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Determinants of Top-Down Sabotage

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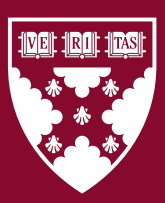

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Determinants of Top-Down Sabotage

By

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Abstract

We investigate the conditions that motivate managers to impede the growth of talented subordinates due to fears of future competition for their own positions. Our research expands on existing tournament and contest theory literature that considers peer-to-peer sabotage as an unintended consequence of relative performance evaluation (RPE) to sabotage across hierarchical levels. Drawing on survey data from 335 U.S. corporate executives, we find that top-down sabotage (TDS) is not driven by RPE systems, but thrives in environments where subjective managerial discretion dominates the performance evaluation process. Weak management control systems create opportunities for such discretion, undermining RPE's effectiveness as a self-monitoring tool. Notably, our results reveal that organizational culture emerges as the most significant factor in mitigating TDS. For firms concerned about TDS hampering succession planning, our findings suggest fostering a collaborative culture and cultivating employees' sense of organizational identity and belonging. These insights contribute to our understanding of organizational dynamics and offer practical guidance for both management scholars and practitioners, shedding light on the complex interplay between hierarchical structures, performance evaluation systems, and strategic behaviors in modern organizations.

Keywords: Succession planning, organizational hierarchy, compensation, promotions, tournaments.

1. Introduction

Can inherent personal biases and misaligned incentives lead managers to sabotage potential successors to enhance their own job security? In the 1990s, the C.E.O of Citigroup Sandy Weill fired his long-time friend and business associate Jamie Dimon. Years later in an interview, Weill mentioned, "[Jamie] wanted to be CEO, and I didn't want to retire (Carney, 2010)." After Weill's eventual retirement, Citigroup faced substantial losses requiring a government bailout, whereas Dimon went on to successfully lead the merger of Bank One to eventually become the CEO of JPMorgan. Similarly, in 2005, after being elected to a historic third term as the Prime Minister of the United Kingdom, Tony Blair was unwilling to relinquish power to his potential successor Gordon Brown. While prioritizing the extension of his tenure, Blair's preference for a successor other than Brown jeopardized succession planning and ended up costing the next election to the Labor Party (Wintour, 2013).

Using survey-based evidence, we explore if status and pecuniary benefits associated with hierarchical seniority can drive insecurity among managers across different hierarchical levels and lead them to sabotage the hiring and promotion prospects of high-ability subordinates. Despite the impact of top-down sabotage (TDS) on organizational performance and succession planning (Xiao and Zaman, 2024), there remains a paucity of research on this phenomenon compared to the extensive literature on peer-to-peer sabotage within organizations (Dye, 1984; Lazear, 1989; Chen, 2003; Krakel, 2005; Konrad, 2009). Our paper seeks to fill this gap by examining the conditions under which strategic motivations for TDS are either exacerbated or mitigated, with a particular focus on the roles of incentive schemes, management control systems, and organizational culture.

We evaluate survey data from 335 corporate executives and empirically analyze the determinants of TDS in organizations. We begin by analyzing the prevalence of the phenomenon and investigate the organizational features under which TDS is likely to prevail. Approximately 30% of the survey

participants report observing sabotage in their organizations, and over 70% throughout their careers. Additionally, almost 28% of the survey respondents report being victims of TDS in their organizations, and about 60% report experiencing it in their careers. The sample does not suffer from self-victimization bias, as fewer participants report being victims of TDS than observing it. About 5% of the respondents even admit to being guilty of exercising TDS against their subordinates during their careers.

We find that the nature of the incentive scheme that a firm operates on is significantly associated with TDS. Our analysis shows that TDS is more prevalent in organizations that operate on relative performance evaluation (RPE) regime, particularly where subjective managerial discretion significantly influences the RPE process. Prior literature on tournaments and contests recognizes the intensity of competition to outperform under RPE can lead peers to sabotage (Dye, 1984; Lazear, 1989; Chen, 2003; Krakel, 2005; Konrad, 2009). The key difference between peer-to-peer sabotage and TDS is that in the latter, managers have the authority to prevent future competition by distorting the selection or performance evaluation process, while peers do not have such power. Recent theoretical work by Xiao and Zaman (2024) analytically derives conditions under which tournament incentives can lead to TDS, hurting profitability via suboptimal employee selection and jeopardizing succession planning. Our paper lends empirical support to theoretical predictions on the relationship between RPE and TDS.

We explore the relationship between TDS and organizational features such as firm size and hierarchical level. Our findings indicate that TDS is primarily a phenomenon in large companies, where organizational control is particularly challenging (Arrow, 1964). In addition, our survey responses indicate that TDS is not more common at any specific hierarchical level, suggesting its prevalence across all levels.
We also find that subjective managerial discretion takes over the RPE process when the enforcement of control systems is weak. Our results show that investment in employee performance management systems and 360-degree feedback processes may be redundant unless management control systems are effectively enforced. In fact, survey findings show that merely having a 360-degree feedback system exacerbates

TDS, unless employees trust the process and feel that it achieves the intended organizational outcomes. These findings also suggest room for further research into the enforcement of management control systems.

A substantial part of our survey is devoted to learning about organizational culture and how that relates to the existence of TDS in organizations. We use a number of different measures for culture and perform principal components analysis to extract measures that are most relevant to mitigating TDS. We find that firms that are concerned about succession planning being hampered due to TDS can benefit from developing a strong sense of culture and belonging to the organization. A culture where employees can comfortably speak their minds and talk to colleagues, rather than "keep cards close to their chest" and "work in silos", can substantially mitigate TDS.

