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Effect of organizational status on employment-related corporate social responsibility: Evidence from a regression discontinuity approach

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Abstract

Research Summary: We examine the effect of organizational status on employment-related corporate social responsibility (CSR). As employees derive nonpecuniary benefits from both organizational status and employment-related CSR, lower status firms may invest in nonpecuniary employment-related CSR to compete in a status-segmented labor market. We identify the effect using a regression discontinuity design (RDD) in the context of the Fortune 1000 rankings, as we contend that the 500th rank position marks an artificial breakpoint in status where quality follows a smooth distribution. We find that firms just failing to make the Fortune 500 perform significantly better in nonpecuniary employment-related CSR. Our findings provide causal evidence for the labor market advantage of organizational status and a richer window into the strategic motivations behind CSR investments.

Managerial Summary: We examine one strategic investment that lower status firms make to compete in a status-segmented labor market: employment-based corporate social responsibility (CSR). We identify the effect using a regression discontinuity design (RDD) in the context of the Fortune 1000 rankings, as we argue that the 500th rank position creates a discontinuity in status at a precise location where quality differences can be assumed to follow a smooth distribution. We find that firms just failing to make it into the Fortune

500 perform significantly better in nonpecuniary employment-related CSR as compared to firms just in the Fortune 500. The findings demonstrate that building a reputation for being socially responsible may offset differences in status and make a lower status organization more appealing to employees.

KEYWORDS

corporate social responsibility, nonpecuniary benefits, organizational status, quasi-experiments, strategic human capital

1 | INTRODUCTION

Organizational status benefits firms in acquiring and retaining employee talent (e.g., Bidwell et al., 2015; Podolny, 1993; Rider & Tan, 2015). High-status organizations are able to recruit high quality employees at a lower cost relative to their lower status peers (Podolny, 1993). Potential employees value the quality signal, esteem, and other psychological advantages conferred by status (Bidwell et al., 2015). The nonpecuniary benefits of working for a high-status organization lead to cost reductions in hiring and retention. The resulting cost savings create a human capital advantage for high-status organizations, as talented employees may even forgo pecuniary benefits in exchange for high status affiliation (Bidwell et al., 2015; Phillips, 2001; Rider & Tan, 2015).

In short, high status firms reward employees with nonpecuniary benefits, which gives those firms a labor market advantage. How, then, do lower status firms compete with high status firms in attracting quality employees? Status scholars have maintained that one way in which low-status firms compete is to expend more costs to make their firms more attractive (e.g., Podolny & Phillips, 1996). For example, they may pay their employees more to make up for the lack of status. In fact, research on status and market competition often treat salaries and status as substitutable (e.g., Castellucci & Podolny, 2017). However, salary tradeoffs alone may not be sufficient, partly because employees prefer the nonpecuniary benefits associated with status.

In this paper, we examine one strategic investment that lower status firms make in order to compete in a status segmented market: employment-based corporate social responsibility (CSR). This type of CSR provides employees with a more hospitable workplace, and involves practices such as employee health and safety, union and employee relations, human capital development, supply chain labor standards, professional development, and work-life benefits. Such practices make the organization more attractive inasmuch as they signal to employees that the firm is a virtuous, more hospitable place to work.

We theorize that when deprived of status advantages, lower status organizations must find ways to compete with high-status organizations for the best employees. Being socially responsible to employees may offset differences in status and make a lower status organization more appealing than it otherwise would be—an insight that is compatible with past research on the relationship between CSR and employee governance (e.g., Bode et al., 2015; Carnahan et al., 2017; Doh et al., 2011; Flammer & Luo, 2017; Gupta et al., 2017).



Although we do not believe that investing in employment-based CSR is the only way that lower status firms offset their status disadvantages, CSR is a distinguishing firm feature (Flammer, 2015b). Research provides mixed evidence as to the financial returns associated with CSR, suggesting that improved social responsibility may have more to do with the social environment of the workplace than it does with profitability (e.g., Barnett & Salomon, 2006; Flammer, 2015a). Increasingly, people seek employment with firms that authentically meld social values with their careers and daily work experience (Pamphile & Ruttan, 2022). Firms that invest in CSR increase employee motivation and engagement and reduce turnover (Carnahan et al., 2017). In other words, being socially responsible creates nonpecuniary benefits for employees (Bode et al., 2015; Flammer & Luo, 2017), making it easier for such organizations to recruit, retain, and reward high-value employees. In this respect, having a reputation for being socially responsible may create similar employment-related benefits as those associated with possessing positive organizational status (e.g., Bidwell et al., 2015; Podolny, 1993; Rider & Tan, 2015).

By examining the effects of status on employment-related CSR investments, this paper advances research on the *causal* effects of organizational status on firm behavior. Despite the ubiquity of status research over the last three decades, identifying the causal effects of status poses considerable empirical challenges. To start, it is difficult to differentiate the effects of status from quality, especially in cases where quality is uncertain and/or difficult to observe. None of the recent research on status, that we are aware of, has focused on identifying the causal effects of status in labor markets specifically (e.g., Azoulay et al., 2013; Kim & King, 2014; Malter, 2014; Simcoe & Waguespack, 2011), partly due to the risk of reverse causality. Hiring has long been proposed to be a conduit whereby status can flow from one organization to another (Dokko & Rosenkopf, 2010; Podolny & Phillips, 1996; Rider & Tan, 2015; Roberts et al., 2011). One must therefore be cautious when interpreting the relationship between organizational status and the ability to hire employees of a given quality and cost. For example, does organizational status attract high-quality employees, or do high-quality employees contribute to elevated organizational status? While it may be easy to say that both effects are valid, it is far harder to isolate causality in one direction or the other.

To causally identify the effect of organizational status on employment-related CSR, we utilize a regression discontinuity design (RDD) in the context of the Fortune 500 and 1000 rankings. Specifically, we treat the rank positions from 1 to 1000 as a continuous assignment variable and the Fortune 500 cut-off as an arbitrary diagnostic threshold. We argue that the evolution of the ranking, as well as its sole reliance on revenue as ranking criteria, renders the 500th rank position an artificial breakpoint. Empirically speaking, this breakpoint is useful as it creates a discontinuity in status—that is, regardless of one's specific rank, being in the Fortune 500 is status enhancing compared to being in the Fortune 1000 only—at a precise location where quality differences can be assumed to follow an otherwise smooth distribution. To put it differently, there is no reason to believe *ex ante* that the 499th largest firm (by revenue) is notably different in underlying quality as compared to the 501st. Nevertheless, these two firms will vary in status, as only one can claim membership in the coveted Fortune 500.¹ Implementing this research design, we find that firms just failing to make it into the Fortune 500 have significantly better reputations in employment-related CSR—which should logically reflect investment in employment-related CSR activities—as compared to firms just in the Fortune 500.

¹Theoretically speaking, belonging to the Fortune 500 indicates membership in a group of actors that are differentiated by a characteristic that signals higher status in society (Berger et al., 1972).

In what follows we introduce the theoretical reasons for labor market benefits of organizational status and develop our hypothesis regarding the relationship between organizational status and employment-related CSR as substitutes. We then describe the empirical context where we implement RDD and present our main estimation results and a series of robustness tests that address a number of alternative explanations. Finally, we consider the broader theoretical and practical implications of our findings in the discussion section.

2 | THEORY AND HYPOTHESIS DEVELOPMENT

2.1 | Nonpecuniary benefits of employer status

Prior research theorizes that employer status is an important form of nonpecuniary employment benefit that employees value (Rider & Tan, 2015). All else equal, employees have a greater willingness to work for high-status organizations relative to lower status ones (e.g., Bidwell et al., 2015; Phillips, 2001; Rider & Tan, 2015). Lacking the nonpecuniary employment benefits associated with organizational status, companies with lower status logically face greater challenges in the recruitment, motivation, and retention of quality employees (Bidwell et al., 2015; Phillips, 2001; Podolny, 1993; Rider & Tan, 2015).

