What Drives Location Preference for Corporate Social Responsibility (CSR) Investments in India?

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ABSTRACT

Corporate Social Responsibility (CSR) is seen as a means for companies to contribute towards broader societal goals beyond their immediate industrial focus, and companies are known to donate a part of their profits to social development for education, health, and other sectors. In 2014, the Government of India made CSR mandatory for companies beyond a certain level of profitability. It was observed however that many geographies in need of financial assistance for social development actually did not receive much CSR funds. In this paper, we investigate what might be the reasons behind how companies choose the locations for their CSR investments. In particular, we examine political reasons where companies may use CSR to seek favours from politicians. We find several interesting patterns and show that there might be grounds for the government to regulate CSR to some extent.

CCS CONCEPTS

• **Social and professional topics** → **Governmental regulations**; **Industry statistics**.

KEYWORDS

Corporate Social Responsibility; Social development; Corporate-political interlocks; Politically connected companies

1 INTRODUCTION

According to the Companies Act 2013 in India, companies having a net worth of more than INR 500 crores[1], or with an annual turnover of INR 1000 crores or more, or with a net profit of INR 5 crores during any financial year are required to spend at least two percent of their average profit earned during the last three years towards

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[1]INR 10 crore = INR 100 million = approximately USD 1.4 million

CSR activities. CSR investments in India are largely meant for social development activities and it is the company's prerogative to choose where in the country it wants to spend the amount and towards which social development goals. Companies could be inclined to make CSR investments in geographical areas that are severely under-developed or they could invest in community development around their factories or plants, or to create a socially credible image in potentially new markets, or even invest in constituencies of politicians to which the company may have certain links. In this paper, we try to investigate such reasons to understand what drives a company's decisions on where to make CSR investments. CSR investments of public enterprises are likely to be politically influenced. There is evidence from Bangladesh that public sector banks invested in development sectors that were aligned with the election manifesto of the ruling political party [15]. In India, the Comptroller and Auditor General (CAG) [3] noted that several Central Public Sector Enterprises contributed large amounts to the *Statue of Unity* under their CSR mandate, which was an image building project strongly supported by the ruling political party in India [11].

Considering these examples that CSR investments may not always be made with incorruptible intentions, we examine CSR investment data in India and answer the following research questions:

- Do the least developed districts that are in need for development assistance get more CSR funds?
- To what extent is a company's decision of where to invest governed by its political links in that district, or the company's presence in that district?

We find from our analysis that the least developed districts in India do not receive much CSR funds, rather well developed areas attract most of the CSR investment. Companies also prefer to invest in areas close to their places of operation. We also find evidence that political links of companies, factors like whether or not the elected representative from a location belongs to the ruling political party, or is associated with a ministry that is related to the industry sector of the company, also influence decisions of where companies invest.

2 RELATED WORK

Studies indicate the impact of CSR on social development, such as improvements in education, health, and sanitation through CSR in the state of Kerala in India [13]. Studies also indicate the positive branding that CSR can create for the company [6]. Along with these studies that demonstrate the textbook pathways of CSR impact, there is also evidence that political control over public sector enterprises affects CSR investments [7, 15]. Misuse has also been documented, like CSR was used in Tanzania as a means to build political careers for business-persons [9]. In Portugal, politically connected firms used CSR funds to improve the image of their connected politicians [2]. Our work comes closest to these papers about potential misuse

of CSR funds. We however take a quantitative approach through our rich data-set at the company level, unlike the qualitative approach taken in other studies.

The fact that CSR is used as a mechanism for favours between companies and politicians is not altogether surprising. Mian et al. [8], for example, found that in Pakistan the bigger, politically connected firms have access to loans of much higher amounts from government banks as compared to unconnected firms. Another study by Mara Facio [5] showed that across countries, sharp increases in stock prices of companies occur when they form new political connections. In light of this background, our observations are timely. The Government of India set up a high level committee in 2018 to review CSR operations and noted that districts actually in need of development assistance were not getting much funds [12]. Our findings support this observation and we go beyond to identify potentially corrupting factors that may be driving CSR investments.