The rest of our article is structured as follows. The next section discusses the conceptual background for conditions that give rise to, mitigate or exacerbate TDS. Section 3 describes the survey procedure and participant profiles. Using responses from the survey, section 4 is devoted to empirical analysis of TDS and section 5 discusses the context further and provides concluding remarks.

2. Conceptual background

Organizational hierarchy serves the dual role of incentivizing employees to exert effort (Bénabou and Tirole, 2003; Gagné and Deci, 2005; Rantakari, 2012), while reducing information acquisition costs by delegating decision-making authority to local team managers (Ouchi and Dowling, 1974; Harris and Raviv, 2002; Wernerfelt, 2007). In addition to greater compensation and rewards, hierarchical seniority in organizations is often associated with supervisory authority over task delegation and performance evaluation of subordinates (Blau, 1968; Jacques, 1990; 1996; Romme, 2019; Ma et al., 2022). The literature recognizes that in a contest for greater rewards, peers can engage in sabotage (Lazear, 1989;

Chen, 2003; Krakel, 2005; Konrad, 2009). Our paper extends this literature by studying how managers may exploit their hierarchical authority to systematically sabotage their best subordinates to enhance job security and to prevent future competition.

The literature in economics and management has documented peer-to-peer sabotage as an unintended consequence of relative performance evaluation (RPE) (Salop and Scheffman, 1983; Lazear, 1989; Oremus, 2013). On one hand, RPE incentivizes effort and mitigates monitoring costs for firms by ranking and promoting peers on a relative rather than absolute basis (Lazear and Rosen, 1981; Malcomson, 1984; Demsetz, 1995). On the other hand, the desire to outperform (or avoid being outperformed) may lead individuals to substitute productive effort with sabotage when the former is more costly (Salop and Scheffman, 1983; Lazear, 1989; Oremus, 2013). The literature shows that sabotage is often directed toward high-ability peers, as their colleagues find it costlier to outperform them through productive effort (Skaperdas and Grofman, 1995; Chen, 2003; Muenster, 2007; Gurtler and Munster, 2010; Vandegrift and Yavas, 2010; Deutscher et al., 2013; Balafoutas, 2012).

Exploring RPE further, experimental evidence shows that the intensity of sabotage increases with monetary incentives (Lazear, 1989; Harbring and Irlenbusch, 2005, 2008, 2011; Falk, Fehr, and Huffman, 2008; Reidl et al., 2024). Thus, when a firm operates on RPE and offers substantial financial rewards for top performance, employees are highly motivated to outperform the competition. Charness, Masclet, and Villeval (2014) demonstrate that even under flat-wage conditions, competition for status alone is sufficient to cause peer-to-peer sabotage, highlighting that non-monetary incentives can also drive destructive behaviors. This implies that firms need to carefully design their incentive systems to mitigate the negative effects of both monetary and status-based competition. Additionally, Carpenter, Matthews, and Schirm (2010) show that even the anticipation of sabotage by peers demotivates workers and jeopardizes productivity, further underscoring the need for transparent and well-structured performance evaluation systems.

The literature on sabotage across hierarchy is still nascent and emerging. While firms encourage managers to select capable colleagues by rewarding overall team productivity (Bandiera, Barankay, Rasul, 2013), the RPE system can also create insecurity, as managers may see productive subordinates as future competitors (Lazear, 1995; Friebel and Raith, 2004; Edelman and Larkin, 2014). Lazer (1995) alluded to the strategic incentive for incumbents to sabotage the hiring process when they share the same compensation pool as new hires. Friebel and Raith (2004) suggest that enforcing a strict chain of command can alleviate supervisors' insecurity and mitigate hiring sabotage, though their model does not address the impact of TDS on promotions or succession planning. Edelman and Larkin (2014) theorize that social comparisons can lead senior employees to resort to deception to enhance their performance measures, highlighting the role of social dynamics in managerial sabotage. Hecht, Maas, and van Rinsum (2021) find that managers try to retain productive employees as subordinates by preventing their promotion out of their team, a practice termed "talent hoarding." Similarly, Haegele (2022) notes that managers, when evaluated on team performance, engage in talent hoarding to hinder the upward mobility of employees. Both studies suggest unfair performance evaluations of subordinates in order to retain them as subordinates.

The idea that managers sabotage subordinates to mitigate potential competition, rather than merely to retain them as employees, distinguishes TDS from talent hoarding. Effective succession planning across all hierarchical levels relies on reliable performance evaluation and credit attribution to individual employees (Kim, 2003). While previous literature has focused on the reluctance of CEOs to step down (Boeker, 1992; Ocasio, 1994), the desire to retain managerial positions extends beyond C-Suite executives. Monetary and non-pecuniary benefits associated with hierarchical seniority can drive insecurity among mid-level managers, leading them to engage in TDS. Mid-level managers may enforce a strict chain of command to prevent subordinates from gaining visibility and may unjustly claim credit for their subordinates' work (Friebel and Raith, 2004; Zaman, 2022). Practitioners report that managers sabotage their subordinates by spreading false rumors within the organization (Kurter, 2021; Carter,

2022). Edelman and Larkin (2015) find that unfavorable social comparisons with junior employees can damage senior managers' self-esteem and lead to deceptive behavior if their own performance lags behind.

To the best of our knowledge, Xiao and Zaman (2024) are the first to analytically derive equilibrium predictions on effort and TDS. They propose a headstart control system, similar in spirit (but not in magnitude) to academic tenure, to insulate incumbent managers from potential competition. Their findings suggest that a sufficient headstart can eliminate hiring sabotage. However, they also show that reducing the magnitude of head start, while allowing some level of TDS, can benefit firms concerned with succession planning. This insight sets the stage for examining how management control systems and performance evaluation mechanisms can be designed to balance the need for fair evaluation and the mitigation of sabotage.