There are two main mechanisms that underlie a positive link between organizational status and the nonpecuniary advantages given to employees (Correll et al., 2017; Sharkey & Kovács, 2017). The first mechanism relates to how status may affect inferences of underlying quality (Azoulay et al., 2013; Kim & King, 2014; Kovács & Sharkey, 2014; McDonnell & King, 2018; Podolny, 1993; Salganik et al., 2006; Simcoe & Waguespack, 2011). When decision-makers face difficulties verifying quality, they may rely on signals from social standings such as status to form their evaluations. Empirical research shows that status is associated with expectations and presumptions of higher quality (e.g., Azoulay et al., 2013; Kim & King, 2014; Kovács & Sharkey, 2014; McDonnell & King, 2018). Thus, employees may find it beneficial to work for a high status firm, which they perceive as conferring greater quality.

Additionally, recent research highlights a second mechanism whereby benefits of status arise. As Correll et al. (2017) point out, decision makers are often interdependent such that their decisions are based on inferences of potential actions taken by the other decision-makers (Correll et al., 2017; Malter, 2014; Ridgeway & Correll, 2006; Sharkey & Kovács, 2017). As this tendency of third-order inference dominates judgments of quality when interdependence is high, decision makers act on prevailing status beliefs and favor high status actors. Examples of status benefits in such decision contexts include conspicuous consumption (Malter, 2014), gift giving (Sharkey & Kovács, 2017), stock market reaction (Smith et al., 2021), and market intermediaries (Zuckerman et al., 2003).

In the labor market context, both mechanisms of status advantages are salient. High-status affiliations can provide signals of superior human capital (e.g., Merton, 1968; Podolny, 1993; Rider & Tan, 2015), but additionally, being employed by high-status organizations creates an association that its employees value beyond any direct pecuniary benefit, especially inasmuch as they perceive that other people evaluate high status associations more favorably (Bidwell et al., 2015; Jensen, 2006; Merton, 1968; Phillips, 2001; Podolny, 1993; Podolny, 2001; Rider & Tan, 2015; Zuckerman et al., 2003).



2.2 | CSR as substitute for employer status

The implications of occupying unfavorable status positions are far-reaching for low-status companies in labor market competition. As a significant body of research on strategic human capital shows, the quality of human capital helps create a firm's competitive advantage (Campbell et al., 2012; Coff, 1997; Kryscynski et al., 2021). The status-based challenges in the recruitment and retention of human capital may lead to cumulative disadvantage that undermines the low-status companies' competitiveness. Low-status companies are likely to take strategic actions to counteract these challenges, seeking to offset the lack of nonpecuniary benefits associated with status by making their companies more attractive to employees in other domains. For example, previous research has proposed that high employer status may be substituted for pecuniary benefits in the forms of higher salary or elevated prospect for promotion (e.g., Castellucci & Podolny, 2017; Phillips, 2001; Podolny, 1993).

However, pecuniary benefits are limited in their effectiveness when it comes to substituting for nonpecuniary benefits that are valued by employees (Stern, 2004). When employer status is highly coveted in a status-segmented labor market, pecuniary benefits may be insufficient for low-status companies to attract and to retain quality employees. Also, the use of pecuniary incentives in employee governance may be ineffective and, in some circumstances, may even work counter to organizations' goals (e.g., Bergstresser & Philippon, 2006; Flammer & Luo, 2017; Frank & Obloj, 2014; Hur & Nordgren, 2016; Larkin, 2014; Larkin et al., 2012). Examples of the unintended consequences associated with the use of pecuniary incentives include attentional fixation on compensation instead of work-related tasks (Coff, 1997; Hur & Nordgren, 2016), increases in employee gaming and unethical behavior (Bergstresser & Philippon, 2006; Burns & Kedia, 2006; Frank & Obloj, 2014; Larkin, 2014), and decreases in employee satisfaction (Larkin et al., 2012).

Both firms and employees may prefer nonpecuniary benefits as a substitute for status affiliation (e.g., Bode et al., 2015; Burbano, 2016; Campbell et al., 2012; Carnahan et al., 2017; Flammer & Luo, 2017; Gubler et al., 2018; Rider & Tan, 2015). Because nonpecuniary benefits often entail firm-specific commitment, they tend to be less imitable than the provision of monetary rewards alone (Campbell et al., 2012). In this way, nonpecuniary benefits may provide companies with important pathways to sustainable competitive advantage related to human capital (Campbell et al., 2012; Flammer & Luo, 2017).

In particular, a growing literature points to the role of CSR as an important source of nonpecuniary benefits (Bode et al., 2015; Brammer et al., 2007; Carnahan et al., 2017; Doh et al., 2011; Flammer & Luo, 2017; Gupta et al., 2017). In particular, employment-related CSR is an attractive nonpecuniary benefit inasmuch as it is directly targeted at the employees. Flammer and Luo (2017) theorized that employment-related CSR is an effective lever in employee governance. Employing a quasi-experiment design that exploits exogenous shocks due to variation in state unemployment benefits, the authors documented the causal effect of employment-related CSR on alleviating concerns in employee governance. Gubler and coauthors found a significant increase in worker productivity brought by corporate wellness programs which is an integral part of employment-related CSR (Gubler et al., 2018).

Moreover, compared to other forms of CSR, employment-related CSR is less likely to be controversial with a broad spectrum of employees. Other forms of CSR, including environmental and social practices, vary in their appeal to employees, partly due to differences in employees' political ideology (e.g., Gupta et al., 2017). Heterogeneity in employees' attitudes and values will affect which kinds of CSR they find meaningful and motivating (Hicklenton et al., 2021). CSR

practices that are incongruent with the values of some employees may be alienating and demotivating to those same employees (Pamphile & Ruttan, 2022). Some CSR issues, like those related to the environment, have become especially polarizing (Feinberg & Willer, 2013). In contrast, CSR practices aimed at employee well-being have broad appeal because they provide broad benefits to employees (Bode & Singh, 2018; Gubler et al., 2018).

Using employment-related CSR to address challenges in employee management is particularly pertinent to low-status firms that seek to offset their competitive disadvantage. Employment-related CSR involves embracing positive employment practices, such as human capital development, while also avoiding negative labor practices, such as employing sweatshop labor. Maximizing the good while minimizing negative employment practices sends a signal to employees that the company cares about employee welfare and is willing to incur costs in order to “do the right thing” for its employees. Importantly, developing a reputation for good employment-related CSR is not without costs. Emphasizing and investing in employee welfare creates additional labor costs in its supply chain. Therefore, building a reputation as a good employer requires real investment on the firm's part. For this reason, we believe that firms with incentives to offer nonpecuniary benefits to their employees (in particular, low-status firms) will be more likely to seek to build a reputation in employment-related CSR.

Hypothesis 1. All else equal, low-status companies will engage in more employment-related CSR than high status companies.

3 | EMPIRICAL STRATEGY

The context where we test our hypothesis is the Fortune 500/1000 ranking. In 1955, the Fortune magazine began to rank all US public companies by annual revenue and to publish the list of the 500 largest companies as the US business elites. In its earlier years, the Fortune 500 ranking consisted almost entirely of manufacturing companies. With the rise of the service sector, Fortune started to publish a separate “Service 500” ranking in addition to the traditional “Manufacturing 500” in the 1970's. In 1995, Fortune redefined the ranking to be the Fortune 1000 ranking that listed the top 1000 US companies by their revenue regardless of sector (Deile, 2003). In this section, we argue that the unique history of the Fortune 500/1000 ranking provides a promising empirical setting where we can apply a sharp RDD to examine the causal effect of organizational status on employment-related CSR.

