Table 9**  
**Intermediate vs Final Goods**

In this table, we present the results of the effect of AD on Chinese products from countries with high stakeholder preference for CSR (Panel A) and countries with low stakeholder preference for CSR (Panel B) on CSR expenses of Indian firms, stratified by intermediate and final goods. The dependent variable in all columns is  $\ln(1+CSR)$ . The control group contains firms that have never been exposed to an AD shock within the 2006-2013 sample period. All specifications include the full set of control variables as shown in Table 4, year dummies and industry dummies. Robust standard errors clustered at the firm level are reported in the brackets. \*\*\*, \*\*, and \* denote statistical significance at 1%, 5%, and 10% levels, respectively.

	Dependent Variable: $\ln(1+CSR)$			
	Panel A: Intermediate Goods		Panel B: Final Goods	
	(1)	(2)	(3)	(4)
Treated (HP) *	0.127***		0.315***	
Post (HP)	(0.057)		(0.109)	
Treated (LP) *		-0.037		-0.044
Post (LP)		(0.030)		(0.036)
Treated (HP)	0.133		0.091	
	(0.088)		(0.074)	
Treated (LP)		0.101		0.066
		(0.076)		(0.053)
Control Variables	Yes	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes	Yes
Industry Dummies	Yes	Yes	Yes	Yes
Observations	2,324	1,030	2,324	1,030
Adjusted R <sup>2</sup>	0.328	0.227	0.250	0.197

**Table 10**  
**Difference-in-Differences Estimator: Components of CSR**

In this table, we present the Difference-in-Differences estimates for the effect of AD on the three components of CSR: donations (columns 1 and 2), community expenses (columns 3 and 4), and environmental expenses (columns 5 and 6). The control group contains firms that have never been exposed to an AD shock within the 2006-2013 sample period. All specifications include the full set of control variables as shown in Table 4, year dummies and industry dummies. Robust standard errors clustered at the firm level are reported in the brackets. \*\*\*, \*\*, and \* denote statistical significance at 1%, 5%, and 10% levels, respectively.

Dependent Variable	Ln (1+Donations)		Ln (1+Community Expenses)		Ln (1+Environmental Expenses)	
	(1)	(2)	(3)	(4)	(5)	(6)
Treated (HP)	0.234**		0.187**		0.082*	
* Post (HP)	(0.101)		(0.078)		(0.043)	
Treated (LP)		0.067		0.055		0.006
* Post (LP)		(0.098)		(0.073)		(0.025)
Treated (HP)	0.127		0.082		0.071	
	(0.103)		(0.069)		(0.060)	
Treated (LP)		0.044		0.028		0.020
		(0.030)		(0.026)		(0.019)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Industry Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,276	2,884	2,976	2,550	2,322	2,066
Adjusted R <sup>2</sup>	0.304	0.230	0.287	0.182	0.163	0.150

## Appendix A: Variable Descriptions

Variables	Description
Ln (1+CSR Expenses)	Natural log of total annual expenditure on social and environmental activities = Donations + Community Expenses + Environmental Expenses
Donations	Annual donations to a local authority or an institution for social and humanitarian causes
Community Expenses	Annual expenses on building and maintenance of public services (parks, primary schools, etc.)
Environmental Expenses	Annual non-capitalized expenditure on environmental and pollution control related issues.
Treated (HP)	Dummy = 1 if the competing Chinese product of an Indian firm faces an anti-dumping petition from a country with high stakeholder preference for CSR (the USA and the European Union)
Treated (LP)	Dummy = 1 if the competing Chinese product of an Indian firm faces an anti-dumping petition from a country with low stakeholder preference for CSR (Argentina, Brazil, Mexico, South Africa and the UAE)
Post (HP) and Post (LP)	Dummy = 1 for all years after the competing Chinese product of an Indian firm faces anti-dumping petitions from countries with high and low stakeholder preferences for CSR
Ln (Sales)	Natural log of annual sales turnover
ROA	Net income scaled by total assets
Ln (1+Exports)	Natural log of annual export revenues
% Shareholding-Promoters	% of shares outstanding owned by and associated with the promoter family.
% Shareholding-Institutions	% of shares outstanding owned by institutions such as banks, insurance companies, hedge funds, and mutual funds.

Board Size	Number of directors on the board
% Independent Directors	Number of directors classified as independent non-executive directors, scaled by board size
Ln (1+R&D)	Natural log of annual research and development expenditure
Ln (1+Capex)	Natural log of Annual capital expenditures
Total Assets	Natural log of Total Assets
MTBV	$\frac{\text{Market Capitalization} + \text{Book Value of Debt}}{\text{Total Assets}}$
Business Group	Dummy = 1 if the firm is an affiliate of a business group
Final Goods	Dummy = 1 if the main product of the firm is a consumer good, based on the main product category of the firm recorded in Prowess

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## Appendix B: Matching Protocols

1. Anti-dumping data is downloaded from the World Bank's Global Anti-Dumping Database <https://datacatalog.worldbank.org/dataset/temporary-trade-barriers-database-including-global-antidumping-database/resource/dc7b361e>.

