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Corporate Social Initiatives and Employee Retention

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Firms are increasingly launching initiatives with explicit social mandates. The business case for these often relies on one critical aspect of human capital management: employee retention. Although prior empirical studies have demonstrated a link between corporate social initiatives and intermediate employee-related outcomes such as motivation and identification with the firm, their relationship with final retention outcomes has not been investigated. Our study fills this gap. Using individual-level data for approximately 10,000 employees in a global management consulting firm, we present empirical evidence of a positive retention effect associated with employee participation in a corporate initiative with explicit social impact goals. In addition, we offer arguments for moderating conditions that weaken this relationship and present evidence consistent with our arguments. Further econometric analysis based on a stringent matching approach as well as additional analyses based on survey and interview data suggest that the retention effect can at least partly be attributed to treatment and is not all just a manifestation of sorting of certain types of employees into the social initiative. Overall, by demonstrating a positive association between social initiative participation and employee retention, this study highlights the need for further research into how corporate social engagement can serve as a tool for strategic human capital management.

Keywords: corporate social initiatives; social impact; corporate social responsibility; strategic human capital; employee retention; management consulting

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1. Introduction

Firms are increasingly under pressure to address critical issues of societal concern (Aguilera et al. 2007, King 2008, Koh et al. 2014). In response, many are launching corporate initiatives with explicit societal mandates. These range from stand-alone corporate social responsibility (CSR) activities (Henisz et al. 2014, Marquis and Qian 2014) to initiatives attempting to integrate societal priorities into their core strategy and operations (Mahoney et al. 2009, Porter and Kramer 2011, Prahalad and Hart 2002, Seelos and Mair 2007). In the process, more and more firms are offering employees opportunities to participate in such corporate social initiatives—often with an expectation of deriving strategic benefits related to their human capital (Calian 2014, Fleming and Jones 2013). We examine the benefits of employee participation in such initiatives for a critical dimension of a firm's human capital strategy: its ability to retain talent. In doing so, we contribute to the burgeoning literature examining the link between corporate social engagement and specific outcomes of strategic interest to the firm (e.g., Cheng et al. 2013, Servaes and Tamayo 2013). Establishing an overall correlation between social engagement and financial performance has proven to be elusive in prior work (Margolis et al. 2009), prompting

research into the mechanisms underlying that relationship. Therefore, the examination of the employee-related commercial benefits of corporate social engagement is an important research direction.

By investigating the association between corporate social initiatives and employee retention, this study integrates two important streams of literature: the literature on CSR and that on strategic human capital. With respect to human capital, recent work has emphasized the importance of taking into account not only “demand-side” factors affecting interfirm mobility but also “supply-side” factors such as heterogeneity in employee preferences for the nonfinancial benefits a job offers (Campbell et al. 2012a, b). While such factors have received attention in specific literature streams such as those on scientific labor markets (Sauermann and Roach 2014, Stern 2004) or entrepreneurship-related careers (Stuart and Ding 2006), the broader strategic human capital literature has not sufficiently integrated the heterogeneity in employee preferences. Our study begins to fill this gap by documenting how managers can improve “stickiness” of employees to their jobs by better satisfying their nonfinancial preferences through appropriate levers—one of which may be social engagement.

Although the link between corporate social initiatives and retention has not been investigated directly, scholars

taking a psychological perspective have demonstrated that participation in these initiatives can improve intermediate outcomes such as employee motivation (Dunn et al. 2008; Grant 2012a, b) and identification with the firm (Brammer et al. 2007, Turban and Greening 1997). The mechanism hypothesized to underlie such effects has been that the intangible benefits employees gain from participating in such initiatives improve their perception of the firm, which in principle could also increase their willingness to stay with the firm (Cohen 1993, O'Reilly and Chatman 1986). However, as research in other contexts such as expatriate postings has found, individuals returning from atypical assignments to mainstream work also suffer reintegration difficulties (Kraimer et al. 2012). If similar difficulties occur in the context of corporate social initiatives, the above-mentioned benefits might at times be muted or even reversed—a contingency we also explore.

Broader research on careers and interfirm mobility is also relevant for our research question. This body of work has shown that retention outcomes may be significantly shaped by matching of employees with different preferences to jobs of different kinds (Agarwal and Ohyama 2013, Becker 1973, Jovanovic 1979). This idea has, in fact, been tested in multiple contexts, such as how scientists make the choice between joining academic versus industry jobs (Sauermann and Roach 2014, Stern 2004) or how certain kinds of individuals sort into entrepreneurship-related careers (Stuart and Ding 2006). In this study, we extend this reasoning to the context of corporate social initiatives, wherein different work opportunities within a firm vary in their perceived social impact and hence in their alignment with the preferences of employees that vary in their “taste for social impact.” By providing an avenue for socially minded individuals to satisfy their preferences through participation in a corporate social initiative, we argue and show that the firm can improve retention of these employees.

Although the primary aim of this study is to shed light on the employee perspective on corporate social initiatives, our interest in *within-firm* sorting of employees based on their social impact preferences has parallels to the research examining *cross-organizational* sorting of individuals across sectors with varying concern for social impact. In this literature, a major challenge has been to identify effects related specifically to the social mission of organizations—because nonprofit or public sector organizations also differ from private sector firms in the nature of the work and the skills involved (Delfgaauw and Dur 2008, Leete 2001, Prendergast 2007, Preston 1989, Ruhm and Borkoski 2003). Similar challenges would arise even in a within-firm study attempting to isolate the effects of the social mission of a corporate philanthropy or CSR department, since such a department also differs from the mainstream activities of

the firm in the nature of the work and the skills involved. For the outcomes to be attributable to the impact dimension of a firm's social initiative, an ideal research context would be one where its social initiative and commercial activities differ only in their mission and are otherwise comparable in the type of work involved and their manner of operating. Although a perfect setting is hard to find, we describe below how our choice of research site is driven by a desire to approximate such a context as closely as possible.

Our empirical approach is based on analyses of internal data from a leading global management consulting firm. This firm provides its employees with the opportunity to participate in consulting projects with an explicit social impact goal, through an initiative we refer to as corporate social initiative, or CSI for short, for confidentiality reasons. Importantly, CSI projects are not pro bono but operate in ways very similar to the mainstream consulting business: they are sold, staffed, and managed like commercial projects. The main difference between CSI projects and commercial projects is related not to the nature of the work or the skills involved but to the prominence of the social impact goal of CSI, which is bringing the firm's world-class consulting services to mission-oriented clients such as foundations, nongovernmental organizations (NGOs), and development agencies that normally cannot afford the firm's commercial rates. To make CSI a viable “social business” despite the lower fees that CSI clients are charged relative to commercial clients, employees that agree to be staffed on CSI projects have to accept a significant reduction in salary for the duration of the CSI project (typically a few months). On a CSI project, consultants still employ the kind of skills and consulting methodologies they are familiar with from their commercial projects.

As is typical in studies relying on naturally occurring data, we cannot be conclusive in the extent to which empirical patterns we find reflect “selection” versus “treatment” effects. However, we try to carefully account for at least the observed characteristics of individuals while also using additional data from interviews and surveys to shed further light on the underlying mechanisms. In particular, women, younger employees, high-tenured employees, better-performing employees, and employees from certain countries are found to be more likely to participate in CSI. For a reasonable comparison of employee retention rates, we therefore use all of these variables to construct a stringently matched sample of CSI participants and nonparticipants that are comparable on these attributes. In subsequent analysis of this matched sample, CSI participation is still found to be associated with lower likelihood of leaving the firm. We also demonstrate that CSI participants perform at least as well as nonparticipants on subsequent mainstream commercial projects, a finding consistent with a view that decreased retention associated with CSI is

indeed a strategically desirable outcome for the firm. Further, our survey data suggest that those interested in CSI were, if anything, more at risk of leaving the firm than those not interested in CSI. This is consistent with our main regression findings and suggests that the positive retention effect of CSI participation is not merely due to selection into CSI.

Nevertheless, given the nature of our data, we are cautious not to draw strong causal interpretations from our findings. Instead, we view this study as a precursor to future research into disentangling potential mechanisms behind the intriguing phenomenon. As one of the first studies linking corporate social initiatives to employee retention—a key outcome of strategic interest to the firm—our study contributes to the growing literature examining the social engagement of firms as a lever of human resource performance (Brammer et al. 2007, Turban and Greening 1997). In doing so, it complements other approaches that examine drivers of employee engagement, such as offering employees diverse opportunities for personal development (Bidwell and Keller 2014, Gambardella et al. 2014), nurturing a diverse range of skills (Campion et al. 1994), and providing new ways for finding a good match between individual preferences and jobs (Jackson 2013). More broadly, it contributes to the literature on human-resource-based competitive advantage by offering insights into how a certain class of corporate programs might help achieve desirable strategic outcomes related to the management of human resources (Coff 1997, Coff and Kryscynski 2011).