3.1 | Fortune 500 as a discontinuous threshold that confers organizational status

We propose that the Fortune ranking confers a high-status distinction on companies ranked within the Fortune 500 category. Although nominally a ranking of the largest companies, the Fortune 500 has become an important status marker in the business community. The first reason of this relates to the important role of publicity in the construction of status beliefs. While status beliefs can emerge from direct interactions (Ridgeway et al., 1998; Webster & Hysom, 1998), an integral premise for status beliefs to become actionable and consequential is the spread of common knowledge about who holds greater status (Correll et al., 2017).



In other words, publicity is key to the formation of consequential status beliefs. It follows that prominent third parties, such as *Fortune* magazine, are particularly impactful in the construction of organizational status due to their immeasurably high influence in the business community (Bowers & Prato, 2018; Correll et al., 2017; Espeland & Sauder, 2016; Lynn et al., 2009; Sauder et al., 2012; Sharkey & Kovács, 2017). The Fortune ranking is one of the first and most publicized rankings in business history.

More importantly, while the Fortune ranking is based solely on revenue size, the Fortune 500 can be considered as a discontinuous threshold that confers organizational status because of how *Fortune* publicized the Fortune 500 in the past few decades. Specifically, the publicity around the Fortune 500 was dedicated primarily to the notion that Fortune 500 is a group of prestigious (i.e., high status) companies. By contrast, much less attention is paid to the specific positions of the companies ranked within this group. In this respect, the way that *Fortune* publicized the Fortune 500 resembles the active construction of a category where objects are considered relatively similar within it (Rosch, 1978). As organizations derive part of their identity through membership in categories (Smith, 2011), belonging to the Fortune 500 confers a categorical distinction that is similar in function to what social psychologists describe as a “status characteristic” (Berger et al., 1972). If an organization is ranked, it implicitly belongs to a high status group and this serves as a distinguishing characteristic that elevates it above other organizations (Bowers & Prato, 2018; Sauder et al., 2012).

Figure 1 presents confirmatory evidence for the disproportionate publicity around the Fortune 500. We searched for the term of Fortune ranks at each hundredth rank position within Fortune 1000 in the Business Source Premier database (e.g., Fortune 100, Fortune 200, ..., Fortune 900, Fortune 1000), which returns the number of mentions by a variety of media sources including magazines, trade publications, academic journals, newspapers, market research reports, and industry profiles. To ensure comparability, Figure 1a plots the total number of search results after 1995 when the Fortune ranking was extended to the Fortune 1000. Figure 1 presents strong evidence that highlights the publicity distinctiveness of the Fortune 500 category in the otherwise smoothly distributed Fortune 1000. Specifically, the Fortune 500 receives about more than four times the number of media mentions than the Fortune 1000. Among other hundredth rank positions, the Fortune 100 has even

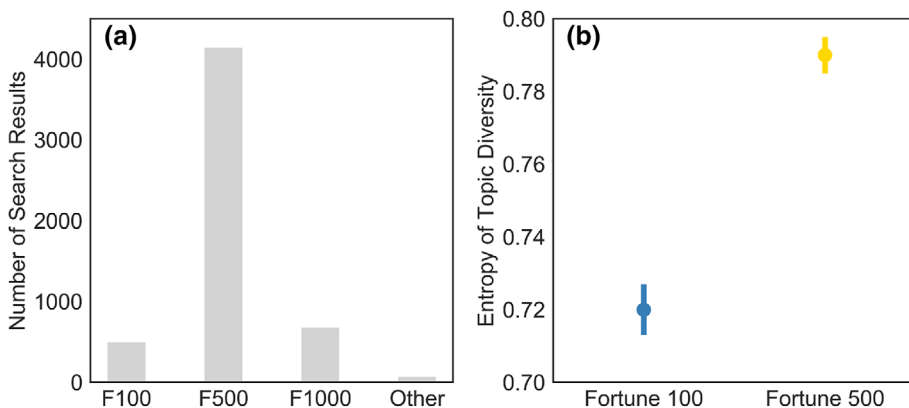


FIGURE 1 (a) Number of Media References. (b) Subject diversity in media references to Fortune 100 and Fortune 500.

lower publicity than the Fortune 1000. The number of media mentions to all other hundredth rank positions in the Fortune ranking is minimal.

In addition, the stark contrast between the publicity of the Fortune 100 and the Fortune 500 provides additional support for our contention that the Fortune 500 is a distinctive high status category due to its categorical construction by *Fortune*. Although Fortune 100 companies are much larger in revenue size, Figure 1a demonstrates that the Fortune 500 as a category receives much more attention than the Fortune 100. To further examine the difference in the extent of categorical construction between the Fortune 500 and the Fortune 100, Figure 1b plots the Normalized Shannon Entropy (Eagle et al., 2010) which measures the diversity of the subjects associated with the media mentions to the Fortune 500 and the Fortune 100 respectively. As can be seen in the figure, the Fortune 500 is associated with a much more diverse set of subjects than the Fortune 100, which is suggestive of a greater degree of inclusivity and abstraction as a meaningful category (Rosch, 1978). As less effort was made to establish the Fortune 100 as a distinctive category, we do not expect the Fortune 100 to mark a discontinuous status threshold in the otherwise smoothly distributed Fortune ranking. For our purposes, the Fortune 100 is a useful placebo cut-off for comparison to inclusion in the Fortune 500.

Therefore, we contend that there exists a discontinuity in status conferred on companies that are just above and below the 500th position (i.e., just in versus just out of the Fortune 500) while revenue (i.e., the underlying statistic determining the Fortune ranking) follows an otherwise smooth distribution around this threshold. As Merton (1968) notes in his observation of “the 41st chair,” rankings generate a discontinuity in status around the endpoint of membership in the ranking. This notion pertains to the 500th position in the Fortune 1000 ranking in particular. As *Fortune* only began to extend the ranking to the Fortune 1000 40 years after the Fortune 500 category had been extensively publicized, the Fortune 500 category has continued to garner more publicity and prestige, as indicated in Figure 1.

Additionally, anecdotal evidence abounds that Fortune 500 is a significant distinction ascribed to employers in job advertisements and by labor market intermediaries (e.g., Gelber, 2023; Joyce, 2021) as well as local governments and regional economic development organizations alike (e.g., Colorado Office of Economic Development & International Trade, 2016; Michigan Economic Development Corporation, 2023). There also exists much anecdotal evidence that companies that just fail to make the Fortune 500 emphasize commitment to employment-related CSR on pertinent dimensions. For example, Snap-on has invested heavily in its employee “safety culture” and fostered professional development (Snap-on Incorporated, 2022, 2023). In a similar vein, Conduent, which only recently made the Fortune 500, is well known for investing heavily in their employee culture and fostering diversity in the workforce (Conduent, 2022). Importantly, Burlington Resources sees a top priority of its CSR program is “attracting, developing, and retaining top talent” (Burlington Stores, 2022).

In summary, we contend that Fortune 500 marks a discontinuous threshold that confers organizational status to companies ranked within this category, providing a promising context to implement regression discontinuity to investigate the effect of organizational status on employment-related CSR. The treatment of organizational status—here, being part of the Fortune 500 or not—follows a discontinuous function of rank positions in the Fortune 1000 with the 500th position as the diagnostic threshold in the otherwise smoothly distributed rank positions. While the Fortune ranking is generated by revenue information,² the Fortune 500/1000

²The revenue information obtained from Compustat may not fully align with the historical information used at the time when the rankings were published, in part due to restatements and updates incorporated by Compustat.



ranking has been actively constructed and extensively publicized independent of the underlying revenue information. What carries meaningful implications for organizational status is the Fortune ranking rather than revenue. Therefore, the rank position *Fortune-rank* constitutes the assignment variable in this RDD context. The independent variable organizational status is measured by a dichotomous variable *Fortune 500* that equals one if a company is ranked within the Fortune 500 and zero if ranked between the Fortune 501 and 1000.