2. The data dump consists of files for AD initiations by individual countries against other countries. It contains information on the product under AD investigation, the dates of initiation, primary and final dumping and injury decisions, and the dates when AD is revoked.

3. In the files corresponding to each of India's large export destinations, we filter for the ADs initiated against Chinese products. In the field "INV\_CTY\_NAME", we sort for "China". The files from where we parse the information on AD against China are:

- United States (file: GAD-USA)
- the European Union (file: GAD-EUN)
- Argentina (file: GAD-ARG)
- Brazil (file: GAD-BRA)
- Japan (file: GAD-JAP)
- Mexico (file: GAD-MEX)
- Saudi-Arabia (file: GAD-OTH - tab for GCC)
- South Africa (file: GAD-ZAF)
- United Arab Emirates (file: GAD-OTH - tab for GCC)

4. For all the cases of AD initiated on Chinese manufacturers between 2003-2013, we collect information on the product under AD investigation (Product List-A).

### Aggregate Exports

5. We obtain the list of all products manufactured and traded by Indian firms as reported by Prowess (Product List-B).

6. We use directional string-based matching of Product-List A to Product-List B.

- For the subsample of Product-List A, for which we find no exact match, we perform further matching for similarity of 0.90 and over (see from the GB codes).
- Finally, we manually check the unmatched items in Product List-A.
- The set of matched products is obtained.

7. The product level matches are aggregated at the firm level. The companies for which at least one of the products manufactured or traded are in the set of matched products are classified as firms affected by AD shocks.

- If the AD shocks originate from High Preference countries, the company is included in the *Treated (HP)* treatment group.
- If the AD shocks originate from Low Preference countries, the company is included in the *Treated (LP)* treatment group.



### **A subsample of Product-Level Export Data**

7A. Companies that export the exact product in Product List-A to the country in which the Chinese product is under AD investigation are classified as 'firms affected by AD shocks'.

- If a Chinese product is under AD investigation in a High Preference country, the Indian exporters of the same product to that specific High Preference country is included in the *Treated (HP)* treatment group.
- If a Chinese product is under AD investigation in a Low Preference country, the Indian exporters of the same product to that specific Low Preference country is included in the *Treated (LP)* treatment group.

### Appendix C: Effect of AD on CSR expenses - DID with Firm Fixed Effects

In this table, we present the Difference-in-Differences estimates for the effect of AD on CSR expenditure with firm-fixed effects. The dependent variable in columns 1,2, and 3 are  $\ln(1+CSR)$ ,  $\ln(1+Capex)$ , and  $\ln(1+R\&D)$ , respectively. In all specifications, the control group contains firms that have never been exposed to an AD shock within the 2006-2013 sample period. Robust standard errors clustered at the firm level are reported in the brackets. \*\*\*, \*\*, and \* denote statistical significance at 1%, 5%, and 10% levels, respectively.

	Ln(1+CSR)	Ln(1+Capex)	Ln(1+R&D)
	(1)	(2)	(3)
Treated (HP) * Post (HP)	0.199*** (0.072)	0.244*** (0.095)	0.139** (0.062)
Treated (LP) * Post (LP)	0.098 (0.081)	0.118** (0.070)	0.099** (0.046)
Control Variables	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes
Observations	3,762	3,762	3,762
Adj R <sup>2</sup>	0.366	0.283	0.245

### Appendix D: Origin of Shock and the effect of AD on CSR

This table presents the results of the effect of AD on Chinese products from countries with high stakeholder preference for CSR (Panel A) and countries with low stakeholder preference for CSR (Panel B) on CSR expenses of Indian firms. We present the estimates by the most common origins of AD shocks. The dependent variable in all columns is  $\ln(1+CSR)$ . The control group contains firms that have never been exposed to an AD shock within the 2006-2013 sample period. All specifications include the full set of control variables as shown in Table 4, year dummies and industry dummies. Robust standard errors clustered at the firm level are reported in the brackets. \*\*\*, \*\*, and \* denote statistical significance at 1%, 5%, and 10% levels, respectively.