3 DATASETS

We obtained company specific CSR data (amount spent, in which District, for what purpose, industry sector of the company) from http://www.csr.gov.in for the years 2014 to 2017. Political data with information about the Member of Parliament (MP)'s name, political party and constituency for both the Lok Sabha (lower house of the Indian Parliament) and the Rajya Sabha (upper house of the Indian Parliament) was obtained from http://www.indiavotes.com. Corporate data comprising the company's name, its industry sector and details of its directors, for approximately 90,000 large companies was collected from the Ministry of Corporate Affairs website: www.mca.gov.in. These companies were sampled through a snowball strategy starting with 5,000 publicly listed companies in India and adding more companies that shared directors with those in the seed set of companies. The snowball sampling was done to a depth of 2. Corporate-government interlocks between these companies and their directors, with national level politicians (Lok Sabha and Rajya Sabha MPs between the years 2004 and 2018) and bureaucrats (current and retired officers of the Indian Administrative Services between the years 1961 and 2018) was also used, based on a dataset constructed in another study [14]. Addresses of a sample of factories or plants owned by large companies were obtained from the website https://www.dynamiclevels.com/. This gave us data of 17,330 factories belonging to 2,419 companies.

We undertook careful resolution steps to combine these different datasets. In most cases, the unique Company Identification Number (CIN) available in the datasets helped us match the companies. To match locations, we used string matching to first resolve the locations with the Indian census codes, and then used it as a common field to link the datasets together.

We first start with a broad characterization study of the CSR data. The average CSR expenditure per year is approximately INR 13,000 crores. Sector wise expenditures towards CSR shows that that most investment is made for *education and livelihood* and *health and nutrition*. In terms of geographic preferences, the state of Maharashtra corners almost 16% of the total CSR investment in India, followed by Karnataka (5.75%) and Andhra Pradesh (5.19%). An examination of the per-capita CSR investment for different states shows that states like Goa, Maharashtra and Andhra Pradesh get much larger CSR

investments than poorer states like Bihar, Jharkhand and Madhya Pradesh. A detailed analysis is available in a longer version of the paper [4]. This encourages us to investigate possible reasons behind such a skewed distribution to understand why some of the most deserving geographies for CSR funds do not get adequate attention.

4 RESEARCH QUESTIONS

We answer the research questions by constructing Ordinary Least Squares (OLS) and logistic regression models. We first describe the different variables we constructed and then present the results.

4.1 Variables

4.1.1 Development related variables. Some parliamentary constituencies in India are reserved for marginalized groups. These groups are categorized as *Scheduled Castes* (SC) and *Scheduled Tribes* (ST) [16]. We develop binary variables for the *type of constituency*, of whether it is Reserved (SC/ST) or Unreserved. Further, the Government of India has built a list of 117 most under-developed districts, called *aspirational* districts and we use a binary variable to indicate if a district is *aspirational* or not. To link parliamentary constituencies and districts, we manually mapped constituencies to districts since some districts can be a part of more than one constituency.

We do not have reliable and recent Gross Domestic Product (GDP) data at the district level. Hence, to assess the socio-economic development of a district, we use a proxy measure based on satellite data that we have developed in a separate study [1], where we built a method using daytime satellite imagery to assess the socio-economic development of a district based on six factors: condition of the households, asset ownership, main source of water, main source of lighting, fuel used for cooking, and bathroom facilities. On similar lines as the Human Development Index (HDI), in which health, education, and economic indicators are combined in an equally weighted manner to get a composite statistics, we combined these six factors to form a common index which we refer to as the *Aggregate Development Index* (ADI) of a district.

- *Aggregate Development Index (ADI)*: This index provides a value between 6 and 18 for each district. We approximate the ADI of a constituency as the mean value of the ADIs of the districts that it spans.

4.1.2 Industry Related Variables. The industry related variables attempt to capture a company's interest in making its CSR investment in a particular location. These are:

- *Company has a factory located in the constituency*: This binary variable captures if the company under consideration has a factory located in the constituency.
- *Number of factories in the constituency*: This variable captures the number of factories located in a constituency, indicating the degree of industrialization of the location.
- *Total CSR amount invested in the constituency*: This variable is the sum of all CSR investments made in the districts of a constituency, to indicate the popularity of a constituency to receive CSR investments.
- *Total CSR amount invested in the district, by all companies working in the same industry sector as the company under*

consideration: This variable captures whether other companies working in the same industry sector as that of the company, are also interested in the location. This variable is meant check for broader ecosystem level interests in the location under consideration.