We further argue that companies are unlikely to control and manipulate their rank positions with precision in the Fortune 500/1000 ranking. To start with, the falsification of revenue data entails punitive market reactions as well as regulatory punishment by the SEC. Furthermore, Because the Fortune ranking is determined by revenue information, where a company ends up depends on its relative standing across the full spectrum of companies and industries in a given fiscal year. Precise manipulation of one's position is unlikely as it entails detailed knowledge of all other companies' performance before their financial data become available. Additionally, *Fortune's* simple and straightforward ranking method leaves little room for manipulation on behalf of companies or *Fortune* itself. Put together, we argue that the Fortune 500/1000 ranking provides a unique context for implementing a sharp RDD to estimate the effect of organizational status on employment-related CSR.

3.2 | Nonpecuniary employment-related CSR

To operationalize nonpecuniary employment-related CSR, we use data from MSCI ESG STATS KLD (MSCI) database and Thomson Reuters' ASSET4 (ASSET4) database for baseline analyses and robustness tests, respectively. First, the MSCI data provide ratings of corporate social performance across a variety of dimensions including community, corporate governance, diversity, employment relations, environment, human rights, and product quality. Having extensive coverage is particularly important for our empirical strategy, as the RDD identification requires dense distribution of observations in a local area near a focal threshold. The MSCI database provides comprehensive coverage of firms' CSR performance that extends back to 1995 when the Fortune 1000 ranking first became available. The MSCI data is one of the most widely used databases in academic research on CSR. Our use of the rating differs from the majority of that existing research. Rather than assuming the ratings data to represent objective measures of employment responsibility, we treat the data as a proxy measure of the amount of effort (and consequently the cost) expended by a company to improve its reputation in nonpecuniary employment-related CSR. We assume that increases in a company's nonpecuniary employment-related CSR reputation can function to improve its attractiveness to current and potential employees. The MSCI database does have limitations. For example, several researchers have cautioned against the practice of aggregating MSCI scores across dimensions or the aspects of concerns and strengths (Chatterji et al., 2009; Flammer & Luo, 2017). Furthermore, ongoing debate in the CSR literature highlights considerable differences that exist among popular and publicly available databases (Chatterji et al., 2016).

We make systematic efforts to assuage these concerns when operationalizing nonpecuniary employment-related CSR. First, we conduct systematic robustness tests with an alternative dataset. We use ASSET4 data, another widely used dataset in academic research that provide ESG ratings globally in four broad categories: environmental, economic, social, and corporate governance categories. Second, we focus on the subcategories in both the MSCI and the ASSET4 data that pertain to nonpecuniary employment CSR (Appendix S9).

Specifically, in the baseline analyses with MSCI data, we classify the subcategories in the employment relations dimension cash profit sharing, retirement benefit strengths, and employee stock ownership as pecuniary and the subcategories including employee health and safety, union relations, human capital development, supply chain labor standards, human capital-other strengths, employee relations, professional development, and work-life benefits as nonpecuniary (Appendix S9A). Each subcategory is a binary variable indicating if the company has a strength in that area in a given year. Our baseline dependent variable measures whether the company provides nonpecuniary employment-related benefits with a binary variable indicating if the company has any strength in the pertinent subcategories. Accordingly, the measure is derived from the nonpecuniary subcategories, which equals to one if one or more subcategories equal to one and zero otherwise. In the robustness tests with ASSET4 data, we also classify the subcategory-level ASSET4 ratings into two buckets of pecuniary and nonpecuniary employment-related CSR (Appendix S9B). The ASSET4 data at the subcategory-level are binary variables indicating whether a company has a strength in the respective area. In this test, we operationalize the dependent variable nonpecuniary employment-related CSR with a count variable by the sum of the pertinent nonpecuniary subcategories in ASSET4.

3.3 | Covariates

We include a vector of control variables related to companies' financial and operating performance including return on assets (ROA, lagged), sales growth, book-leverage ratio, cash ratio, earnings-per-share (EPS), the natural log of employment size, industry-fixed effect and year-fixed effect. We include year-fixed effects in the analyses because we use pooled cross sections of data for our main RDD analyses (Lee & Lemieux, 2010). We also control for industry-fixed effects inasmuch as previous research on the nonpecuniary benefits of employer status is often situated in labor market competition within industries (e.g., Rider & Tan, 2015). Also, recent research on the strategic value of CSR highlights variations across industries (Flammer & Luo, 2017) and shows that differentiation through CSR is more likely to be achieved when the companies are otherwise similar (Flammer, 2015b).

3.4 | Data and sample

Our baseline analyses are based on data from 1995 to 2015 and were obtained from *Fortune*, Compustat North America Fundamentals Annual database, and MSCI ESG STATS KLD (MSCI) databases. We begin with 1995 because this is the year that *Fortune* began to publish the full Fortune 1000 ranking, making 1995 the earliest year for which our estimation method can be used. Specifically, Fortune ranking in year_{*t*} is based on the revenues of fiscal year_{*t-1*}. The publication date is in the spring of year_{*t*} around March, April, or May. The MSCI score on year_{*t*} comes out after the end of year_{*t*}. Therefore, the Fortune ranking precedes the MSCI score for around 8 months. After integrating the Fortune ranking, MSCI social ratings, and the Compustat data, the final dataset on which we draw for our baseline analysis contains 15,875 firm-year observations from 1995 to 2015. In the RDD analyses and robustness tests that follow, we show that our results are robust when we employ different analysis samples determined by a variety of bandwidth choices.



In the robustness tests with ASSET4 data, we integrated the Fortune ranking from *Fortune*, Compustat North America Fundamentals Annual, and Thomson Reuters' ASSET4 databases after 2002 when the ASSET4 ratings became available. The robustness test analysis sample contained 9947 firm-year observations from 2002 to 2022.

3.5 | Test for quasi-randomized assignment

The key identifying assumption of RDD in this context is that companies are not able to strategically manipulate the assignment variable *Fortune-rank* with precision, so that assignment to treatment is as good as randomly assigned around the diagnostic threshold. As we discussed previously, the context of Fortune ranking has several unique characteristics that are expected to prevent companies from precise manipulation of the assignment variable *Fortune-rank*. In this section, we engage in empirical test for quasi-randomized assignment following convention³ (e.g., Flammer, 2015a; Flammer & Bansal, 2017; Imbens & Lemieux, 2008). Specifically, we examined whether there exist any pre-existing differences in the covariates and the lagged dependent variable across the Fortune500 threshold. Table 1 tests whether companies that are immediately above or below the Fortune500 threshold have similar ex ante characteristics, corresponding to all firm-level covariates and the dependent variable that we consider in the main analyses, controlling for linear trends in the distance from the Fortune500 threshold. Following previous research (Flammer, 2015a), we measure the variables of interest in the year preceding the ranking ($t - 1$) and the change in the covariate from year ($t - 2$) to year ($t - 1$). Models (1) and (2) in Table 1 report the comparison results using two widely used data-driven bandwidth selection methods, including cross-validation (Calónico et al., 2015) and Imbens and Kalyanaraman (2012). As the p -values indicate, none of the variables of interest demonstrate statistically significant difference among companies on either side of the Fortune500 threshold within both the cross-validation bandwidth and the Imbens and Kalyanaraman (2012) bandwidth, providing support for our identifying assumption that companies are incapable of precise manipulation of the assignment variable.