2. Corporate Social Initiatives and the Employee

An important first step to developing arguments for the relationship between employee participation in corporate social initiatives and retention is clarifying how participation in a social initiative project differs from engaging in one of the firm's commercial projects. Having established these differences, we then delve into potential mechanisms linking participation to retention, some related to how employees with different preferences might sort into different projects and others related to how the participation itself might affect employee attitudes and behavior. Finally, we consider how characteristics of the specific projects that employees participate in might moderate the link between the corporate social initiative and employee retention.

2.1. What Is Different About Corporate Social Initiatives?

When an employee engages in a firm's commercial activities, the end goal is typically the generation of some form of commercial benefit for the firm. This does not mean that such work could not have any social

impact. In fact, the essence of capitalism is that a firm—even when seeking profits—creates substantial value for society through the market mechanism, with only some of this value being captured by the firm itself and the rest accruing to a broader set of stakeholders (such as the customers and suppliers). However, despite the fact that commercial activities can and often do have a positive impact on society, the distinguishing feature of a corporate social initiative is that it has an *explicitly stated* social impact objective. People with different views on the market system often disagree on the extent of the net benefits to society that result from purely commercial initiatives versus those with an explicit social impact goal. In addition, many scholars have argued that most corporate social initiatives are undertaken with an ultimate intention of improving the commercial performance of the firm (Karnani 2011). Although important, these issues are orthogonal to the research question of interest. For the purpose of this study, it is important only that from the employees' perspectives the corporate social initiative aims to make a bigger difference to society compared with the commercial activities of the firm.

Although the defining characteristic of corporate social initiatives is positive social impact as an explicit objective, in practice such initiatives also often differ from commercial activities in the nature of the work and the skills involved. This presents a significant challenge when trying to attribute findings regarding participation in such initiatives specifically to their social objectives. These challenges also occur in research studying career choices individuals make in joining mission-oriented organizations, since nonprofit organizations and public sector entities also typically differ substantially from for-profit firms in the nature of work and the kind of skills involved (Delfgaauw and Dur 2008, Leete 2001, Prendergast 2007, Preston 1989, Ruhm and Borkoski 2003). Similarly, in corporate settings, stand-alone corporate philanthropy or CSR departments are often quite isolated from the commercial activities of a firm and are very different in the kinds of people they employ and the kinds of activities these employees carry out. A key challenge for studying our research question is therefore finding an empirical context where the observed differences in outcomes related to a corporate social initiative can be related specifically to its social impact objectives, an issue we return to later in the paper.

2.2. A Link Between Corporate Social Initiative Participation and Employee Retention?

One stated motivation for firms establishing corporate social initiatives is often improved talent management—in particular, improved employee retention, a key strategic outcome for most firms (Campbell et al. 2012a, b; Coff 1997). Research has indeed documented a positive relationship between employee participation in social

initiatives and intermediate outcomes such as individual motivation and identification with the firm (e.g., Bartel 2001; Dunn et al. 2008; Grant 2012a, b). However, the issue of whether and how a corporate social initiative is ultimately related to employee retention has not been examined in the existing literature.

One potential mechanism linking social initiatives to retention comes directly from prior research documenting how employee participation in prosocial activities could increase employee identification with the firm (Brammer et al. 2007, Mirvis 2012, Rodrigo and Arenas 2008, Turban and Greening 1997). This research suggests the possibility that the participation itself results in a positive “treatment effect.” Often, individuals in large firms struggle to see the relevance of their daily work; activities that have an explicit societal impact goal and provide them with the opportunity to create such an impact within the corporate context might therefore lead to increase in motivation and identification (Grant 2012a, Wilson 2000). Psychological mechanisms behind such an effect could include an enhanced sense of meaningful existence and belonging for employees (Bauman and Skitka 2012), self-affirmation (Cable et al. 2013), and a view that their employer is acting in accordance with fundamental principles of justice and morality (Ellemers et al. 2011). Integrating the above arguments with findings from the separate literature that has linked greater organizational identification in general to employee retention (Cohen 1993, O’Reilly and Chatman 1986, Porter et al. 1974), one might therefore expect that organizational identification resulting specifically from participation in a corporate social initiative would also positively influence employee retention.

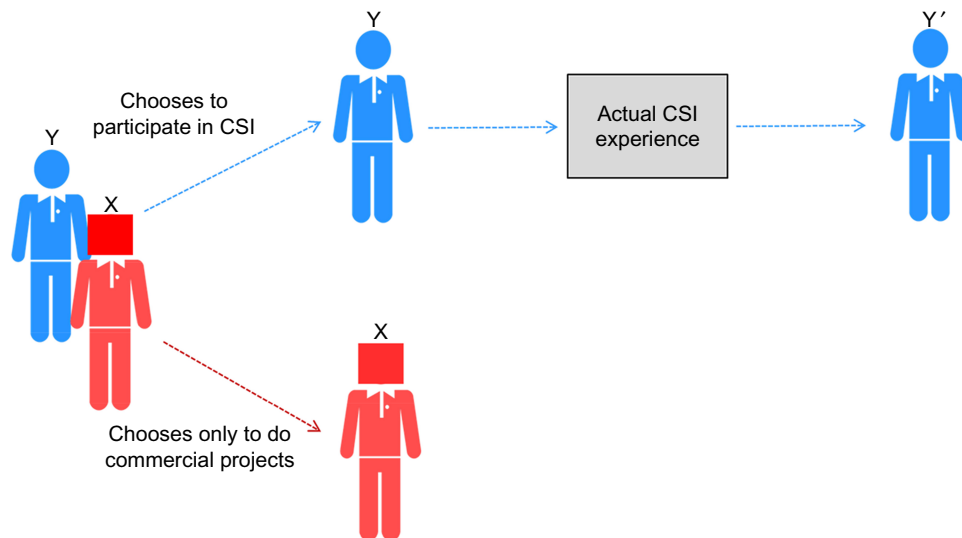
A complementary explanation to the mechanism outlined above is that improved retention may also result from a “sorting effect” of improving the match of individuals into jobs. Analogous studies from the context of individuals sorting across sectors already document how certain individuals pursue careers in social impact at the cost of a personal financial sacrifice (Besley and Ghatak 2001, 2005). Indeed, wage dispersion in the nonprofit sector is more compressed than in for-profit firms, consistent with a view that nonprofits rely more on intrinsic motivation to retain talent (Leete 2000, Pennerstorfer and Schneider 2010). Following a parallel reasoning in a corporate context, we expect sorting to happen even *within a firm*, where some individuals choose to work only on commercial projects whereas others are attracted to projects with explicit social impact objectives. This view is also consistent with experimental research showing heterogeneity in the extent to which social impact considerations enter an individual’s utility function (Fehrler and Kosfeld 2014, Gneezy and List 2006). Although the predominant approach to date in research on corporate social initiatives and employees

has been to emphasize treatment effects mentioned previously, a fuller explanation ought to include potential sorting effects.

Formally, according to the theory of job matching in the presence of labor market frictions (Jovanovic 1979), employee turnover is an indicator of an inappropriate match between an employee and his or her assigned job within the organization (Miller 1984, Mortensen 1988, Simon and Warner 1992). Improving the quality of the match between an individual and the assigned work can therefore be a mechanism for decreasing dysfunctional turnover (Allen et al. 2010). As employees may not fully know *ex ante* the extent to which they would value intangible benefits derived from contributing to society, the possibility of participating in a corporate social initiative provides employees the flexibility to experiment without having to leave the firm. Even if such participation requires a personal sacrifice (such as having to take a *temporary* salary reduction for the period of the project), a significant fraction of the participating employees might still view this “hybrid” arrangement as being a superior fit for their preferences to the more extreme step of quitting to pursue a purely nonprofit career (which requires a *permanent* salary reduction). In other words, for certain employees the corporate social initiative option offers “the best of both worlds”—wherein they appreciate the “blended” value proposition of pursuing a traditional business career and having an explicit social impact within the firm.¹

It is worth clarifying that the sorting of certain kinds of employees into a corporate social initiative does not rule out the possibility that treatment effects *also* occur (and vice versa). Increased retention could, in fact, be the result of a combination of improved sorting of different kinds of employees into projects *and* improved employee motivation and identification with the firm as a result of the participation experience itself. How these effects could simultaneously occur in the same firm is illustrated in Figure 1. The figure represents a stylized diagram of two employees, X and Y. The two have different preferences for social impact, so Y derives nonfinancial benefits from taking part in the corporate social initiative but X does not. Therefore, X sorts only into commercial projects whereas Y tries to participate in the social initiative when the possibility arises. Increased retention through a sorting effect might occur if the option to be able to contribute to social impact within the existing job makes staying with the firm more attractive to Y. However, it is possible that Y’s views and attitudes toward the firm are also favorably transformed by the actual CSI experience—a treatment effect wherein the individual’s identification and relationship with the firm have now improved further. In other words, arguments for sorting and treatment effects lead to the following prediction.