The discretion to select a colleague who may become a (later) competitor differentiates TDS from peer-to-peer sabotage. This discretion introduces agency concerns (Jensen and Meckling, 2019; Holmström, 1979), as managers may be torn between maintaining their authority and fairly evaluating subordinates. In his seminal 1972 article "On the idea of a management control system", Ernest Lowe (1972) noted that managers must balance personal goals with organizational objectives, often exercising significant discretion in their roles: “The managers of the subunits of the enterprise must necessarily be ambivalent in view of their own personal goals, as well as have a good deal of discretion in deciding how they should behave and in formulating their part of any overall plan to achieve organizational objectives.”

The purpose of management control systems is to “ensure that resources are obtained and used effectively and efficiently in the accomplishment of the organization's objectives” (Anthony and Govindarajan, 1998). Prior literature has explored how incentive schemes and performance management systems can drive desirable outcomes (Merchant and Van der Stede, 2007; Casas-Arce, Lourenço, and Martínez-Jerez, 2017; Du, Erkens, Young, and Tang, 2018). However, the possibility of TDS questions the efficacy of

performance evaluation systems, particularly when the manager (the provider of feedback) foresees competition in his subordinate (the receiver of feedback).

The 360-degree feedback system, an output-based control system where peers, subordinates, and supervisors provide performance feedback, is intended for performance improvement and leadership development (Atwater, Roush, & Fischthal, 1995; Reilly, Smither, & Vasilopoulos, 1996). However, it may become ineffective in politically charged environments (Ghorpade, 2000). Employees fearing backlash may withhold honest feedback, rendering the process redundant.

Scholars have also considered aligning employee preferences through input-based management controls, such as employee selection, particularly when noisy performance measures challenge incentive contracting (Prendergast, 2011; Campbell, 2012; Abernethy et al., 2015; Akerlof and Kranton, 2000, 2005). For example, referrals-based hiring has been considered a viable input-based MCS to align employee preferences (Campbell, 2012) and improve the quality of match between firm and employee (Fernandez et al., 2000). However, the viability of referrals-based selection as an effective MCS becomes questionable if managerial discretion makes the selection process vulnerable to TDS.

In addition to formal control systems, there is a growing literature on organizational culture as an informal mechanism to achieve organizational goals (Campbell, 2012; Gibbons and Henderson, 2013; Gorton et al., 2022). Schein (2010) defines culture as the system of shared beliefs and values among employees of an organization. Over the years, the construct of culture in academic literature has encompassed a firm's reputation developed by employee behavior over time (Kreps, 1990), the “stock of knowledge that is shared by a substantial portion of the employees of the firm” (Cremer, 1993), shared beliefs and objectives that help mitigate agency problems (Van den Steen, 2010), and context-dependent weights on different elements of culture, such as values, customs, norms, identities, and languages, that lead employees to collaborate and behave in certain ways (Gorton & Zentefis, 2022).

Theoretical literature in management and economics predicts better organizational outcomes by aligning employee preferences when contracting on output becomes challenging (Merchant, 1985; Cohen and Pfeffer, 1986; Akerlof and Kranton, 2000, 2005; Simons, 2000; Prendergast, 2008; Van den Steen, 2005, 2010). Van den Steen (2010) models culture to understand general agency problems arising from differences in employee objectives. He analytically shows that homogeneity in culture, in terms of shared beliefs and goals, improves communication and coordination, allowing firms to economize on monitoring costs, albeit at the cost of reduced experimentation. Xiao and Zaman (2024) demonstrate that even a rational manager can benefit more from selecting a higher-ability employee who shares the common goal of maximizing organizational profitability than by exercising sabotage. Thus, fostering a culture of collaboration where employees' values align with organizational values can mitigate agency costs such as TDS. However, given the numerous constructs of organizational culture covered in prior studies, researchers can benefit from narrowing their focus to elements of culture relevant to the context of their specific problem (Jahoda, 2012; Hofstede and Minkov, 2013).

3 Study design and data collection

We use primary survey data from white-collar professionals to analyze the prevalence of TDS in organizations. The survey comprises six parts: organizational setup, management control systems, manager behavior, TDS, culture, demographics, and personal salary information. We designed the survey flow to ensure that we receive all salient aspects of the organization and control systems *prior* to soliciting information about TDS. Such a design prevents participants from being primed to think about TDS while answering questions about their organizational setup and management control systems. The complete survey instrument is included in Appendix A

3.1 Survey Procedure and Participant Profiles

The survey was directed towards white-collar professionals residing in the United States. One of the authors utilized their LinkedIn network, which comprised over 25,000 direct connections, to distribute the survey. Filters were employed to concentrate on industry practitioners within the U.S., thereby excluding faculty members or academics, resulting in approximately 2,000 eligible connections. The survey was disseminated via direct message on LinkedIn during June and July 2023, with participants being offered the opportunity to win one of 100 copies of a recent business book as an incentive. The target audience consisted of corporate executives and employees with managerial experience, who are well-versed in managing staff and identifying the differences between victims of sabotage and disgruntled employees. The invitation message can be found in Appendix B.

Given the self-reported nature of our survey, there are potential concerns regarding the accuracy and reliability of the responses. Self-reported surveys can sometimes lead to biases such as social desirability bias, where respondents may underreport undesirable behaviors like engaging in sabotage, or self-victimization bias, where respondents might overreport being victims to gain sympathy or justify their own behavior. Additionally, respondents may also suffer from recall bias, affecting the accuracy of their reporting.