	Dependent Variable: $\ln(1+CSR)$			
	Panel A		Panel B	
	US	EU	Brazil	Rest
	(1)	(2)	(3)	(4)
Treated (HP) * Post (HP)	0.334** (0.141)	0.267** (0.104)		
Treated (LP) * Post (LP)			0.045 (0.111)	-0.038 (0.040)
Treated (HP)	0.227 (0.144)		0.128 (0.113)	
Treated (LP)		0.194 (0.163)		0.070 (0.052)
Control Variables	Yes	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes	Yes
Industry Dummies	Yes	Yes	Yes	Yes
Observations	1,453	992	581	736
Adjusted R <sup>2</sup>	0.389	0.345	0.219	0.201

### Appendix E: Origin of Shock and the effect of AD on CapEx and R&D

This table presents the results of the effect of AD on Chinese products from countries with high stakeholder preference for CSR (Panel A) and countries with low stakeholder preference for CSR (Panel B) on CapEx and R&D expenses of Indian firms. We present the estimates by the most common origins of AD shocks. The dependent variable is  $\ln(1+\text{Capex})$  in columns (1), (3), (5) and (7). The dependent variable is  $\ln(1+\text{R\&D})$  in columns (2), (4), (6) and (8). The control group contains firms that have never been exposed to an AD shock within the 2006-2013 sample period. All specifications include the full set of control variables as shown in Table 4, year dummies and industry dummies. Robust standard errors clustered at the firm level are reported in the brackets. \*\*\*, \*\*, and \* denote statistical significance at 1%, 5%, and 10% levels, respectively.

	Panel A				Panel B			
	US		EU		Brazil		Rest	
	CapEx	R&D	CapEx	R&D	CapEx	R&D	CapEx	R&D
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treated (HP) * Post (HP)	0.334*** (0.108)	0.234** (0.113)	0.307** (0.142)	0.206** (0.096)				
Treated (LP) * Post (LP)					0.340** (0.163)	0.186** (0.083)	0.310** (0.128)	0.190** (0.092)
Treated (HP)	0.250 (0.191)	0.038 (0.028)	0.199 (0.160)	0.035 (0.026)				
Treated (LP)					0.188 (0.134)	0.026 (0.022)	0.158 (0.137)	0.020 (0.018)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,453	1,453	992	992	581	581	736	736
Adjusted R <sup>2</sup>	0.307	0.271	0.275	0.243	0.283	0.280	0.221	0.183

## Appendix F: Effect of AD on CSR expenses - Instrumental Variable Estimates

This table presents the instrumental variable estimates for the effect of anti-dumping initiations on Chinese exports on the CSR of Indian firms who compete in the product market. Export of Indian firms is instrumented by anti-dumping initiations. The dependent variables are given at the top of each column. In columns 1 and 2, we present the first and second stage regressions for AD initiations on Chinese products from countries with high stakeholder preferences for CSR. In columns 3 and 4, we present the first and second stage regressions for AD initiations on Chinese products from countries with low stakeholder preference for CSR. Standard errors clustered at the firm levels are in the brackets. \*\*\*\*, \*\*, and \* indicate significance at the 1%, 5% and 10% levels, respectively.

	Ln (1+Export)	Ln(1+CSR)	Ln (1+Export)	Ln(1+CSR)
	(1)	(2)	(3)	(4)
<i>Exports</i>		0.017**		0.003
		(0.006)		(0.005)
Treated (HP)	0.055***		0.038***	
	(0.012)		(0.010)	
Treated (LP)				
Control Variables	Yes	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes	Yes
Industry Dummies	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes
F-stats	21.00		14.44	
Observations	3,481	3,040	3,481	3,040

### Appendix G: Subsample of Final Duties and Revoked Duties

In this table, we present the effect of AD on Chinese products on the CSR expenses of Indian firms. In panel A, we provide estimates for the subsample of AD initiations that led to a final anti-dumping duty. In panel B, we present results for the subsample of AD initiations where the antidumping duties were revoked. The dependent variable in all columns is  $\ln(1+CSR)$ . The control group contains firms that have never been exposed to an AD shock within the 2006-2013 sample period. All specifications include the full set of control variables as shown in Table 4, year dummies and industry dummies. Robust standard errors clustered at the firm level are reported in the brackets. \*\*\*, \*\*, and \* denote statistical significance at 1%, 5%, and 10% levels, respectively.

	Dependent Variable: $\ln(1+CSR)$			
	Panel A: Final Duties		Panel B: Revoked Duties	
	(1)	(2)	(3)	(4)
Treated (HP) * Post (HP)	0.602*** (0.198)		0.703*** (0.076)	
Treated (LP) * Post (LP)		-0.044 (0.029)		-0.037 (0.058)
Treated (HP)	0.159 (0.128)		0.125 (0.110)	
Treated (LP)		0.057 (0.044)		0.043 (0.034)
Control Variables	Yes	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes	Yes
Industry Dummies	Yes	Yes	Yes	Yes
Observations	3,481	3,040	3,481	3,040
Adjusted R <sup>2</sup>	0.260	0.213	0.328	0.306