Figure 1 (Color online) Potential Sorting and Treatment Effects Associated with CSI



HYPOTHESIS 1. *Employee participation in a corporate social initiative is positively associated with employee retention.*

2.3. Moderators for the Retention Effect?

Although our prior arguments suggest a positive retention effect related to participation in CSI projects on average, the strength of the effect is likely to vary with characteristics of the project. In our setting, the main differences across CSI projects were in their length and location. Projects ranged from short term (e.g., one month) to long term (e.g., six months) and could have been based in developed countries such as the United Kingdom or in developing economies such as Tanzania. We expect that project experiences that are particularly intense in terms of duration or location could weaken the proposed positive retention effect, and possibly even reverse it.

In prior research, the central dynamic underlying an individual's organizational identification has been tied to the presence of social relations that support the individuals' views of themselves and the organization (Greil and Rudy 1984). Accordingly, the identification process is strongest when individuals are encapsulated by a community and weakest in situations where they are removed from their peers (Petriglieri 2011, Pratt 2000). Such a weakening is likely to occur when the employee is away from the main part of the organization for a long duration or is in a location that is economically and culturally distant from the main organization. This issue is further accentuated by the fact that maintaining a favorable position in a firm's internal networks (i.e., for promotion or access to resources) requires maintaining close contact with key people inside the firm (Singh et al. 2010). Although taking place in a different context

from social initiatives, prior research on expatriate postings provides evidence consistent with the general argument: returning expatriates have been shown to experience a reduced fit with the organization (Black et al. 1992), often leading to an increase in turnover (Fiol et al. 2009, Kraimer et al. 2012).

In our setting, projects that remove individuals for longer periods or more effectively from their commercial peers are likely to be associated with weaker subsequent organizational identification. Some participants returning from social impact projects may perceive a lack of fit with the firm, making them more likely to leave. This effect is likely to be most pronounced if participants spend significant time away from their commercial peers with nonprofit or public sector workers who differ in their outlook and values relative to those peers. A prolonged absence might also signal to other organizational members that the employee has lost familiarity with the firm or is not serious about commercial work, leading to a negative reaction. Similarly, being on a project in a distant emerging market location is more likely to be interpreted by other organizational members as lacking seriousness about commercial work, increasing the likelihood that their colleagues might regard the returning participants as misfits.

Although the above discussion is consistent with a treatment effect, differences in how employees sort into initiatives could also produce or reinforce a similar result. To the extent that participating employees have at least partial control over the kind of project within the corporate social initiative to which they are assigned, they can influence ex ante the length and location of their experience through the choice of project. Individuals who have particularly strong preferences for involvement with social impact work might be more likely to choose projects offering more intense experience, i.e., longer

projects and projects in locations with greater perceived potential for social impact (e.g., low-income emerging markets). A preference for more intense projects could indicate that these employees are less well matched to the commercial work of the firm (i.e., their taste for social impact is particularly high), making them more likely to leave the firm when they return to the commercial activities.

In summary, arguments based on potential sorting as well as treatment effects lead us to suggest that project length and emerging market location would negatively moderate the association between participation and retention predicted in Hypothesis 1. Formally, we therefore propose the following.

HYPOTHESIS 2. *The positive relationship between participation in a corporate social initiative and retention likelihood is weaker when the duration of the participation is longer.*

HYPOTHESIS 3. *The positive relationship between participation in a corporate social initiative and retention likelihood is weaker when the participation involves working in an emerging market.*

3. Empirical Analysis

3.1. Research Setting

Our research setting is a global management consulting firm that houses a corporate social initiative, which we refer to simply as CSI for confidentiality reasons. This research site was deliberately chosen to keep the nature of the work between the firm's commercial activities and the corporate social initiative as similar as possible, making it well suited for studying effects associated specifically with the social impact objectives of the social initiative.

CSI is closely integrated with the firm's mainstream consulting business and even generates revenues, albeit no profit, of its own. Unlike potential philanthropic initiatives that would have provided consultants with a sense of social engagement in a work setting very different from what they normally do (e.g., volunteering in orphanages or building schools in villages), CSI work requires tasks and skills comparable to those in commercial consulting projects. For example, a consultant specializing in supply chain optimization or information technology strategy would typically employ these skills whether staffed on a commercial project (e.g., for a consumer goods company) or a CSI project (e.g., for an aid organization). Given that CSI serves more mission-driven clients, the main difference between CSI and commercial projects from the point of view of the employees is that they have the opportunity to contribute to the CSI client's social impact objectives in return for accepting a financial compromise in the form of a salary cut for the duration of the project. This salary cut policy

has helped CSI make substantial progress toward being self-sustaining despite the fact CSI clients are charged at lower consulting rates than regular clients.

Although employees indicate their interest in CSI, supply of talent vastly exceeds demand. Internal processes in the firm ensure that CSI projects are not disproportionately staffed by those with below-average performance records or specific kinds of backgrounds. Just like in the commercial projects, CSI project staffing is a combined result of the expressed interest of individuals in CSI, a match with the project based on their skills, and their availability at the time of staffing. On the whole, the final staffing is therefore not driven just by an employee's choice, though employee preferences do play a role as nobody is forced to join CSI. We take this into account in our research design as well as interpretation of findings.

3.2. Employee-Level Data

We were given access to individual-level data for employees in four of the countries where the firm has significant business (the United States, the United Kingdom, Canada, and Ireland). The data covered 10,634 individuals employed at the firm at any time during the period January 2007 to June 2013. Of these, we dropped 813 employees who had joined the firm only during 2013, as these were too new to have had a chance to participate in CSI during our study period (i.e., by June 30, 2013). As summarized in Table 1(a), the population we consider is therefore made up of 9,821 employees (6,753 employed in the United States, 2,983 in the United Kingdom, 629 in Canada, and 269 in Ireland). Of these, 4,449 had left the firm by the end of our study period.² Firm records also reveal that 479 of the 9,821 employees had participated in CSI between January 2007 and June 2013, 373 of which were still employed with the firm as of June 2013.³ We also know the dates (recorded monthly) and the number of days billed to CSI projects by the participants. A breakdown of CSI participation is reported in Table 1(b) (by employee cohort) and Table 1(c) (by last year of participation).

Since the last employment status for everyone is observed as of the same end date (June 30, 2013), employees joining in earlier cohorts are observed for longer durations. Because CSI participants are, on average, observed for shorter time windows since CSI is a relatively new program, the fraction of leavers among the overall population (45.3%, as in Table 1(a)) versus the CSI participants (22.1%, as in Tables 1(b) and 1(c)) is not directly comparable. We take this into account in our research design below by using a sample of participants and nonparticipants that has been appropriately matched to ensure equal lengths of their observation windows.

Table 1(a) Overall Employee Population (by Employee Cohort)

Employee cohort	Employees joining firm in this cohort	Subset no longer with firm as of June 30, 2013	Percent no longer with firm as of June 30, 2013
Pre-2007	3,550	2,108	59.4
2007	1,131	764	67.6
2008	923	542	58.7
2009	326	127	39.0
2010	1,452	604	41.6
2011	1,328	228	17.2
2012	1,111	76	6.8
Total	9,821	4,449	45.3

Table 1(b) CSI Participation (by Employee Cohort)

Employee cohort	Employees participating from this cohort	Subset no longer with firm as of June 30, 2013	Percent no longer with firm as of June 30, 2013
Pre-2007	251	60	23.9
2007	64	22	34.4
2008	66	17	25.8
2009	29	2	6.9
2010	51	4	7.8
2011	13	0	0.0
2012	5	1	20.0
Total	479	106	22.1

Table 1(c) CSI Participation (by Project Year)

Project year	Employees doing a CSI project this year	Subset no longer with firm as of June 30, 2013	Percent no longer with firm as of June 30, 2013
2007	8	1	12.5
2008	33	16	48.5
2009	81	35	43.2
2010	69	25	36.2
2011	81	17	21.0
2012	120	10	8.3
2013 ^a	87	2	2.3
Total	479	106	22.1

^aCSI project participation data for 2013 cover only half a year (January to June).

3.3. Variable Definitions

The indicator variable *Left Firm* captures whether an individual has left the firm (*Left Firm* = 1) or is still with the firm (*Left Firm* = 0) as of the end of our study period. We also know whether the departure was voluntary or whether the person was asked to leave, and therefore we define more fine-grained variables, *Left Firm Voluntarily* and *Left Firm Nonvoluntarily*, to distinguish leaving by choice (*Left Firm Voluntarily* = 1) from being asked to leave (*Left Firm Nonvoluntarily* = 1).