To address these issues, we implemented several methodological strategies. First, the survey was designed to be anonymous, encouraging honesty by assuring participants that their identities would not be revealed. Participants were informed prior to giving consent that no identifiable information would be collected. Second, the survey included questions on organizational setup and control systems before inquiring about TDS, minimizing priming effects and reducing the likelihood of biased responses. Third, by including both observational and experiential questions about TDS, we could cross-verify the responses and identify discrepancies. The survey took approximately 10 minutes to complete.
Out of the 2,000 direct survey requests sent, we received 335 responses, a response rate of 17%.

Respondents worked at organizations of varying sizes and across various levels of organizational hierarchy. Appendix C summarizes the professional experience and backgrounds of the 335 practitioners who responded to the survey. Overall, our sample is skewed towards senior corporate executives familiar with the challenges of climbing the corporate ladder. Almost 27% identified as managers or equivalents, and over 40% were vice-presidents, directors, or C-suite executives. About 75% of respondents had over 10 years of corporate experience, and over 35% had more than 20 years of experience. Less than 4% had 2 years of experience or less. Over 70% of survey takers worked at large organizations with over 250 employees, with the majority at firms with at least 5,000 employees. About 12% worked in medium-sized organizations with 51 to 250 employees, and the remaining participants worked in small enterprises, with about 6% in micro-enterprises with fewer than 10 employees. Almost 80% of the sample were males. Survey participants represented various industries, with substantial representation from technology (30.1%), financial services (16.7%), healthcare (12.8%), and consulting (12.5%). Many participants also came from consumer goods, services, media, entertainment, and materials sectors. These profiles provide a robust basis for analyzing the prevalence and impact of TDS across different organizational contexts and managerial levels.

4. Empirical analysis

Building on the conceptual foundations, we now empirically analyze the determinants of top-down sabotage (TDS) based on survey responses. We begin by estimating our primary dependent variable by constructing a measure for TDS. We then analyze the potential links between organizational characteristics and TDS. Descriptive statistics on organizational features, control mechanisms, and firm culture are presented before testing for the statistical significance of their association with TDS.

4.1.1 Measuring Top-Down Sabotage (TDS)

To understand the prevalence of TDS, we asked survey participants the following questions:

1. Have you observed managers sabotage high-performing subordinates to keep their own jobs secure or to prevent future competition for themselves in your 1) organization, 2) department, 3) career?
2. Based on your experience, has a manager or a supervisor ever tried to sabotage your career growth in your 1) organization, 2) department, 3) career?
3. Have you ever tried to sabotage the career growth of a subordinate in your 1) organization, 2) department, 3) career?

Figure 1 shows that almost 21% of participants have observed TDS in their current departments, about 30% report observing it in their organizations, and 71% have observed TDS in their careers across all the organizations they have worked at. Approximately 20% and 28% of respondents personally experienced TDS in their departments and organizations, respectively, while about 60% have experienced it in their careers. Notably, less than 2% of participants admit to sabotaging their subordinates in their departments or organizations, and hardly 5% admit to engaging in TDS over their careers. Given that fewer participants report being victims of TDS than observing it, the sample is unlikely to suffer from self-victimization bias.

[INSERT FIGURE 1 HERE]

Table 1 reports the correlations between observing TDS, being a victim of TDS, and being guilty of TDS in one's department, organization, and career. Many participants who report observing TDS did not experience it themselves, and vice versa. Most participants who reported observing or experiencing TDS did not admit to engaging in TDS themselves against their subordinates. There is a significant positive correlation (60%) between those who observe TDS and those who are victims of TDS in their organizations. However, within an organization, being guilty of TDS has a weaker correlation with both observing TDS (8%) and being a victim of TDS (20%).

To facilitate further analysis, we construct a binary measure for TDS, which equals 1 if an individual has observed, experienced, or admitted to engaging in TDS within their organization, and 0 otherwise. This binary measure will be used to explore the determinants of TDS in our empirical analysis.

[INSERT TABLE 1 HERE]

4.1.2 Drivers of TDS

Before conducting empirical tests to analyze the determinants of TDS, we describe the broad patterns observed in the survey. Understanding these patterns is crucial for identifying the underlying drivers of TDS in organizations. We begin by analyzing the role of incentive schemes that could motivate managers to resort to sabotage. Theoretical literature on tournaments predicts that sabotage increases with the size of financial rewards (Lazear, 1989; Harbring and Irlenbusch, 2011; Falk, Fehr, and Huffman, 2008). Charness et al. (2014) find that even under flat wages, agents resort to sabotage for status concerns. In light of this literature, we asked survey participants whether they have "seen managers sabotage high-performing subordinates for either monetary or status concerns."

Figure 2 shows that over 50% of respondents did not observe TDS in their organizations for either status or monetary reasons. However, about 21% cited status concerns as a major determinant of TDS, which is almost equal to the number citing both status and monetary concerns simultaneously, and substantially higher than the 3.3% who observed TDS for monetary reasons alone. Consistent with Edelman, Benjamin, and Larkin (2015), these results suggest the need to consider pride and status concerns that managers may have when evaluating their subordinates.

[INSERT FIGURE 2 HERE]

Next, we explore the role of the underlying incentive scheme. Given that sabotage literature is grounded in RPE, we asked participants whether their organization operates on RPE for compensation or promotion purposes and analyze how that relates to TDS. Figure 3A shows that in organizations operating on RPE,

37.8% of employees report the existence of TDS. The prevalence of TDS in non-RPE-based organizations is not much different at 32.7%, suggesting that RPE by itself does not lead to a greater incidence of TDS. To account for the possibility of inherent biases in managerial decision-making, we decipher the role of managerial discretion in the RPE process. Figure 3B shows that when a firm operates on RPE but the final decision on compensation or promotion relies on subjective managerial discretion, the incidence of TDS increases to 46.8%. Conversely, the magnitude of TDS under RPE without managerial discretion drops to 26.9%, even lower than TDS observed in non-RPE-based organizations. These observations raise questions about what creates the room for managerial discretion and brings about agency concerns when RPE is supposed to lower monitoring costs and many organizations can operate on RPE without experiencing TDS.