4 | RESULTS

4.1 | Graphical analyses

Our main analyses consist of graphical analyses, parametric estimation results, and nonparametric estimation results. Compared to the parametric and nonparametric estimation results that provide more conclusive evidence than graphs (Almond et al., 2010), graphical analyses are widely used in RDD to visualize the discontinuity at the diagnostic threshold. We began the main analyses

³We implement the McCrary density test to investigate if there exists a significant difference in the density of observations above and below the Fortune500 threshold in our analysis sample (McCrary, 2008). In our empirical context, the assignment variable *Fortune-rank* should in theory follow a continuous distribution as every rank position typically corresponds to one firm in each year. Due to the limited coverage of the MSCI dataset, our analysis sample is affected by missing data, which warrants further inspection into the continuity of the assignment variable (Appendix S1).

TABLE 1 Covariate balance.

Variables	(1) Cross-validation	(2) Imbens and Kalyanaraman (2012)
ROA ($t - 1$)	−0.00333 (0.00455)	−0.00325 (0.00462)
ROA (change from ($t - 2$) to ($t - 1$))	−0.000751 (0.00560)	−0.00350 (0.00596)
Book-leverage ratio ($t - 1$)	0.0134 (0.0146)	0.0154 (0.0147)
Book-leverage ratio (change from ($t - 2$) to ($t - 1$))	4.89e-06 (0.00265)	0.000379 (0.00278)
Cash ratio ($t - 1$)	0.00240 (0.00510)	0.00147 (0.00516)
Cash ratio (change from ($t - 2$) to ($t - 1$))	−0.000178 (0.00278)	−0.000631 (0.00294)
Sales growth ($t - 1$)	−21.39 (38.90)	−5.424 (40.04)
Sales growth (change from ($t - 2$) to ($t - 1$))	89.03 (69.00)	95.96 (68.71)
Employment size (log) ($t - 1$)	−0.0330 (0.0736)	−0.0501 (0.0737)
Employment size (log) (change from ($t - 2$) to ($t - 1$))	0.0176 (0.0110)	0.0169 (0.0114)
EPS ($t - 1$)	−0.131 (0.714)	0.212 (0.719)
EPS (change from ($t - 2$) to ($t - 1$))	−0.785 (0.523)	−1.016 (0.634)
Nonpecuniary Employee CSR ($t - 1$)	−0.0392 (0.0246)	−0.0363 (0.0241)
Nonpecuniary Employee CSR (change from ($t - 2$) to ($t - 1$))	−0.0162 (0.0170)	−0.0131 (0.0181)
<i>Bandwidth Size</i>	[275:725]	[293:707]

Note: Each entry presents the result of a separate regression. Columns (1) and (2) report regressions using cross-validation bandwidth and Imbens and Kalyanaraman (2012) bandwidth, respectively. All comparisons are conducted controlling for the distance between the rank positions and the Fortune 500 cut-off with standard errors clustered on the firm level.

by plotting the relationship between the dependent variable *Nonpecuniary Employment CSR_i* and the assignment variable rank positions in Fortune 1000 to visually examine the existence of a discontinuity at the diagnostic threshold at Fortune 500.



Figure 2 plots the relationship between *Nonpecuniary Employment CSR_i* and *Fortune-rank* using locally weighted scatterplot smoothing. The y-axis indicates *Nonpecuniary Employment CSR_i*, and x-axis indicates Fortune rank positions. Diamond dots are the mean of *Nonpecuniary Employment CSR_i* within bins. We specified 10 bins on both sides of the cut-off using bin width of 50 rank positions. Bandwidth size is the full analysis sample. As the figure shows, there is a visible discontinuity in *Nonpecuniary Employment CSR_i* around the Fortune500 threshold, with companies that just fail to make the Fortune 500 category displaying higher nonpecuniary employment-related CSR. Additionally, we also present the graphical analysis using an alternative IMSE-optimal evenly spaced bin-selection method (Calonico et al., 2017), and an alternative dependent variable measure filtering out a vector of covariates and within-firm correlations of errors overtime from the dependent variable (Appendix S2).

4.2 | Parametric estimation

To estimate the size of the discontinuity at the Fortune 500 threshold, we first use a standard parametric method of regression discontinuity analysis that includes flexible functional forms of the assignment variable (e.g., Imbens & Lemieux, 2008). Following convention, we pool the data from 1995 to 2015 and use robust standard errors clustered on the firm level to account for within-firm correlation of the errors overtime (Lee & Lemieux, 2010). We specify the following model for firm *i* with Fortune rank position *rank_i* in year *t*:

$$\begin{aligned} \text{Nonpecuniary Employment CSR}_i = & \alpha_0 + \alpha_1 \text{Fortune500}_i + \alpha_2 (\text{rank}_i - 500) \\ & + \alpha_3 (\text{rank}_i - 500)^2 + \alpha_4 (\text{rank}_i - 500)^3 + \alpha_5 \text{Fortune500}_i \\ & \times (\text{rank}_i - 500) + \alpha_6 \text{Fortune500}_i \times (\text{rank}_i - 500)^2 \\ & + \alpha_7 \text{Fortune500}_i \times (\text{rank}_i - 500)^3 + \alpha_t + \alpha_{\text{ind}} + \delta X'_i + \varepsilon_i. \end{aligned}$$

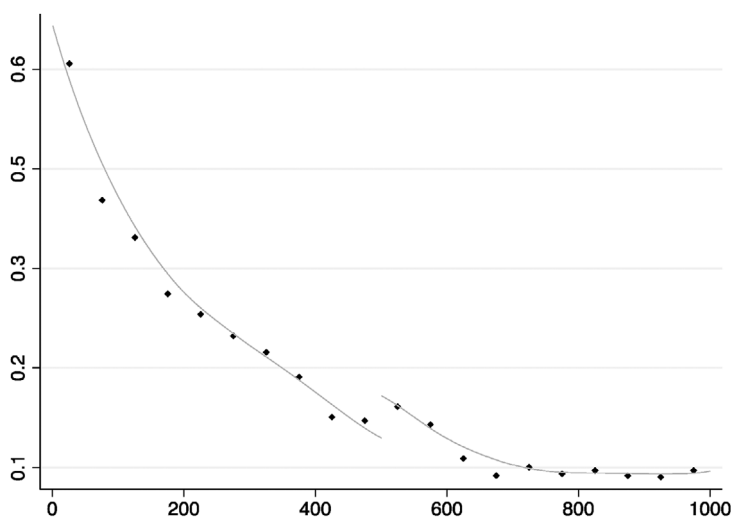


FIGURE 2 Graphical Analysis. Nonparametric locally weighted scatterplot smoothing. y-axis indicates nonpecuniary employee CSR, and x-axis indicates Fortune rank positions. Diamond dots are the mean of nonpecuniary employee CSR within bins. Bandwidth size is full sample.

In this model, the dependent variable *Nonpecuniary Employment CSR_i* measures firm *i*'s nonpecuniary employment-related CSR in year *t* using the dichotomous variable we constructed based on the subcategories of strengths in the employment dimension of MSCI. The variable *Fortune500_i* is an indicator that firm *i* is ranked within Fortune 500 (from Fortune 1st to Fortune 500th). The variable *rank_i* measures the companies' rank positions in the Fortune 1000 ranking, and $(rank_i - 500)$ measures the distance between the rank positions and the 500th threshold from either side of the cut-off. By subtracting the threshold of 500 from the rank positions, the assignment variable is normalized which renders α_1 the average causal effect in RDD (Angrist & Pischke, 2008, p. 193). To account for distances far away from the threshold, we include a number of polynomial functions of the normalized assignment variable $(rank_i - 500)$. The interaction between the *Fortune500_i* treatment indicator variable and the polynomials are also included to allow more flexibility and different trends on different sides of the Fortune500 threshold.