4.1.3 Political Variables. The following variables carry political information about different locations:

- *Vote margin*: This gives the vote margin (%) between the elected Member of the Parliament (MP) of a constituency and the runners-up, based on the 2014 national election in India.
- *State alignment*: This is a binary variable that denotes whether the MP of a constituency also belongs to the same political party or alliance that is in power in the state.
- *Centre alignment*: This binary variable captures if the MP of a constituency also belongs to the same political party or alliance that is in power at the centre.
- *MP is a minister*: This binary variable captures if the elected MP from a constituency is also a cabinet or union minister.
- *Rajya Sabha MP is a minister and uses MPLAD funds for the constituency*: Several union ministry posts are also held by Rajya Sabha MPs who are not elected via national elections. We consider that such ministers may also have an affiliation with specific constituencies, which can be inferred from their choice of the constituency as a recipient of the *Member of Parliament Local Area Development* (MPLAD) funds [10].
- *Ministry-Company interaction*: This binary variable captures if the ministry in which the elected MP (or the affiliated Rajha Sabha MP) from the constituency is a minister, also operates in an industry sector that is of interest to the company.
- *Political party-Company interlock*: Using our knowledge base of corporate-government interlocks [14], this binary variable captures if the political party of the elected MP from the constituency has any member who is a director in the company.
- *Political party-Company donations*: This is a binary variable that captures if the company donated funds to the political party of the elected MP from the constituency.

4.2 Research Question #1

Do less developed constituencies and districts get more CSR funds? Ideally, districts with lower ADI values should receive more CSR funds. We begin with plotting CDFs of the amount of CSR funds received by districts for three categories of ADI: 6-10 (low ADI districts), 11-14 (medium ADI districts), and 15-18 (high ADI districts). We study this both for ADIs of 2011 when the Indian census was last prepared, and ADIs of 2019 for which the values are estimated using the satellite-data based classification models mentioned earlier. The CDF for ADI-2019 is shown in figure 1. We observe that although each range of ADI values has several districts that received no CSR funding, the amounts received by the high-ADI districts are much more than that received by low-ADI districts. While 10% (24) of the high-ADI districts received more than INR 50 crores as CSR, hardly 1% of the low-ADI and medium-ADI districts received similar amounts (only three low-ADI and three medium-ADI districts received similar amounts). 27% (196) of the districts did not receive any CSR funds, including 32 aspirational districts. On the other hand, developed cities like Mumbai and Pune have received more than
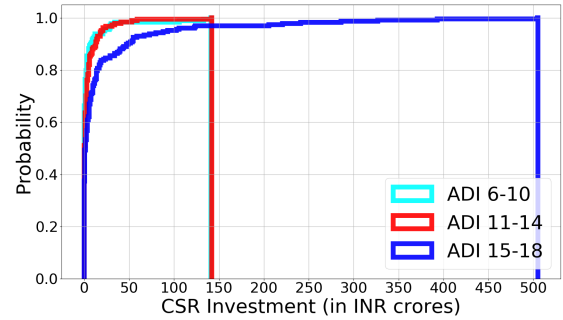

Figure 1: ADI 2019 vs CSR

Table 1: Results for research question #1: Do less developed constituencies and districts get more CSR funds?

Independent Variables	Model 1	Model 2	Model 3
ADI	0.0899 0.000***	0.059 0.000***	0.055 0.000***
(GEN)×(not aspirational)	0.007 (0.283)	0.008 (0.192)	0.006 (0.268)
(SC)×(not aspirational)	-0.018 (0.056)	-0.021 0.017*	-0.02 0.019*
(ST)×(not aspirational)	0.001 (0.906)	-0.005 (0.665)	-0.007 (0.580)
(GEN)×(aspirational)	0.006 (0.430)	0.004 (0.572)	0.005 (0.493)
(SC)×(aspirational)	-0.011 (0.509)	-0.005 (0.731)	-0.006 (0.667)
(ST)×(aspirational)	-0.002 (0.878)	0.003 (0.768)	0.001 (0.915)
Number of factories in the Constituency	-	0.359 0.000***	0.356 0.000***
Vote Margin	-	-	0.006 (0.723)
State Alignment	-	-	0.010 (0.112)
Centre Alignment	-	-	0.005 (0.947)
MP is Minister	-	-	-0.005 (0.637)
Rajya Sabha MP -Minister-MPLAD	-	-	0.04 0.01*
Total Constituencies	543	543	543
Intercept	-0.02	-0.016	-0.021
R Square	0.121	0.283	0.296

500 crores as CSR funds each. These findings show that the CSR investments in districts is not proportional to their developmental needs. We next run three OLS regression models to better understand why some constituencies get more CSR funds than others. The output variable in each model is the total CSR amount funded in a constituency. The models are described in the following sections.