[INSERT FIGURE 3 HERE]

We also examine whether the challenges associated with managing and monitoring employees in large organizations exacerbate TDS. Figure 4 shows TDS as a function of organization size, with the x-axis indicating the number of employees in an organization and the y-axis showing the percentage of respondents reporting TDS in their organization. Figure 4A indicates that TDS tends to increase with organization size.

Among those who report the existence of TDS in their organizations, we explore whether the magnitude of the incidence varies by organization size. Figure 4B shows the percentage of people who have observed TDS for each organization size, conditional on only those who report observing TDS. Notably, 57.3% of employees who report observing TDS work at firms with more than 5,000 employees, highlighting the succession planning challenges faced by large organizations. In contrast, less than 10% of those who observed TDS work in small firms with 50 employees or fewer.

[INSERT FIGURE 4 HERE]

Large firms often have multiple managerial layers for organization and task delegation. To analyze the challenges of monitoring managers across organizational hierarchy, we asked survey participants about their present hierarchical level in their organizations and analyzed how that is associated with TDS. The x-axis in Figure 5 indicates the survey taker's present position in terms of the number of hierarchical levels below the CEO, and the y-axis shows the percentage of respondents reporting TDS in their organization.

The figure depicts that TDS is agnostic to hierarchical level. Approximately 33.8% of respondents who report observing TDS in their organizations are just one level below the CEO. The concern for TDS appears relatively greater in the middle of the organizational hierarchy, with about 35% of respondents two to three levels below the CEO and 42.2% four to six levels below reporting TDS. The concern tends to be lower at the bottom of the hierarchy, with about 30.3% of respondents at least seven levels below the CEO reporting TDS.

Figure 5 highlights the need to explore agency concerns in the middle of the organizational hierarchy. Unlike the CEO and other C-suite executives, mid-level managers are not directly under the scrutiny of either the board of directors or shareholders. Since their actions are not directly penalized by the market, they have greater room to exercise TDS if control systems are weak. Thus, firms concerned with employee selection and succession planning need to be particularly cognizant of agency concerns in the middle of the organizational hierarchy.

[INSERT FIGURE 5 HERE]

4.1.3 Descriptive Statistics

This section presents the descriptive statistics based on responses to the survey questions used as variables in the empirical analysis. Detailed descriptions of how each variable is constructed are provided in Appendix D. Table 2 shows the descriptive statistics for key variables. "TDS in organization" occurs if

a survey respondent has either personally observed TDS in the organization, has been a victim of TDS, or has been guilty of engaging in TDS in the organization. The data shows that a mean of 37% of survey participants report "TDS in organization." Building on the literature on sabotage under RPE, we asked survey participants whether their firm operates on RPE for compensation or promotion purposes and whether subjective managerial discretion ultimately prevails over the RPE process. Over 85% of survey respondents work at firms that evaluate candidates on RPE for compensation or promotion. However, 47% report that while their firm operates on RPE, the ultimate decision on "who gets promoted" and "how performance gets noticed" largely depends on subjective evaluation by the manager. Therefore, we document responses to both "RPE" and "RPE discretion" as separate binary variables to test whether TDS is a consequence of RPE itself or if managerial discretion plays a significant role in intensifying TDS in organizations.

Given the relationship between organization size and TDS observed in Figure 4, we construct an ordinal variable "Org. size," ranging from 0 to 5 in increments of 1. An organization with 10 employees or fewer is assigned a 0, and an organization with over 5,000 employees is assigned a 5. The mean value is 3.74, corresponding to an organization size between 250 and 5,000 employees, whereas the median survey respondent works in an organization with over 5,000 employees. Similarly, we construct an ordinal variable for hierarchical level, ranging from 0 for employees that are more than six levels below the CEO (or equivalent) to 3 for employees one level below the CEO (or equivalent). The mean value of 1.62 indicates that, on average, survey respondents are near 2 to 3 levels below the CEO.

[INSERT TABLE 2 HERE]

To test the effectiveness of management control systems in mitigating the incidence of TDS, we asked survey respondents if their organization has an employee performance feedback system in place. The binary variable takes the value of 1 if the system is used by a "manager or supervisor to provide feedback on an employee's performance and to identify areas of strength and areas needing improvement." 90% of

survey respondents report that their organization uses an employee performance feedback system. Additionally, we construct an ordinal variable "Performance transparency" to estimate the ease with which "each individual's contribution towards overall team output is transparently and accurately attributed for the employee's performance evaluation." The mean value of 1.64 falls between "somewhat difficult" and "somewhat easy," though the median employee reports "somewhat easy."

Organizations often use a 360-degree feedback system for employees to provide feedback on their colleagues, including subordinates and supervisors. To test whether the 360-degree feedback system mitigates TDS, we coded a binary variable asking respondents if a "360 system exists" in their organization. On average, 50% of employees report in the affirmative. We then asked if their organization's 360-degree system is effective in leading to fair performance evaluations. The binary variable takes the value of 1 when the respondent indicates that "360 is effective" and 0 otherwise. On average, 28% of respondents believe that the 360-degree system is effectively enforced in their organizations.