Specifically, our choice of the order of polynomials is guided by the Akaike information criterion (AIC) to alleviate concerns about overfitting when we include higher order polynomials of the assignment variable (Lee & Lemieux, 2010). The AIC penalizes model complexity as its value increases with error variance and the number of parameters, and the model that minimizes AIC value is preferred. For the main specification, we compared the models when we include polynomials that take on different orders from one to five, and the minimum AIC value is obtained when the third-order polynomial is included. We present the main parametric analysis results with the third-order polynomial, while we also present the estimates with different orders of polynomials from linear to fifth order in detail (Appendix S3).

Table 2 summarizes the results of the main parametric estimation. The results support our hypothesis: model (7) shows the negative effect of Fortune 500 status on *Nonpecuniary Employment CSR_i* is statistically significant ($\hat{\beta} = -0.837, SE = 0.262$). All the models include the third-order polynomials of the assignment variable *Fortune-rank*, as well as the interaction terms of the *Fortune500_i* indicator variable and the polynomials. Models (3)–(7) all control for industry-fixed effects and year fixed effects and cluster the robust standard errors at the firm level. Model (5) adds covariates including lagged ROA, sales growth, book-leverage ratio. As the number of observations decreases when these covariates are included, model (4) presents the same estimation conducted in model (3) with the observations used in model (5). The consistent results across models (3) to (5) assuage concerns about the decrease in the number of observations. Model (7) further adds cash ratio, EPS, and employment size (log). In a similar vein, model (6) conducts the same estimation underlying model (5) using the same number of observations available in model (7) and presents consistent results, alleviating concerns about the decrease in the number of observations as additional covariates are included. Importantly, the coefficients and significance levels remain highly consistent as additional control variables are included from model (3) through model (5) and (7). Specifically, the point estimate in Model (7) suggests that Fortune 500 status decreases the odds of the provision of *Nonpecuniary Employment CSR_i* by a factor of 0.43 ($= \exp(-0.837)$).

4.3 | Nonparametric estimation

Following convention (Flammer, 2015a; Flammer & Bansal, 2017; Lee & Lemieux, 2010), we complement the parametric estimation results with a non-parametric local linear regression without assumptions about functional forms. Following convention in RDD (Calonico



TABLE 2 Parametric estimation results.

Variables	(3)	(4)	(5)	(6)	(7)
FT500	−0.748 (0.249)	−0.836 (0.262)	−0.827 (0.263)	−0.855 (0.261)	−0.837 (0.262)
Lagged ROA			0.168 (0.541)	0.274 (0.550)	0.382 (0.546)
Sales growth (log)			0.169 (0.136)	0.126 (0.140)	0.0305 (0.163)
Book-leverage ratio			−0.365 (0.367)	−0.336 (0.365)	−0.406 (0.365)
Cash ratio					−0.774 (0.739)
Employment size (log)					0.167 (0.118)
EPS					−0.00552 (0.00453)
Constant	−1.952 (0.384)	−1.544 (0.252)	−1.466 (0.279)	−1.475 (0.279)	−1.774 (0.419)
Observations	15,875	12,100	12,100	11,737	11,737
Industry-fixed effect	Yes	Yes	Yes	Yes	Yes
Year-fixed effect	Yes	Yes	Yes	Yes	Yes
Polynomials (third)	Yes	Yes	Yes	Yes	Yes
FT500*Polynomials (third)	Yes	Yes	Yes	Yes	Yes

Note: Robust standard errors (in parentheses) clustered at the company level.

et al., 2015; Imbens & Kalyanaraman, 2012), our choices of bandwidth were informed by the data. Specifically, we employ two widely used data-driven bandwidth selection algorithms including cross-validation (Calonico et al., 2015) and Imbens and Kalyanaraman (2012). The bandwidth we obtained using cross-validation includes 225 rank positions to the left and the right of the Fortune500 threshold, and the bandwidth selected according to Imbens and Kalyanaraman (2012) includes 207 rank positions to the left and the right of the threshold.

With these two bandwidths, Table 3 reports the result of the non-parametric local linear estimation where we used a triangular kernel that allows the weight of observations to decay with increasing distance from the threshold. In the baseline regression, we found that Fortune500 companies have lower *Nonpecuniary Employment CSR_i* in both bandwidths selected by cross-validation ($\hat{\beta} = -0.0494, SE = 0.0179$) and Imbens and Kalyanaraman (2012) ($\hat{\beta} = -0.0477, SE = 0.0186$). The result confirms that companies just in the high-status category, Fortune 500, have weaker nonpecuniary employment-related CSR. Additionally, to account for a vector of control variables and within firm correlations of errors overtime in this estimation, we conducted the same set of local linear regression analyses with the aforementioned alternative measure *resid_emps_i* (Appendix S4).

TABLE 3 Nonparametric local linear estimation with different bandwidths.

Variables	(8)	(9)
Fortune 500	−0.0494 (0.0179)	−0.0477 (0.0186)
Observations	[4343; 3810]	[3989; 3504]
Kernel type	Triangular	Triangular
Bandwidth type	Cross-validation	Imbens and Kalyanaraman (2012)

Note: The dependent variable is Nonpecuniary Employment CSR and the estimation is conducted without controlling for any covariates. Column (8) reports the estimates in the bandwidth selected by cross-validation. Column (9) reports the estimates in the bandwidth selected according to Imbens and Kalyanaraman (2012).

5 | ROBUSTNESS TESTS

5.1 | Bandwidth sensitivity

It is important to assess whether our estimation results are sensitive to bandwidth selection decisions (Flammer, 2015a; Flammer & Bansal, 2017). In the main parametric estimation, we used the full Fortune 1000 sample which incorporates more observations and increases precision. A trade-off of using observations far-away from the threshold is the potential for estimation bias (Lee & Lemieux, 2010). In the parametric estimation, we controlled for polynomials of the assignment variable to account for the distance from the threshold. In the non-parametric analysis, we sought to alleviate this concern using triangular kernel that allows the weight on observations to decrease with the distance from the threshold (Almond et al., 2010). We also employed two alternative bandwidths determined by widely used data-driven bandwidth selection methods including cross-validation and Imbens and Kalyanaraman (2012).

To further examine whether our findings persist using alternative bandwidths, we report estimates obtained using 20 different bandwidths in the Fortune 1000 ranking by gradually enlarging the discontinuity bandwidth around the Fortune500 threshold with an increment of 25 rank positions on both sides of the Fortune 500 threshold (e.g. [475, 525]; ... [150, 850]; [125,875]; ... [11000]). We ran the same specification of model (7) in our main parametric estimation within each discontinuity bandwidth. Specifically, for each bandwidth, we compared the model specifications with polynomials that take on different orders from one to five and selected the model that minimizes AIC (Lee & Lemieux, 2010).

Figure 3a plots the coefficients and the 95% confidence intervals of the estimation in each bandwidth respectively and shows that our results are largely consistent across a wide range of bandwidths. We observe that 20 out of the 20 bandwidths yield estimates with negative coefficients, and 70% of the estimates are both negative and statistically significant. While using observations close to the threshold reduces bias from influences by data points far-away from the threshold, having more observations yields more precise estimates (Almond et al., 2010; Lee & Lemieux, 2010). Specifically, when the bandwidth size becomes as large as 30% of the Fortune 1000 data, we observe that the estimates remain statistically significant at conventional statistical levels in most bandwidths with coefficients of similar sizes. The consistent results across different bandwidths elevate the confidence in our estimation results.