The key explanatory variable of interest in our analysis is the indicator *CSI Participant*, which takes a value of 1 for CSI participants and 0 for nonparticipants. To test for the effect of differences in the length of the CSI experience (Hypothesis 2) and location (Hypothesis 3), we construct two additional variables. First, a continuous variable *CSI Days* is defined as the total number of days a CSI participant billed to a CSI project, and it is set to 0 for nonparticipants. For the relatively rare cases where an individual had more than one CSI project,

CSI Days combines the time spent on all CSI projects, as a project-by-project breakup is not available for a given individual. Second, an indicator variable *CSI in Emerging Market* is defined as 1 when the CSI participant worked on a project based entirely in an emerging market and is set to 0 for other participants as well as nonparticipants.

Table 2 summarizes the above variables as well as additional control variables employed in our analysis. The variable *Experienced Hire* denotes whether an individual had previous work experience before joining the firm (*Experienced Hire* = 1) or not (*Experienced Hire* = 0). We do not have specific data on the exact length or nature of prior work experience, but we do know that experienced individuals almost always come from a consulting or industry background (e.g., it is quite rare for someone to come in as an experienced hire from the non-profit sector). The other variables listed in Table 2 are *CSI Year* (the year of the CSI project for the participating individual or for the CSI participant a nonparticipating

Table 2 Variable Definitions

Variable	Definition
<i>Left Firm</i>	Indicator variable that is 1 if and only if the employee left during our observation window (i.e., by June 30, 2013)
<i>Left Firm Voluntarily</i>	Indicator variable for cases of employee departure where the employee had left by choice
<i>Left Firm Nonvoluntarily</i>	Indicator variable for cases of employee departure where the employee had been asked to leave
<i>CSI Participant</i>	Indicator set to 1 if the employee participated in a CSI project during 2007–2013, 0 otherwise
<i>CSI Days</i>	Total number of CSI project days for the employee as per the firm’s billing records (set to 0 for nonparticipants)
<i>CSI in Emerging Market</i>	Indicator set to 1 if the CSI project required being based in an emerging market location (2013 gross domestic product per capita below USD 10,000 on a purchasing power parity basis)
<i>CSI Year</i>	The calendar year in which the CSI project of interest ends and hence the observation period for retention of this individual begins
<i>Observation Window</i>	Time between the CSI project end and the end of the study period (June 30, 2013), measured in days and converted into decimal years
<i>Female</i>	Indicator variable that is 1 for women and 0 for men
<i>Experienced Hire</i>	Indicator variable that is 1 for individuals with previous work experience and 0 for the rest
<i>Birth Year</i>	The calendar year the employee was born, which helps capture the employee’s age
<i>Joining Year</i>	The calendar year in which an individual joined the firm, which helps capture an employee’s tenure with the firm
<i>Prior Performance</i>	The last available performance rating for the employee before the CSI project date, based on a 1–5 scale (1 being the best rating and 5 the worst)
<i>Country</i>	The country where the home office of the employee is located

individual is matched to), *Observation Window* (the duration for which we observe the retention behavior of a CSI participant or a matched control), *Female* (an indicator for gender), *Birth Year* (the year the person was born), *Joining Year* (the year the person joined the firm), *Prior Performance* (the last available performance rating of the CSI participant or a matched control prior to the CSI project), and *Country* (the country of the home office where an individual is employed).

3.4. Construction of Matched Samples for Retention Analysis

Before empirically examining how CSI participation is related to employee retention, we summarize our findings for the antecedents of CSI participation in Table 3. A logit estimation with *CSI Participant* as the dependent variable suggests that women (*Female* = 0), younger employees (more recent *Birth Year*), high-tenured employees (earlier *Joining Year*), and better-performing employees (lower numeric rating of *Prior Performance*) are more likely to select into CSI. In addition, employees from the three countries included in the table are less likely to participate than those from the United Kingdom (the reference country for the analysis). Overall, there appears to be evidence therefore that selection into CSI is not entirely random, and it suggests a need for constructing an appropriately matched sample.

In fact, there are two challenges in making a cross-sectional comparison of retention across CSI participants and nonparticipants. First, we need to ensure that the time windows employed for observing retention behavior across the two are comparable. Second, CSI participation itself could be driven in complex ways by

characteristics that would affect retention rates independent of CSI, possibly producing a misleading correlation. The first issue can be perfectly addressed and the latter at least partially addressed through an appropriate use of matching techniques (Dehejia and Wahba 1999, Imbens 2004).

For clarity of analysis, we proceed in two steps. We first construct what we call a “loosely matched” sample to account for the first issue, namely, incomparability

Table 3 Antecedents of CSI Participation

Regression model: Sample: Dependent variable:	Logit Full sample <i>CSI Participant</i>
<i>Female</i>	0.178+ (0.096)
<i>Experienced Hire</i>	0.007 (0.152)
<i>Birth Year</i>	0.045** (0.010)
<i>Joining Year</i>	−0.120** (0.014)
<i>Prior Performance</i>	−0.101* (0.049)
<i>Country = United States</i>	−0.354** (0.103)
<i>Country = Canada</i>	−0.400+ (0.221)
<i>Country = Ireland</i>	−0.929* (0.394)
Observations	9,809
Log likelihood	−1,791
Wald χ^2	220.2**

Note. Standard errors are in parentheses.

** $p < 0.01$; * $p < 0.05$; + $p < 0.1$.

of observed time windows. This involves, for each CSI participant, identifying a set of legitimate controls: individuals also employed with the firm as of the date of the CSI project end and not yet being CSI participants.⁴ This procedure ensures that the CSI participant and the nonparticipants in the matched sample can be followed over the same time window (from the CSI project end date to June 30, 2013) in order to examine differences in retention.⁵ We rely on one-to-many matching to fully utilize available data, and we use appropriate weights in all analyses to make correct “treatment on the treated” inference in line with well-established matching methodology (Iacus et al. 2011, 2012; Imbens 2004).⁶

The weighted means of key variables of interest for CSI participants as well as nonparticipants in the loosely matched sample are reported in Table 4(a). A comparison of means of *Left Firm* across the two samples (0.270 for nonparticipants versus 0.210 for participants; difference statistically very significant based on a formal *t*-test) is suggestive of a positive retention effect associated with CSI participation. That this effect is driven

by the difference in the means for *Left Firm Voluntarily* (0.210 for nonparticipants versus 0.160 for participants) is consistent with the interpretation that the retention effect associated with CSI is driven by an increased likelihood of staying voluntarily rather than CSI participants having a lower likelihood of being asked to leave.

We now examine whether the matching procedure results in balanced covariates across subsamples. Other than the mean *Observation Window* for the participant and the nonparticipant samples, which are the same by construction, the two subsamples differ significantly on many dimensions. A robust comparison of retention effects between CSI participants and nonparticipants ought to account for these differences. One way to do so is through multivariate regression analysis. However, our preferred approach is to first improve the quality of match itself, as that would ensure that subsequent multivariate analysis is not sensitive to functional form assumptions of the chosen regression model (Angrist and Pischke 2009, Heckman et al. 1997, Imbens 2004). To the extent that unobserved factors are correlated with

Table 4(a) Summary Statistics for the “Loosely Matched” Sample

	CSI participants		Matched nonparticipants	
	Mean	SD	Mean	SD
<i>Left Firm</i>	0.210	0.410	0.270	0.440
<i>Left Firm Voluntarily</i>	0.160	0.370	0.210	0.410
<i>Left Firm Nonvoluntarily</i>	0.050	0.230	0.050	0.230
<i>Observation Window</i>	803.48	563.33	803.48	563.33
<i>Female</i>	0.490	0.500	0.430	0.490
<i>Experienced Hire</i>	0.150	0.360	0.240	0.430
<i>Birth Year</i>	1,979.59	5.87	1,978.10	8.35
<i>Joining Year</i>	2,005.57	3.90	2,006.62	4.57
<i>Prior Performance</i>	3.240	0.990	3.300	0.970
<i>Country = United Kingdom</i>	0.360	0.480	0.250	0.430
<i>Country = United States</i>	0.570	0.500	0.660	0.470
<i>Country = Canada</i>	0.050	0.220	0.060	0.240
<i>Country = Ireland</i>	0.010	0.120	0.020	0.150

Notes. Based on a one-to-many matching for 475 CSI participants. Appropriate weights are employed.