Building on prior literature on control systems, we asked survey respondents the extent to which their "organization relies on referrals for hiring." We constructed the response as an ordinal variable with 0 corresponding to "never" and 4 corresponding to "always." The mean and median values of 2.56 and 3, respectively, indicate that firms in the sample "often" rely on referrals-based hiring.

We are also interested in the extent to which a direct manager can exercise TDS when their (even senior) manager is actively engaged in knowing about subordinates further down the organizational hierarchy. We asked how common is it for a "manager's manager to make an effort to be fully aware of the abilities and efforts of subordinates without relying on the direct manager's report." The response to "Manager's manager monitors" ranges from 0 to 4 in increments of 1, where 0 is "never" and 4 is "always." The mean value of 2.04 indicates that, on average, the manager's manager "sometimes" makes an effort to be

directly aware of subordinates' abilities and efforts.

In addition to formal control mechanisms, we explored the role of organizational culture as an informal control in mitigating agency concerns. Following Jahoda (2012) and Hofstede and Minkov (2013), we recognize that the definition of culture is specific to the context. Therefore, we asked survey respondents 13 questions on corporate culture, each covering a different dimension documented in the literature. Panel D of Table 2 reports summary statistics for responses to all culture questions, most of which are converted into ordinal variables and the remaining into binary variables. For example, we asked, "How strong is the sense of culture and belonging to the organization at your present employer?" We constructed "culture and belonging" as an ordinal variable ranging from 0 for "extremely weak" to 4 for "very strong." The mean value of 2.91 indicates that, on average, the sense of belonging among survey takers is close to "somewhat strong." Similarly, other culture variables are constructed on an ordinal scale with increasing values reflecting a strong culture.

Appendix E shows the correlation between all variables used in the empirical analysis.

4.2 Estimation Framework

In this section, we empirically analyze the determinants of TDS using survey data responses. We explore whether the underlying incentive scheme drives TDS as theory predicts, examine the potential links between organizational features and TDS, and analyze the role of management control outcomes, particularly focusing on corporate culture as a control mechanism to mitigate TDS. Our primary dependent variable is TDS. Given the binary nature of the variable, we estimate the linear probability model using the ordinary least squares (OLS) framework.

4.2.1 Organizational Features and TDS

We begin by analyzing the impact of the incentive scheme on TDS. Prior literature highlights peer-to-peer sabotage as an unintended consequence of RPE (Lazear, 1989; Chen, 2003; Krakel, 2005). Consistent

with observational evidence documented above, Xiao and Zaman (2024) extend this literature by showing that TDS is driven by a manager's discretionary authority over subordinates under the RPE system.

To empirically examine the relationship between RPE and TDS, we regress our binary measure of TDS on whether a firm operates on RPE for either compensation or promotion purposes. Model (1) in Table 3 shows that RPE by itself is not associated with TDS. Holding all else constant, the likelihood of TDS is 9% higher when a firm operates on RPE, which is statistically insignificant. Next, we isolate the impact of managerial discretion under RPE. In Model (2) of Table 3, we regress TDS on firms where managerial discretion prevails over RPE-based compensation and promotions. We find a strong positive relationship between managerial discretion under RPE and TDS. OLS estimate shows that the likelihood of TDS goes up significantly by 16% when a firm operates on RPE under managerial discretion, holding all else constant. This suggests that when subjective managerial discretion prevails, managers may abuse their authority to sabotage high-ability candidates, thereby preventing future competition for themselves and defeating the purpose of RPE as a self-monitoring mechanism. Following Carpenter et al. (2010) who find that even anticipating sabotage is detrimental to worker productivity, this finding further questions the efficacy of RPE when workers perceive their managers as potential saboteurs.

[INSERT TABLE 3 HERE]

Model (3) of Table 3 finds that TDS is positively associated with the size of the organization. This finding highlights the challenges of monitoring and managing employees in large organizations with multiple layers of hierarchy. Model (4) shows that the likelihood of change in TDS is not impacted by an employee's hierarchical level in an organization. While the present literature on succession planning heavily focuses on the CEO succession, firms need to be aware of TDS by managers across the organizational hierarchy. Lastly, we estimate the effect of all organizational features in Model (5). The likelihood of change in TDS due to both variables, RPE under managerial discretion and organization size, remains significant, holding other organizational features constant.

Towards the end of the survey, we asked participants whether they believe they are compensated at, above, or below their expected market compensation. Our conjecture is that employees who feel they are compensated below market are more likely to report sabotage. Thus, we aim to isolate the impact of disgruntled employees from actual TDS in the organization. In all regressions, we find that employees who claim to be "compensated below market" are significantly more likely to report the existence of TDS in their organization. However, the significance of the estimates of our main variables of interest do not change by accounting for a sense of unfair compensation. In the next section, we use this feature to test the robustness of the relationship between managerial discretion under RPE and TDS. We find that the strong positive association between "RPE discretion" and TDS remains robust to a confounder as strong as "Compensation below market".

4.2.2 Sensitivity Analysis: Managerial discretion under RPE and TDS

The inability to draw causal inference via standard identification strategies could appear to be an obstacle in a survey-based study.[1] In the analysis above, we identified that subjective managerial discretion in the RPE process is significantly positively associated with TDS, both when analyzed independently as well as with other organizational features. Following Cinelli and Hazlett (2020a), we test the robustness of the causal impact by assessing the sensitivity of the point estimate, t-value, and confidence interval of "RPE discretion" to unobserved confounders of varying strengths.

Since we found "Compensation below market" to be strongly positively associated with TDS across all regressions in Table 3, we use it as a benchmark to analyze if a confounder one, two, or even three times as strong as "Compensation below market" would weaken the relationship between RPE discretion and TDS.