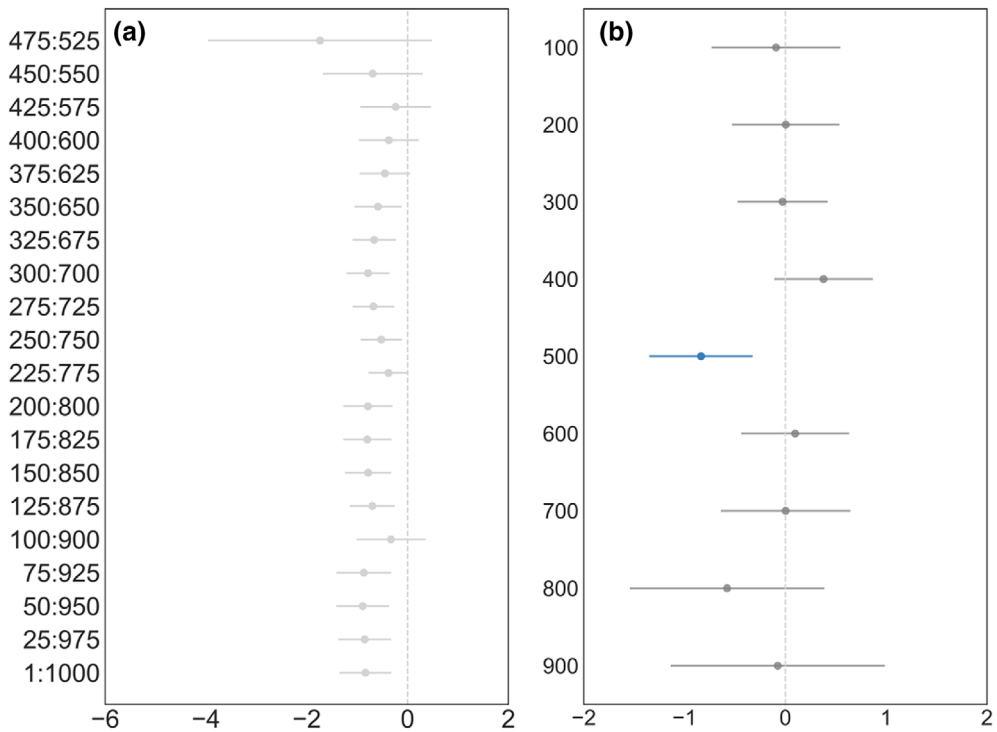


FIGURE 3 (a) Bandwidth sensitivity test (with increment by 25 rank positions on both sides of the Fortune 500 threshold). (b) Robustness test on alternative placebo cut-offs (with parametric estimation using third-order polynomials).

5.2 | Alternative placebo thresholds

We also tested our assumption that Fortune 500 is indeed a discontinuous threshold in the otherwise smoothly distributed Fortune 1000 ranking. To test this assumption, we investigated whether any additional discontinuities are observable at other potential cut-off points. Specifically, we used the same number of observations and parametric estimation as in our baseline model (7) to test whether there exist alternative discontinuity cut-offs at intervals of 100 starting with the Fortune 100 through the Fortune 900. All the models control for the third order of polynomials of the assignment variable. Figure 3b plots the coefficients and the 95% confidence intervals of the estimation using these thresholds. As Figure 3b demonstrates, no statistically significant effects are found at any other potential cut-off points, providing further support that the 500th position marks a discontinuity in status. Additionally, we present consistent estimates when we specify the estimation for each alternative cut-off at hundredth rank positions with the order of polynomials selected by AIC (Appendix S5).

5.3 | Long-run effects

As previously discussed, our main analyses are based on a time lag of approximately 8 months between the publication of Fortune rank in the spring of year_{*t*} and the end of the research year

in December of year_{*t*} underlying the MSCI data. We further examined whether the effects persist in the long-run. Specifically, we conducted parametric analyses on the dependent variable *Nonpecuniary Employment CSR_i* measured in year_{*t*+1} and year_{*t*+2} that correspond to time lags of approximately 20 months and 32 months respectively using the same specifications underlying models (3) and (7) of our main parametric analyses. The results suggest that the estimates of Fortune 500 status on nonpecuniary employment CSR remain negative over the long-run, while we only observe results that are significant at conventional statistical levels in the short-run (Appendix S6).

5.4 | Other CSR dimensions and external validity

Our analyses demonstrate the effect of Fortune 500 status on nonpecuniary employment-related CSR. It is also relevant to examine whether organizational status affects companies' engagement with other forms of CSR. We conducted in-depth analyses on three other CSR dimensions including consumers, environment, and community (see Flammer & Luo, 2017), as well as the nonpecuniary subcategories in these three dimensions (Appendix S7).

The results indicate that the Fortune 500 status does not have significant effects at conventional statistical levels on the number of strengths in other categories of MSCI ratings pertinent to consumers, environment, and community. These results are consistent with our contention that employment-related CSR is more likely to be used as a lever in employee governance as it has broader appeal to employees than other CSR dimensions (Appendix S7).

Next, we examined the external validity of our results by comparing the firms close to Fortune 500 with those far away from the discontinuity on a set of continuous covariates. We compared firms within and outside two data-driven bandwidths selected by two widely used methods, cross-validation and Imbens and Kalyanaraman (2012). Figure 4 plots the comparison of the mean and standard error of a set of control variables. As the results show, firms within the discontinuity bandwidths have notably lower ROA, revenue size, employment size, and earnings per share. The difference may be due in part to the companies that are ranked atop the Fortune ranking, which are disproportionately larger in size. While RDD is “the sharpest tool of causal inference” with observational data (Flammer & Bansal, 2017, p.1828), the comparison suggests that one important weakness is limited external validity (Flammer, 2015a; Flammer & Bansal, 2017).

5.5 | Replication with alternative data and measures of employment-related CSR

We examine whether our findings persist when we systematically replicate the analyses with alternative data and measures of employment-related CSR. First, we replace the MSCI data with ASSET4 data. We implement a negative binomial estimator in the parametric estimation using a model with third-order polynomials that minimizes AIC. Consistent with the baseline findings, Table 4 presents results of the parametric estimation that are statistically significant across models that add covariates from column (10) ($\hat{\beta} = -0.125, SE = 0.0474$), column (11) ($\hat{\beta} = -0.118, SE = 0.0445$), to column (12) ($\hat{\beta} = -0.107, SE = 0.0458$). In addition to the parametric estimation, the ASSET4 analyses spanning nonparametric analysis, graphical analysis,

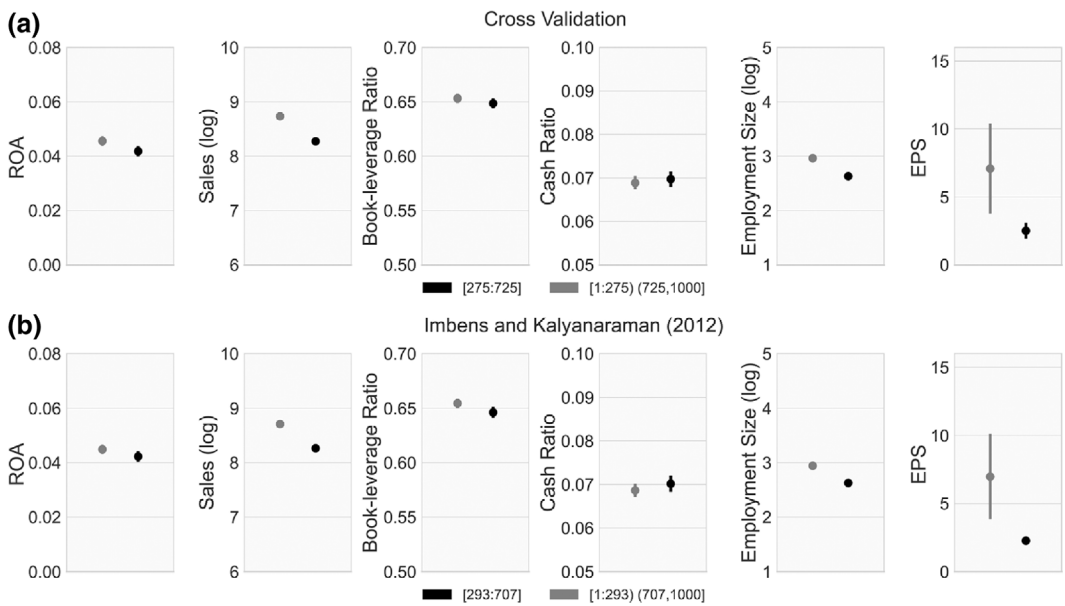


FIGURE 4 Test for external validity.

robustness test with discontinuity samples, and robustness test with placebo cut-offs at other hundredth rank positions are consistent with the baseline analyses (Appendix S8).