Table 4(b) Summary Statistics for the “Stringently Matched” Sample

	CSI participants		Matched nonparticipants	
	Mean	SD	Mean	SD
<i>Left Firm</i>	0.220	0.460	0.290	0.460
<i>Left Firm Voluntarily</i>	0.160	0.430	0.250	0.430
<i>Left Firm Nonvoluntarily</i>	0.060	0.210	0.050	0.210
<i>Observation Window</i>	808.00	561.96	808.00	561.96
<i>Female</i>	0.490	0.500	0.490	0.500
<i>Experienced Hire</i>	0.140	0.350	0.140	0.350
<i>Birth Year</i>	1,980.12	5.32	1,980.12	5.32
<i>Joining Year</i>	2,005.82	3.43	2,005.82	3.43
<i>Prior Performance</i>	3.250	0.970	3.250	0.970
<i>Country = United Kingdom</i>	0.360	0.480	0.360	0.480
<i>Country = United States</i>	0.600	0.490	0.600	0.490
<i>Country = Canada</i>	0.040	0.190	0.040	0.190
<i>Country = Ireland</i>	0.010	0.090	0.010	0.090

Notes. Based on a one-to-many matching for 412 CSI participants. Appropriate weights are employed.

observables, this approach can also reduce—though certainly not eliminate—concerns about endogeneity of participants selecting into CSI projects (Altonji et al. 2005, Dehejia and Wahba 1999).

Our procedure for constructing another matched sample, which we call “stringently matched sample,” employs coarsened exact matching (CEM) to find one-to-many matches between participants and nonparticipants (Iacus et al. 2011, 2012).⁷ We match not just on demographic parameters but also on pre-CSI performance to better address concerns about CSI participants being systematically different and, in ability, potentially not worth retaining in the first place. Specifically, we carry out a match on *Prior Performance* (5 buckets), *Female* (2 buckets), *Country* (4 buckets), *Joining Year* (18 buckets), *Experienced Hire* (2 buckets), and *Birth Year* (6 buckets). This in fact implies an exact fine-grained match (i.e., without coarsening) for all variables other than *Birth Year*.⁸ In addition, we continue to impose the prior condition that the matched controls have to be employed with the firm as of the focal participant’s CSI project end date and should not have participated in a CSI project until then.⁹

The weighted means of key variables of interest for CSI participants versus nonparticipants for the stringently matched sample are reported in Table 4(b). These are now practically identical as expected and confirm a closer comparability of the participant and nonparticipant subsamples than in the loosely matched sample described before. Importantly, a comparison of means of *Left Firm* across the two samples (now 0.290 for nonparticipants versus 0.220 for participants; difference again statistically highly significant based on a formal *t*-test) is now even more strongly suggestive of a positive retention effect associated with CSI participation. Once more, this effect is driven by the difference in the means for *Left Firm Voluntarily* (0.250 for nonparticipants versus 0.160 for participants). In fact, the means for *Left Firm Nonvoluntarily* (0.050 for nonparticipants versus 0.060 for participants) show the opposite pattern: CSI participants are slightly *more* likely than nonparticipants to be asked to leave. However, this effect is quite small relative to the voluntary retention effect.

3.5. Regression Analysis Linking CSI Participation and Retention

The goal of this section is to look for econometric evidence linking CSI participation and retention. One benefit of using stringent matching is that any results are unlikely to be driven by specific functional form assumptions of the regression model. Nevertheless, we ensure the robustness of our findings by employing three kinds of models: linear regression (ordinary least squares (OLS)), logit regression, and survival analysis. Although the latter two models seem better suited given the empirical setting, the benefit of starting with OLS

is that it allows us to more finely account for *Birth Year*, *Joining Year*, and *Prior Performance* nonparametrically using a full set of indicator variables (Angrist and Pischke 2009). We also make some attempt to disentangle sorting and treatment effects while acknowledging that the nature of our data does not allow us to do so conclusively.

Conclusively establishing a treatment effect is difficult not because of selection per se, but because of the possibility that unobserved factors could drive both the exposure to the treatment and the outcome of interest.¹⁰ Although there is no *direct* way to know how severe the issue is in a setting such as ours, Altonji et al. (2005) suggest an *indirect* test: taking the extent to which the findings are distorted when the observed variables are not taken into account as indicative of how wrong a treatment interpretation could become as a result of variables not observed. In line with this, we find it helpful to start with a comparison of a linear regression model employing our loosely matched sample first without versus with the appropriate controls. Comparing columns (1) and (2) of Table 5, we observe that the R^2 statistic goes up by almost 18%, suggesting that our controls do help substantially explain an individual’s decision captured by *Left Firm Voluntarily*. At the same time, the regression coefficient for *CSI Participant* does not go down across models. Instead, the coefficient strengthens slightly in statistical significance (from significance only at $p < 0.05$ to significance at $p < 0.01$) as well as magnitude (from -0.047 to -0.057). The implied magnitude of the CSI effect on retention goes up accordingly from a 23% decrease in the likelihood of the employee leaving (a predicted rate of 0.207 for matched nonparticipants versus 0.160 for CSI participants) as per column (1) to a 27% decrease in the likelihood of leaving (a predicted rate of 0.208 for matched nonparticipants versus 0.151 for CSI participants) as per column (2).

Column (3) of Table 5 repeats the same analysis as above now using the stringently matched sample in order to further account for potentially complex ways in which different observables might interact. Given the different sample, the R^2 values of columns (2) and (3) cannot be directly compared. However, using the stringent sample only further strengthens the estimated retention effect, which is now a 32% decrease in likelihood of leaving associated with CSI participation (0.241 for matched nonparticipants versus 0.163 for CSI participants). There is certainly no evidence of there being any weakening of the retention finding as the quality of the controls is improved. Following the argument from Altonji et al. (2005), this gives some confidence that the retention finding is unlikely to be only a manifestation of unobserved variables.

Linear regression models are easy to interpret, and they also allow the inclusion of fine-grained indicator variables as nonparametric controls without having the

Table 5 Regression Analysis Linking CSI Participation with Employee Retention

Regression model: Sample:	(1) OLS Loosely matched		(2) OLS Loosely matched		(3) OLS Stringently matched		(4) Logit Stringently matched		(5) Multinomial logit Stringently matched		(6) Multinomial logit Stringently matched	
	Left Firm Voluntarily	Right Firm Voluntarily	Left Firm Voluntarily	Right Firm Voluntarily	Left Firm Voluntarily	Right Firm Voluntarily	Left Firm Voluntarily	Right Firm Voluntarily	Left Firm Voluntarily (≤ 1 year)	Right Firm Voluntarily (≤ 1 year)	Left Firm Voluntarily (> 1 year)	Right Firm Voluntarily (> 1 year)
Dependent variable:	Left Firm Voluntarily	Right Firm Voluntarily	Left Firm Voluntarily	Right Firm Voluntarily	Left Firm Voluntarily	Right Firm Voluntarily	Left Firm Voluntarily	Right Firm Voluntarily	Left Firm Voluntarily (≤ 1 year)	Right Firm Voluntarily (≤ 1 year)	Left Firm Voluntarily (> 1 year)	Right Firm Voluntarily (> 1 year)
CSI Participant	-0.047* (0.018) [23%]		-0.078** (0.021) [32%]		-0.528** (0.149) [31%]		-0.545** (0.152) [36%]		-0.563** (0.195) [39%]		-0.498* (0.213) [33%]	
Female			-0.042** (0.015)		-0.235* (0.098)		-0.255* (0.100)		-0.299* (0.123)		-0.182 (0.142)	
Experienced Hire			-0.198** (0.029)		-1.235** (0.209)		-1.419** (0.215)		-1.127** (0.243)		-2.196** (0.428)	
Indicators for Birth Year?	No	Yes	Yes	Yes	5-year	5-year	5-year	5-year	5-year	5-year	5-year	5-year
Indicators for Joining Year?	No	Yes	Yes	Yes	5-year	5-year	5-year	5-year	5-year	5-year	5-year	5-year
Indicators for Prior Performance?	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Indicators for Country?	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Indicators for CSI Year?	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	5,263	5,263	2,883	2,883	2,876	2,876	2,883	2,883	2,883	2,883	2,883	2,883
R ²	0.001	0.177	0.153	0.153								
F-statistic	5.9*	12.1**	7.8**	7.8**								
Log likelihood					-1,350.0	-1,350.0	-1,696.0	-1,696.0	-1,696.0	-1,696.0	-2,058.0	-2,058.0
Wald χ^2					366.0**	366.0**	823.5**	823.5**	823.5**	823.5**	1,017.0**	1,017.0**

Notes: Figures in square brackets represent implied decrease in likelihood of leaving. Standard errors are in parentheses.
 **p < 0.01; *p < 0.05; +p < 0.1.

“incidental parameters problem” in nonlinear estimations (Angrist and Pischke 2009). However, given that the outcome of interest is a binary variable (leaving the firm versus not), a logit model seems like a more natural choice—even though we are now forced to employ indicators for *Birth Year* and *Joining Year* only at a five-year level of aggregation. Nevertheless, the estimated marginal effect associated with *CSI Participant* turns out to be practically identical when comparing the linear model in column (3) and the logit model in column (4) of Table 5. The estimated decrease in likelihood of leaving associated with CSI participation is still estimated at 31% (0.242 for matched nonparticipants versus 0.166 for CSI participants).