[1] See Holland, Paul W. (1986). "Statistics and Causal Inference". J. Amer. Statist. Assoc. 81 (396): 945–960 for more on The Fundamental Problem of Causal Inference.

Table 4 presents the findings from the sensitivity analysis for "RPE discretion" in Model (5) of Table 3.[2] The partial $R^2_{Y\sim D|X}$ indicates the proportion of the residual variance in the outcome attributed to the treatment, after accounting for the variance explained by the observed covariates. This $R^2_{Y\sim D|X}$ also functions as a sensitivity metric. In Table 4, $R^2_{Y\sim D|X}$ = 2.6% suggests that even if unobserved confounders account for all the residual variance of TDS, they would need to explain at least 2.6% of the residual variance of "RPE discretion" to reduce the estimated effect from 0.166 to zero. In summary, $R^2_{Y\sim D|X}$ shows the minimum strength that confounders must have to explain away the observed association between TDS and the "RPE discretion".

[INSERT TABLE 4 HERE]

Note that partial $R^2_{Y\sim D|X}$ might represent an overly extreme scenario since it assumes a confounder accounts for all of the residual variance in the outcome. Therefore, we look at the robustness value of $RV_{q=1}$ = 15%. In other words, an unobserved confounder would need to account for at least 15% of the residual variance in both the treatment ("RPE discretion") and the outcome (TDS) to completely negate the observed effect, meaning it would reduce the point estimate of "RPE discretion" in Model (5) of Table 3, from 0.166 to zero.

The bottom right of Table 4 reports two additional R^2 values that provide bounds on confounding as strong as "Compensation below market". A confounder as strong as "Compensation below market" can explain at most $R^2_{Y\sim Z|X,D}$ = 4.2% of the residual variation of the outcome, and $R^2_{D\sim Z|X}$ = 3.5% of the residual variation of the treatment. Since both those values are below the robustness value $RV_{q=1}$ = 15%, we can conclude that the regression estimate of TDS on "RPE discretion" is robust to a confounder as strong as "Compensation below market".

[2] The analytical methodology underlying the sensitivity analysis framework is described in Appendix F.

Next, we observe that the robustness value ($RV_{q=1;\ \alpha=0:05}$) for testing the null hypothesis that the coefficient of “RPE discretion” is zero is 5.2%. This robustness value takes sampling uncertainty into consideration. To reduce the lower bound of the 95% confidence interval for this coefficient estimate to zero, any unobserved confounder would need to account for at least 5.2% of the residual variance of both "RPE discretion" and TDS.

To further assess the robustness of our findings, we increase the strength of the confounder to determine whether both the point estimates and statistical significance remain consistent. Specifically, we examine the robustness of the results in Model (5) of Table 3 by testing whether "RPE discretion" continues to show a significant positive association with TDS if an unobserved confounder, equal to, double, or triple the strength of "Compensation below market," explains the variation in the treatment and outcome.

Figure 6 illustrates sensitivity contour plots for (A) the point estimate, (B) the t-value, and (C) the sensitivity analysis in extreme scenarios. The horizontal and vertical axes show the degree to which the confounder is associated with the treatment and the outcome, respectively. Both axes are measured using partial R^2, reflecting the percentage of the residual variance in the treatment ("RPE discretion") and the outcome (TDS) that the confounder accounts for.

Consider, for instance, the plot in *Panel A* of Figure 6, which displays the sensitivity plot of the point estimate. For each pair of partial R^2 values, there is a contour line indicating the adjusted estimated effect—this represents the exact point estimate that would have been obtained if the confounder had been included in the regression. The unadjusted point estimate of 0.17 (from Model (5) in Table 3) is located at the bottom-left of the contour plot. As you move along the diagonal (a 45-degree line from the origin), the confounding effect is assumed to strengthen, eventually reversing the sign of the point estimate, which is shown by the red-dotted contour line at zero. The red diamond-shaped points represent the point estimate if the confounder were one, two, or three times as strong as the observed covariate, "Compensation below

market." The plot shows that confounders can significantly reduce the effect size of the point estimate. However, the fact that all three points remain below the red-dotted contour line indicates that even a confounder three times as strong as "Compensation below market" is insufficient to reduce the coefficient estimate to zero, thus highlighting the robustness of the relationship between "RPE discretion" and TDS.

Panel B of Figure 6., presents the sensitivity contour plot for the t-value used to test the null hypothesis of zero effect. The contour lines represent the adjusted t-value for each pair of partial R^2 values if a confounder were included in the regression. In this case, the statistical significance of the relationship between "RPE discretion" and TDS at the 5% significance level is still robust to a confounder as strong as the observed covariate "Compensation below market". However, a confounder two or three times as strong as "Compensation below market" could make the estimate statistically insignificant.

Lastly, we consider the sensitivity analysis of the point estimate to extreme scenarios. *Panel C* of Figure 6 is generated by assuming that confounding accounts for a large portion (if not all) of the residual variance in the outcome and then varying the hypothetical strength of the confounder's relationship with the treatment. The horizontal axis represents the hypothetical partial R^2 between the confounder and the treatment, while the vertical axis displays the adjusted estimated effect. Various extreme scenarios are considered for the partial R^2 between the confounder and the outcome. The solid curve represents the partial $R^2_{Y\sim Z|X,D} = 100\%$, the next dotted curve corresponds to a partial $R^2_{Y\sim Z|X,D} = 75\%$, and the highest curve indicates a partial $R^2_{Y\sim Z|X,D} = 50\%$. The red ticks along the bottom (on the x-axis) represent the limits of confounding that is one time (left red tick), two times (middle red tick), and three times (right red tick) as strongly associated with the treatment as the observed covariate "Compensation below market." When $R^2_{Y\sim Z|X,D} = 75\%$, confounding as strong as "Compensation below market" would not explain away the point estimate associating TDS and "RPE discretion". In both cases where $R^2_{Y\sim Z|X,D} = 75\%$ and $R^2_{Y\sim Z|X,D} = 50\%$, confounders would have to be at least two times as strongly associated with the treatment, as "Compensation below market" to explain away the point estimate. Thus, as theory

predicts, the problem of TDS gets exacerbated when a firm operates on RPE where managerial discretion prevails over the RPE process (Xiao and Zaman, 2024).