4.2.1 Model 1. This model considers only the development related variables as independent variables, whose coefficients and p-values are shown in table 1. ADI is the only variable that has a statistically significant correlation with the total CSR amount funded in a district, and it has a positive coefficient, indicating that well developed districts tend to get more CSR funding.

4.2.2 Model 2. In this model, we also add the industry related variable: *number of factories in the constituency*, which is seen to have a highly significant positive correlation with the dependent variable, alongside the ADI variable. This shows that more industrialized constituencies tend to receive higher CSR funding.

4.2.3 Model 3. We next add several political variables to Model 2 incrementally. We find that while the ADI and industrialization of a constituency continue to remain significant and positively correlated, a weak correlation also exists with the variable that captures if a Rajya Sabha MP of the constituency is a minister or not, indicating that an affiliation with Rajya Sabha MPs can improve the chances of a constituency to get CSR funds.

4.3 Research Question #2

How does a company decide where to invest its CSR funds?
We next analyze from the company's point of view, of where it decides to invest its CSR funds. The dependent variable here is a binary variable capturing if a company invests in a constituency or not. We carry out logistic regression using the independent variables on the following three models.

4.3.1 Model 1. As shown in Table 2, the first model only includes the developmental variables related to the constituency. ADI again emerges as a significant factor with a positive coefficient, showing that companies tend to invest in more developed constituencies.

4.3.2 Model 2. We next add the industry related variables: *Company has a factory located in the constituency* and *CSR amount invested by companies of the same industry sector*. We find a strong positive correlation for both of these variables, along-with ADI, indicating that companies tend to invest in locations where they work (potentially for the community development of the areas) and where their peers are also investing (potentially for competition, or for common interests of the industry sector in that area).

4.3.3 Model 3. Upon adding political variables we find that state and center alignment are significantly and positively correlated with the outcome, indicating that companies invest in locations from where the MPs belong to political parties that are in power at the state or center. A strong positive correlation also exists for whether the Rajya Sabha MP affiliated with the constituency is a minister or not, indicating political influence as a possible factor in location selection. A weakly significant negative relationship is seen between whether the elected MP or affiliated Rajya Sabha MP from the location, works in a ministry that is directly related to an industry sector of relevance for the company, showing that companies seem to be careful to not be seen as associating with locations that may point to them seeking favours from politicians. Contrary examples do exist, and are described in a longer version of paper [4].

Table 2: Results for research question #2: How does a company decide where to invest its CSR funds?

Independent Variables	Model 1	Model 2	Model 3
ADI	4.249 0.000***	2.363 0.000***	2.363 0.000***
(GEN)×(not aspirational)	-0.235 (0.732)	-0.288 (0.864)	-0.327 (0.729)
(SC)×(not aspirational)	-0.627 (0.735)	-0.355 (0.819)	-0.382 (0.634)
(ST)×(not aspirational)	-0.587 (0.865)	-0.515 (0.975)	-0.619 (0.774)
(GEN)×(aspirational)	-0.644 (0.613)	-0.463 0.921	-0.478 0.983
(SC)×(aspirational)	-0.739 (0.904)	-0.537 (0.058)	-0.575 0.041*
(ST)×(aspirational)	-0.551 (0.709)	-0.33 (0.835)	-0.619 (0.571)
Company has a factory located in constituency	-	4.011 0.000***	3.984 0.000***
CSR amount invested by companies of same sector	-	20.223 0.000***	19.884 0.000***
Vote Margin	-	-	0.213 0.032*
State Alignment	-	-	0.656 0.000***
Centre Alignment	-	-	0.315 0.000***
MP is Minister	-	-	-0.066 (0.367)
Rajya Sabha MP -Minister-MPLAD	-	-	0.427 0.000***
Ministry Company Interaction	-	-	-0.377 0.003*
Political Party -Company Interlock	-	-	0.301 (0.664)
Political Party -Company Donations	-	-	-0.04 (0.784)
Intercept	-3.158	-2.489	-2.74
R Square	0.194	0.351	0.354

5 CONCLUSION

We investigated patterns based on which companies decide the locations of where to invest their CSR funds. We found that companies prefer to invest in places where they have factories, or where other companies of the same industry sector are investing. We also found that areas which are already developed tend to receive more CSR funds, while some of the most under-developed districts lack CSR funding. We found a non-trivial relationship of a company's decisions being influenced by political factors, such as more investments made in locations where the MPs belong to the state/central ruling party, or where the MPs hold ministerial posts. This indicates that CSR investments should be regulated to some extent, with the goal of aiding under-developed areas and also so that CSR does not become a tool of quid-pro-quo between companies and politicians.

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