The analysis thus far only considers leaving the firm voluntarily as a binary outcome. In reality, the case of not leaving voluntarily includes two subcases: the individual still being with the firm or having been asked to leave the firm. This richer set of outcomes can be accounted for in a multinomial logit framework with three mutually exclusive and exhaustive outcomes: leaving the firm voluntarily, leaving the firm involuntarily, and not leaving the firm. The findings from this analysis are reported in column (5) of Table 5 that considers both *Left Firm Voluntarily* and *Left Firm Nonvoluntarily* as outcomes, with the third case of still being with the firm being taken as the reference category. We once again find a negative and statistically significant retention coefficient for *Left Firm Voluntarily*, with a 36% reduction in attrition compared with the reference category (0.195

for matched nonparticipants versus 0.125 for CSI participants). On the other hand, the effect for *Left Firm Nonvoluntarily* is only 7% and statistically insignificant (0.013 for matched nonparticipants versus 0.012 for CSI participants). These findings are consistent with a view that the agency in our retention finding lies with the employee, as the retention effect is driven almost entirely by CSI participants *choosing to stay longer*.¹¹

Since we have precise information on exactly when a departure occurred, we can be more fine-grained in our timing analysis. It might seem natural to employ a survival analysis model based on a Cox proportional hazard estimation to model the phenomenon. Before we assume such a functional form for the departure behavior over time, it is useful to extend our previous analysis to see whether the short term versus long term effects of CSI participation differ substantially in terms of retention outcomes. We do so by extending the multinomial model above in order to separate the *Left Firm Voluntarily* outcome further into leaving within one year versus leaving after more than one year post-CSI, and the results from this are reported in column (6) of Table 5. Although the retention rate difference seems to be greater within the first year than in subsequent years, this difference is relatively small (a 39% drop in departure rates in the first year post-CSI versus a 33% drop for later years) and in fact not statistically significant.

Table 6 employs a survival analysis model based on a Cox proportional hazard estimation to replicate the previously reported finding as well as our preferred specification to examine the moderating effects of CSI

Table 6 Hazard Rate Analysis and Moderators of the Retention Effect

	(1) Cox	(2) Cox	(3) Cox	(4) Cox
Regression model:				
Sample:	Stringently matched	Stringently matched	Stringently matched	Stringently matched
Dependent variable:	<i>Left Firm Voluntarily</i>	<i>Left Firm Voluntarily</i>	<i>Left Firm Voluntarily</i>	<i>Left Firm Voluntarily</i>
<i>CSI Participant</i>	-0.489** (0.130)	-2.075** (0.629)	-0.582** (0.140)	-2.029** (0.630)
$\ln(\text{CSI Days})$		0.376** (0.141)		0.347* (0.142)
<i>CSI in Emerging Market</i>			0.877* (0.346)	0.734* (0.348)
<i>Female</i>	-0.184* (0.081)	-0.184* (0.081)	-0.186* (0.081)	-0.186* (0.081)
<i>Experienced Hire</i>	-1.113** (0.192)	-1.124** (0.192)	-1.114** (0.192)	-1.124** (0.192)
Indicators for <i>Birth Year</i> ?	5-year	5-year	5-year	5-year
Indicators for <i>Joining Year</i> ?	5-year	5-year	5-year	5-year
Indicators for <i>Prior Performance</i> ?	Yes	Yes	Yes	Yes
Indicators for <i>Country</i> ?	Yes	Yes	Yes	Yes
Indicators for <i>CSI Year</i> ?	Yes	Yes	Yes	Yes
Observations	2,883	2,883	2,883	2,883
Log likelihood	-4,798.0	-4,794.0	-4,795.0	-4,792.0
Wald χ^2	126.3**	134.7**	131.6**	138.5**

Note. Standard errors are in parentheses.

** $p < 0.01$; * $p < 0.05$; + $p < 0.1$.

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participation duration as well as location. The baseline model in column (1) again shows a significant reduction in the attrition rate. The estimated coefficient of -0.489 for *CSI Participant* implies a 39% decrease in retention likelihood associated with CSI participation, a figure very close in magnitude to the effects estimated using the different models employed earlier. Columns (2)–(4) in Table 6 extend the baseline model to provide analysis of the moderating effects proposed in Hypotheses 2 and 3. As mentioned earlier, *CSI Days* measures the length of the CSI participation, and *CSI in Emerging Market* is an indicator for whether CSI project work primarily involved working in an emerging market. To account for the skewed nature of *CSI Days*, we transform the variable into its logarithmic form (adding 1 first to deal with zero-values for nonparticipants). Columns (2) and (3) analyze the two effects separately, whereas column (4) shows that the findings are qualitatively unchanged even if the two are considered together: the retention effect seems to be stronger for shorter rather than longer CSI projects and for CSI projects based in developed rather than emerging markets.¹²

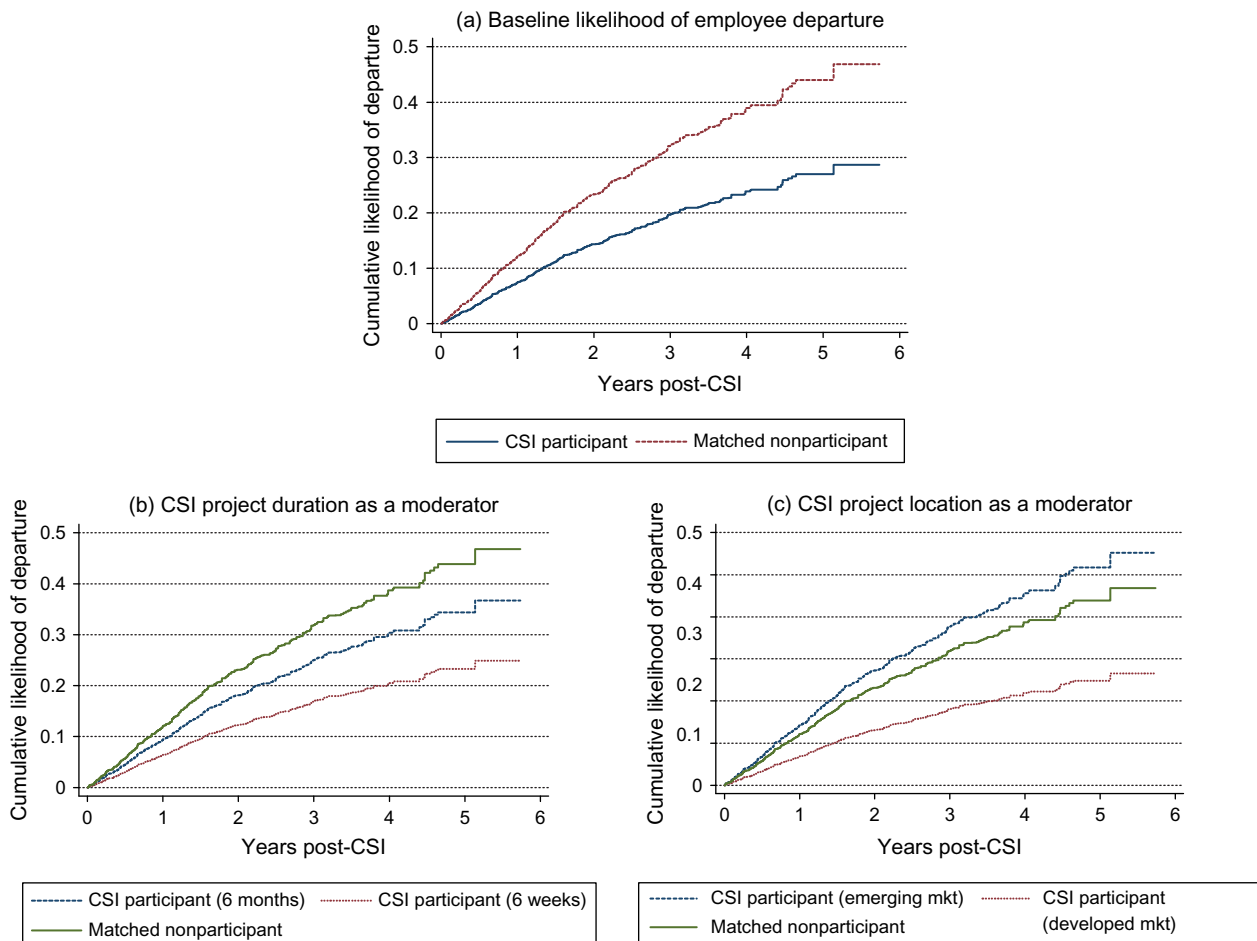
Finally, Figure 2(a) graphs the baseline retention effect based on the Cox proportional hazard estimation,

and Figure 2(b) illustrates graphically the magnitude of the moderating effect of *CSI Days* by comparing a CSI participation duration of six weeks (the 25th percentile of *CSI Days* among participants) with a duration of six months (the 75th percentile of *CSI Days* among participants). Although longer CSI projects are associated with greater retention rates relative to retention rates of matched nonparticipants, the effect is significantly smaller than for shorter CSI projects. Figure 2(c) sheds light on the magnitude of the moderating effect of the indicator variable *CSI in Emerging Market*. It is clear that CSI participation in developed markets is strongly associated with greater retention, and this is what drives the overall effect estimated in the baseline models. In fact, CSI participation in emerging markets actually seems associated with slightly *decreased* retention compared with matched nonparticipants, though this is statistically indistinguishable from the retention rates for the latter.