We also examined the robustness of our results using several alternative measures for nonpecuniary employment-related CSR subcategories in MSCI, and alternative measures of employment-related CSR with MSCI data used in prior research (e.g., Flammer & Luo, 2017). Consistent results are presented in Appendix S8. Put together, these analyses elevate the confidence of our findings and demonstrate that the results hold when we replicate the analyses operationalizing employment-related CSR with alternative data and measures.

6 | DISCUSSION AND CONCLUSION

This paper provides empirical evidence that one factor shaping firms' investments in employment-related CSR is organizational status. Lacking the nonpecuniary employment benefits associated with status, low-status firms need to invest more in other intangible resources that provide nonpecuniary benefits to employees. Having a reputation for CSR is one such asset (e.g., Flammer & Luo, 2017). If companies fall outside of a status category, like the Fortune 500, they must do something to offset this disadvantage in the labor market. Investing in CSR is one possible strategy.

To empirically identify the effect of status on companies' engagement in employment CSR, we draw on sociological insights about the role that information intermediaries like *Fortune* magazine play in the construction of status (e.g., Correll et al., 2017; Lynn et al., 2009) to argue that the Fortune 500 cut-off brings discontinuous difference in organizational status disproportionate to differences in underlying quality near the cut-off. We found that firms just making it into the high-status Fortune 500 category have significantly lower performance in nonpecuniary employment-related CSR measured by MSCI and ASSET4 ratings. Though

TABLE 4 Parametric Estimation with ASSET4 data and alternative measure of nonpecuniary employment CSR (negative binomial model).

Variables	(10)	(11)	(12)
FT500	−0.125 (0.0474)	−0.118 (0.0445)	−0.107 (0.0458)
Lagged ROA		−0.0961 (0.110)	−0.0295 (0.105)
Sales growth (log)		−0.00813 (0.0284)	−0.0362 (0.0328)
Book-leverage ratio		0.0805 (0.0704)	0.0774 (0.0702)
Cash ratio			−0.137 (0.138)
Employment size (log)			0.0630 (0.0238)
EPS			−0.00151 (0.00105)
Constant	2.317 (0.157)	−13.80 (1.407)	−13.94 (1.986)
Observations	9947	7948	7755
Industry fixed effect	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes
Polynomials (third)	Yes	Yes	Yes
FT500*Polynomials (third)	Yes	Yes	Yes

Note: Robust standard errors (in parentheses) clustered at the company level.

ratings may be susceptible to status biases, the potential bias is likely making our estimates conservative inasmuch as status leads to upward biases in favor of high-status actors in evaluation (Azoulay et al., 2013; Kim & King, 2014; Kovács & Sharkey, 2014; McDonnell & King, 2018; Salganik et al., 2006; Simcoe & Waguespack, 2011). The findings remain robust to a number of data-driven bandwidth choices and alternative measures of employment-related CSR. Our focus on the nonpecuniary employment-based CSR suggests that investing in nonpecuniary employee benefits substitutes for status-based nonpecuniary benefits to employees. Importantly, in support of our contention that Fortune 500 marks a discontinuity in the otherwise smoothly distributed *Fortune* ranking, we do not find significant difference in nonpecuniary employment CSR around the placebo cut-offs at any other hundredth rank positions.

Our study provides a richer window into the motivations behind CSR investments. An important implication of the analysis is that lower status firms invest in employment-based CSR in order to offset their status disadvantage. But beyond the effects of status competition, our analysis points to a more general insight about companies' CSR behavior: firms invest in CSR partly as a means to provide nonpecuniary benefits to employees. Therefore, we should expect that firms will invest in CSR in situations when they need to develop a human capital



advantage relative to competitors (Flammer & Luo, 2017). This would apply in situations other than just status-based competition, including in industries in which competition for human capital is intense and in companies that have suffered a reputational crisis. One contribution of our paper, then, is to provide causal evidence of this strategic motivation for investing in CSR.

A related contribution is to suggest a strategic implication for companies in response to their status positions in factor market competition. Extant research on organizational status tends to focus on the impact that status positions have on companies' market outcomes (e.g., Bothner et al., 2012; Jensen, 2006; Malter, 2014; Podolny, 1993; Roberts et al., 2011; Stuart et al., 1999). The question remains as to how might companies address specific implications of status positions. This question is particularly important for actors that have relatively lower status who comprise the majority of a population, as the value of status as a positional good tends to be a function of the scarcity of high-status positions (Malter, 2014; Sorenson, 2014). Insofar as high status leads to favorable biases in evaluation of quality and third-order inference (Correll et al., 2017; Kim & King, 2014; Sharkey & Kovács, 2017), status creates a self-confirming cycle that is competitively vicious for low-status actors (e.g., Merton, 1968; Podolny, 1993). Trapped outside the virtuous cycle where high-status companies reside, how might companies with relatively low-status cope with the implications of their status positions? Our finding suggests one possible solution readily at the companies' disposal in the factor market of labor. We find that employment-related CSR may serve as a substitute for organizational status in providing nonpecuniary benefits that employees value.

This paper further contributes to the literature on Podolny's status-based model of market competition in two aspects. First, this paper seeks to provide empirical evidence for the labor market advantage of organizational status. The factor market advantages work in tandem with increased product market acceptance to result in status-based profitability (Podolny, 1993). While past empirical works have documented the status-based product market advantages in a variety of industries (e.g., Benjamin & Podolny, 1999; Jensen, 2006; Roberts et al., 2011; Stuart et al., 1999), empirical research has only recently started to examine the status-based cost benefits in factor markets (Bidwell et al., 2015; Rider & Tan, 2015).

Furthermore, research on the labor market benefits of organizational status to date focuses on the substitution between status and pecuniary benefits (Bidwell et al., 2015; Phillips, 2001; Podolny, 2001; Rider & Tan, 2015). Yet growing research points to the limitations of pecuniary incentives (e.g., Flammer & Luo, 2017; Larkin et al., 2012; Rider & Tan, 2015). Research on employee governance has also highlighted the vital role of relational and nonpecuniary benefits in engaging and managing employees (e.g., Bode et al., 2015; Brammer et al., 2007; Gupta et al., 2017). It thus calls for insights into the relationship between organizational status and other coveted nonpecuniary benefits. Our finding suggests that high-status organizations also face lower demands for nonpecuniary benefits in the form of employment-related CSR to attract, retain and engage employees.

The study has some limitations. While our theoretical proposition pertains to firms concerned with employee governance in general, we implement RDD in a local area near the Fortune 500 cut-off where unambiguously there is a status difference. An inherent weakness of this quasi-experimental design is limited generalizability. Future research may examine if the proposition holds in other contexts comprised of companies with different sizes or forms of ownership, and may also consider other strategic factor markets. Inasmuch as the implementation of RDD in our empirical context leans heavily on the construction of a categorical distinction of status around the Fortune 500 threshold, the empirical strategy is limited in its applicability to

other contexts where status follows continuous and smooth distribution. Future research may also investigate whether the proposition persists in other contexts.

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DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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