3.6. Performance Implications?

Our stringently matched sample and related analysis already account for systematic differences in *prior* performance for CSI participants versus nonparticipants.

Figure 2 (Color online) Survival Analysis (Cox Hazard Rate Models) for the Likelihood of Employee Departure



We also explored whether there are any differences in their *subsequent* performance. We started by analyzing employee exit records to see which of the leaving individuals had been classified as top performers at the time of leaving. We found that 30% of the participants leaving voluntarily had been top performers, whereas the corresponding figure was 24% for the matched nonparticipants that left. This suggests that the recent performance of the leaving CSI participants was at least as good as, and perhaps even slightly better than, the leaving nonparticipants. Unfortunately, we do not have access to a similar classification for employees still employed with the firm.

We did have access to the yearly performance database the firm maintained for all its employees. Although the annual data often have missing values, we were able to find at least one observation of post-CSI performance for most individuals. The statistics again show that the difference in performance is not significant even though CSI participants now seem marginally behind: the fraction of employees with an average or above-average rating is 59% for CSI participants and 63% for nonparticipants. Combining performance information from these two sources, there does not seem to be evidence that CSI participants are worse than nonparticipants in their post-CSI performance. Therefore, improved retention among CSI participants does not seem inconsistent with the overall business goals of the firm.

3.7. A “Treatment on Treated” Interpretation?

Whereas employee selection and sorting effects could drive some of the findings, we explore the intriguing possibility that at least some of the results represent an actual treatment effect from CSI participation. Indeed, many of the obvious selection effects should have been accounted for by the fact that our data involve a comparison only between professionally similar employees employed in similar jobs within the same consulting firm, and that the sample construction uses stringent matching on the demographic profiles and past performance of employees. Results from the procedure suggested by Altonji et al. (2005), as discussed above, are also consistent with there being at least some treatment effect.

Given that we cannot fully account for unobserved factors, we do not interpret our findings as demonstrating that *taking employees at random and exposing some of them to CSI could improve retention*. But we present two additional pieces of evidence consistent with an interpretation that *taking employees with an inherent interest in CSI and exposing them to CSI could improve retention*. This represents a less aggressive causal interpretation in line with a treatment on the treated view of the effect (Heckman et al. 1997, Imbens 2004, Angrist and Pischke 2009).

3.7.1. Evidence From Survey Data. A skeptical reader might wonder whether the kind of individuals who select into CSI would anyway be more likely to stay with the firm longer for reasons unrelated to CSI. Yet our survey evidence shows that, if anything, the opposite seems to be true: employees interested in CSI participation are in fact generally those who are least satisfied with their regular job and thus most at risk of leaving the firm *ex ante*.

We surveyed current employees who had not participated in CSI (as of 2013) regarding their interest in CSI, their perceptions of their everyday job, and their self-stated likelihood of staying with the firm.¹³ The findings reported here are based on 552 responses we received from a population of just over 5,000 nonparticipants. Of these, 62 had already applied for CSI but had not been selected, 297 reported being interested in CSI but had not yet applied, and 193 had no interest in CSI. Table 7 summarizes how these three groups differed on their answers to five survey questions relevant to the present analysis.¹⁴

Based on the responses to the questions “My work activities are personally meaningful to me,” “I am proud to tell others where I work,” and “What I do at work makes the world a better place,” we find that people with the lowest interest in CSI also assign the highest meaning to their everyday commercial work, display the most pride regarding their everyday commercial work, and believe that their commercial work makes the world a better place. Similarly, examining responses to the questions “I rarely think about leaving my job to work elsewhere” and “It would take a lot to get me to leave my job,” it appears that those interested in CSI were, if anything, more at risk of leaving the firm than those not interested in CSI. Taken together, the evidence from the survey mitigates a concern that individuals selecting into CSI were *ex ante* more likely to stay with the firm.

3.7.2. Evidence from Interview Data. In line with the analysis and discussions above, most of our interviews with CSI managers and participants include at least some reference to significant selection and sorting effects in determining who would apply and be assigned to a CSI project. However, a majority of the former CSI participants we interviewed also reported at least some evidence consistent with our treatment on the treated interpretation. The interviewed participants do not represent a random sample, as they are former CSI participants (still with the firm as of the interview date) with whom the CSI management team was able to arrange interviews. Accordingly, we should take the interview data as suggestive and illustrative.

We systematically coded interview transcripts of 16 former CSI participants for self-reported changes that might have occurred during their CSI project participation or immediately following their return to the commercial practice. This coding revealed that in 12 of 16

Table 7 Survey Evidence from Current Employees Who Had Not Participated in CSI (552 Respondents)

	<i>Not interested in CSI</i> Mean (SD)	<i>Interested but not applied</i> Mean (SD)	<i>Applied to CSI</i> Mean (SD)
[Q1] My work activities are personally meaningful to me.	3.80 (0.89)	3.37** (0.96)	3.38** (0.90)
[Q2] I am proud to tell others where I work.	4.20 (0.74)	4.09 (0.79)	4.05 (0.82)
[Q3] What I do at work makes the world a better place.	3.17 (1.03)	2.85** (0.99)	2.89+ (1.03)
[Q4] I rarely think about leaving my job to work elsewhere.	3.18 (1.11)	3.02 (1.10)	2.93+ (1.03)
[Q5] It would take a lot to get me to leave my job.	3.63 (1.05)	3.36** (1.00)	3.27** (0.85)

Note. All survey questions use a 1–5 scale (1 = strongly disagree, 5 = strongly agree).

** $p < 0.01$; * $p < 0.05$; + $p < 0.1$ (t -test result for mean being statistically different from the first column mean).

Table 8 Illustrative Quotes from Interviews Conducted with Former CSI Participants

Self-reported benefits associated with CSI

1. "Once I got back and settled back into commercial practice, I realized that I really enjoy the [CSI] kind of work.... I was making more of a difference with my work and my time than helping increase share price. Doing CSI was one of the reasons why I wouldn't move from [the firm]."
2. "So you're typically working with people who are very passionate about what they are doing, but they don't tend to have a lot of structure. They don't tend to have skills to be able to get things done in a very systematic manner.... So it was very fulfilling from that perspective because clearly, we were adding immediate value. I certainly came back refreshed from my experience. I think that certainly added value to [the firm]. It helped me stick around for another two years."
3. "I think it flips a switch in your brain that even if development isn't for you, you've had that experience. That stays in the back of your mind. I think the experience is very self-fulfilling. I feel very loyal toward [the firm] for providing me this opportunity. The return was unceremonious, and to me, this is probably one of the biggest faults I have seen, the transition out of [CSI]."
4. "It was very interesting, and obviously a great personal experience, as well as professional experience. I thought it was great to show that you are actually able to design solutions that were going to benefit people on the ground. It wasn't just, you know, a kind of black box where you're doing something in an HQ [headquarters] office. It was going to benefit the way the program was going to be run."
5. "This was an experience that I will have with me for the rest of my life. I think it really developed me personally and professionally. The challenges and obstacles that came up were totally unexpected."
6. "It was mind-blowing. We talked to the victims of the genocide right there in front of us. I went home that day full of emotions. I'm glad that I've really managed to help them. I worked 16 hours a day and had many challenges. But I also had an amazing personal experience. I think I came back a much more confident person."
7. "It has been more meaningful than working with clients that help organization to lay off people so that they can make a bunch of money."
8. "Your mind-set is improved. I enjoyed it a lot. So it was definitely a good experience."

Self-reported challenges associated with CSI

1. "We were working with such passionate people, when they talked about these issues, you really felt like you were actually doing something meaningful... now coming back I'm working on a project which is 170 people and I feel like I'm this tiny little ant in this company. After the type of work I've been doing... I was thinking 'I actually can't do this.'"
2. "A lot of people do really enjoy the project and want to keep going.... [But] you know you have to come back to commercial projects. So that is a real struggle."
3. "I didn't get a really good evaluation from my managers... they don't see it as 'theirs,' they don't see it as important. They had no idea what I was doing."
4. "I feel like I am further away from my [commercial unit] community than I was before."

cases, the interviews included evidence consistent with a treatment effect (though we cannot link it to retention, as the interviewees had not been explicitly asked to comment on their likely future duration of stay with the firm). Thus, the 12 informants reported a change in their perceptions of themselves or the firm as a result of participation in CSI. Although the full interviews lasted on average 60 minutes, for brevity purposes, Table 8 presents a representative quote capturing the essence of each interviewee's experience. The quotes provide a useful illustration of the positive effect as well as the

challenges that individuals perceived as being associated with their CSI experience.

4. Conclusion

Given the strategic role played by human capital and the tremendous costs to firms of replacing lost employees (Bidwell 2011), employee retention can be critical for firm performance (Allen et al. 2010, Briscoe and Rogan 2015). Prior research has studied a wide range of levers that companies employ to retain employees:

financial incentives (Campbell et al. 2012b), organizational culture (Sheridan 1992), quality of work (Guthrie 2001), and legal recourse (Agarwal et al. 2009). We have complemented these efforts by examining a tool for retention that has been largely overlooked in the academic literature—namely, corporate social initiatives. We found that employee participation in a corporate social initiative was positively associated with retention rates in the firm. Furthermore, these results came from a conservative context in which the likelihood of observing employees with a taste for social impact was low, a profit-driven business consultancy. Despite this, consultants in this firm willingly took pay cuts to participate in corporate social initiatives, and their postparticipation likelihood of staying at the firm was greater than that of nonparticipants.

In demonstrating significant sorting effects on observable characteristics, and acknowledging the possibility of additional unobserved selection, our work relates closely to the broader literature on how individuals with heterogeneous preferences are matched to different jobs. Such effects have been studied in other settings, including science-based jobs (Agarwal and Ohyama 2013, Roach and Sauermann 2015, Sauermann and Stephan 2013, Stern 2004), entrepreneurship (Stuart and Ding 2006), nonprofit work (Leete 2001, Preston 1989, Ruhm and Borkoski 2003), and the public sector (Delfgaauw and Dur 2008, Prendergast 2007). However, there remains a dearth of related empirical work in the context of corporate social initiatives—even at a time when these initiatives are becoming increasingly prevalent.

Our evidence is also consistent with the argument that retention is at least in part driven by a treatment effect associated with actual participation. The findings from our matched sample analysis, combined with empirical tests based on the methodology of Altonji et al. (2005) and supplementary evidence drawn from survey and interview data, are consistent with a treatment on the treated interpretation (Angrist and Pischke 2009, Heckman et al. 1997, Imbens 2004). In other words, while acknowledging the possibility that individuals sort into projects, our evidence also provides support of some treatment effects for the subpopulation of employees with a propensity to select into corporate social initiatives.

We should note that, because our research design only considers the *post-CSI* duration of employment, our findings exclude any additional retention effect arising from the possibility that certain participants would stay longer with the firm just to be able to take part in CSI in the first place. The nature of our data and our conservative design prevent us from examining additional retention effects related either to *anticipation* of doing CSI or simply having an (unexercised) *option* of doing CSI, implying that we are likely underestimating the overall retention effect. Studying these additional channels through which

the corporate social initiative influences retention could be a fruitful agenda for further research.

We have clearly only begun to investigate the important yet complex relationship between corporate social initiatives and employee retention, leaving the disentangling of mechanisms for future research. Further insights into the underlying mechanisms could be generated through methods employing in-depth qualitative research or detailed surveys. More progress on establishing causal effects could also be made by employing experimental research designs, and promising attempts have been made in that direction (Burbano 2014, Fehrler and Kosfeld 2014, Frank and Smith 2014, Hossain and Li 2014). At the same time, experiments are only a limited representation of complex real-world phenomena and best seen as complements rather than substitutes for archival studies such as ours. Another promising direction could be to look for natural experiments in real-world settings, though these can be hard to find. The evolving literature would also benefit from more formal modeling of job matching in the context of social impact opportunities, capturing the dynamics of how individuals enter and leave different pools of jobs within and across organizations (Jovanovic 1979, Miller 1984, Mortensen 1988, Simon and Warner 1992).

We close by noting the link of our research to a broader discussion on how firms can develop innovative business models integrating societal impact considerations into their strategies (Porter and Kramer 2011, Prahalad and Hart 2002, Seelos and Mair 2007). Informing the strategic human capital perspective, our study suggests that both scholars and practitioners must take heterogeneity in employees' preferences, such as those for social impact, more seriously into consideration. Certain types of employees may derive greater benefit from participating in a corporate social initiative because they value having the best of both worlds: a traditional corporate career and the opportunity to create explicit social impact. Indeed, in our setting, the perceived nonfinancial benefits were sufficiently large that some employees chose to participate despite having to take a substantial salary cut. For the firm, the initiative was associated with retention and reputational benefits achieved via a business model financially closer to self-sustaining than a traditional CSR project. Charging clients (even at a reduced rate) rather than doing pro bono work and requiring the employees to bear some of the cost reduced the burden on the firm. At the same time, the initiative created value for external stakeholders by making consulting services accessible to nonprofit and development organizations and allowing them to better serve the disadvantaged segments of society. Although it is impractical to carry out a comprehensive welfare analysis of the corporate social initiative with the data we have, exploring such a direction in future research would also be promising.

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Endnotes

¹Theoretically speaking, the retention effect could become negative if participants have such a strong preference for social impact that they quit to pursue the same elsewhere (e.g., in an NGO). However, our expectation is that the kind of employees a consulting firm attracts would generally prefer a “hybrid career track” to quitting entirely. In other words, “prosocial preferences” for a majority of such employees would be sufficiently satiated by engaging in social impact for a limited time. Their preferences are not so extreme that they would quit, forgoing salary and other attractive aspects they enjoy in a commercial career. In our discussion of moderating conditions in §3.5, however, we consider specific contingencies where the latter effect might dominate.

²Because the records for 12 of the 9,821 individuals (4 of whom were CSI participants) were missing values for some key variables, we dropped these in our matching procedure and subsequent analyses.

³Although CSI has been in place since 2002, details regarding projects prior to 2007 are not available. However, aggregate records indicate that almost 90% of all CSI projects took place during our study period. A CSI manager also ensured that our sample does not include pre-2007 CSI participants miscoded as nonparticipants. To the extent that any miscoding occurred, it would only make it harder for us to find differences in retention rates between CSI participants and nonparticipants.

⁴The condition “not yet” ensures that we do not use information “from the future” in finding matches, so people who take part in CSI *in the future* are still allowed as valid controls. Practically speaking, given that only a small fraction of the population goes through CSI, whether or not we allow future CSI participants as controls has only a relatively minor real effect on the nature of the matched sample and hence our regression estimates.

⁵In the few atypical cases where an employee participated in more than one CSI project, we based the analysis on his or her last project. Such cases are quite rare, and the findings are not sensitive to dropping these cases.

⁶All our main findings are robust to employing a one-to-one match instead, though such a match is less preferable given that the standard errors tend to be larger as a result of the effective sample size being smaller.

⁷For a recent application of the CEM approach in the context of interorganizational mobility of individuals (albeit in the context of inventor mobility and associated knowledge diffusion), see [Singh and Agrawal \(2011\)](#).

⁸To ensure that age is still well accounted for, all regressions include fixed effects for the actual year (and not just the decade) of birth. There is a trade-off between stringency of the match and the number of CSI observations that are dropped,

which is why we chose to coarsen the birth year up to the birth decade. The findings remain robust, but the number of CSI observations matched falls significantly, if we match using 5-year or finer buckets instead.

⁹We would have liked to draw the controls only from the sub-population of employees that applied to participate in CSI but were not selected. Unfortunately, the firm does not maintain historical records of who applied to CSI.

¹⁰Clarifying this, [Imbens \(2004\)](#) notes that “two agents with the same values for observed characteristics may differ in their treatment choices without invalidating the unconfoundedness assumption if the differences in their choices is driven by differences in unobserved characteristics that are themselves unrelated to the outcomes of interest” (p. 7).

¹¹The firm tries to record the reason behind voluntary departures, though the coding is not systematic. Many of the reasons look similar for CSI participants versus nonparticipants, but we found some suggestive differences. What the firm classifies as “Personal reasons” was a more commonly stated reason for departure for CSI participants (20% of the cases) versus nonparticipants (12% of the cases). On the other hand, nonparticipants seemed more likely to leave for reasons aligned with optimizing a traditional consulting career, such as monetary concerns (inadequate “total rewards”) and promotion within the company (“lack of promotion opportunities”); these two together constituted 15% of the cases for nonparticipants and only 5% of the cases for CSI participants.

¹²Because of data unavailability, we were unable to match CSI participants and nonparticipants on the location or length of all the projects they had worked on. Therefore, the findings regarding the moderating effects should be interpreted with some caution. For example, participation in a longer project or one in a low-income country might, to some extent, be associated with a lower retention rate regardless of it being a CSI project or a commercial project.

¹³Because we surveyed individuals still with the firm right after the end of the period our archival data covers, we do not have data on subsequent retention outcomes for the surveyed individuals.

¹⁴The survey questions were drawn upon a scale of work meaningfulness developed by [Bunderson and Thompson \(2009\)](#).

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