We also perform sensitivity analysis on "Org size", the other significant variable in Table 3. The findings show that the point estimate associating TDS with the size of the organization remains robust to a confounder one, two, or even three times as strongly associated with the treatment ("Org size") and the outcome ("TDS") as "Compensation below market". The statistical relationship between "Org size" and TDS at the 10% significance level remains robust to a confounder as strong as the observed covariate "Compensation below market". Even in the most extreme case, $R^2_{Y\sim Z|X,D} = 100\%$, confounding two or three times as strong as "Compensation below market" would not explain away the point estimate associating TDS and "Org size". Collectively, our results show that the relationship between TDS and organization size is highly robust to extreme confounding.

4.3 Management Control Systems and TDS

The finding that subjective managerial discretion in the RPE process results in TDS is consistent with equilibrium predictions by Xiao and Zaman (2024), who show that rational managers will resort to TDS unless incentivized to do so otherwise. In this section, we explore whether the implementation and enforcement of management control systems (MCS) can mitigate TDS. Prior literature on MCS has focused on formal control mechanisms such as employee performance measurement systems and incentive schemes to mitigate agency concerns (Merchant and Van der Stede, 2007; Casas-Arce, Lourenço, and Martínez-Jerez, 2017; Du, Erkens, Young, and Tang, 2018) or indirect mechanisms such as employee selection to align preferences via input-based MCS (Akerlof and Kranton, 2000, 2005; Prendergast, 2011; Campbell, 2012; Abernethy et al., 2015).

Panel A of Table 5 shows OLS results from the linear probability model that regresses TDS on control systems that we discussed earlier in the section on conceptual background. Model (1) indicates that the

implementation of employee performance feedback systems does not change the likelihood of TDS significantly. This suggests that merely investing in a costly feedback system may not mitigate sabotage by a manager responsible for providing performance feedback to subordinates.

Model (2) finds that TDS is significantly mitigated by 8% when a firm transparently and accurately attributes each individual's contribution towards overall team output for employee performance evaluation. This indicates that the implementation of a formal feedback system may be redundant unless the firm has processes in place for accurate credit attribution and transparent performance evaluation.

Firms often use formal 360-degree feedback processes to evaluate employees, including managers, across different hierarchical levels. Model (3) shows that simply having a 360-degree feedback process does not impact the likelihood of TDS. However, Model (4) reveals a significant reduction of 15% in TDS when respondents perceive the 360-degree feedback system as effective, compared to cases where it is either absent or merely a formality. This highlights that MCS can be costly and may not realize the intended benefit if not effectively enforced.

Prior literature on input-based controls finds that referrals-based employee selection aligns worker preferences and is positively associated with firm-level outcomes (Campbell, 2012; Hoffman, 2017). However, Model (5) shows no association between referrals-based hiring and the resulting change in likelihood of TDS. Additionally, Model (6) does not find any change in TDS due to the involvement of a manager's manager in the performance evaluation process.

In Model (7), TDS is regressed on all MCS variables. The transparency in the performance evaluation system remains significantly negatively associated with TDS at the 5% level, and the effective enforcement of the 360-degree feedback system remains significantly negatively associated with TDS at the 1% level. However, the mere existence of a 360-degree feedback system in the organization becomes strongly positively associated with TDS at the 1% level, indicating that without effective enforcement, such systems can exacerbate agency concerns. This result complements Zaman (2022), who finds that

managers may resort to specious reasoning to justify questionable behavior after exercising TDS. Sensitivity analysis finds that the point estimates for significant variables in Model (7) remain robust to confounding.

[INSERT TABLE 5 HERE]

4.3.1 Management Control Systems and Managerial Discretion under RPE

In the previous section, we found that TDS is largely prevalent in organizations where managerial discretion prevails over the RPE process. The nature of RPE is such that by promoting (hiring) a high-ability subordinate, the incumbent decision-maker has to share the compensation pool more evenly with the newly promoted colleague (or the new hire) (Lazear, 1995). We now explore if weaknesses in MCS improve the likelihood of subjective managerial discretion to override the RPE process and undermine its role as a self-monitoring mechanism. *Panel B* of Table 5 provides OLS results from a linear probability model that estimates the change in likelihood of managerial discretion presiding over the RPE process due to the presence, or lack of, MCS.

Model (1) shows that merely implementing an employee performance feedback system does not reduce the likelihood of subjective managerial discretion to prevail in the RPE system. Model (2) finds that greater transparency and accurate performance attribution mitigate the presence of subjective managerial discretion under RPE at the 5% level. In other words, when a firm "transparently and accurately attribute[s] each individual's contribution towards overall team output for employee's performance evaluation," the likelihood of subjective managerial discretion to override the RPE process reduces significantly by 6%. Consistent with prior findings for TDS, Model (3) shows that a 360-degree feedback system by itself does not change the extent of managerial discretion under RPE. However, Model (4) shows that having an effectively enforced 360-degree feedback system changes that likelihood for subjective managerial discretion to take over the RPE process. Relative to the case where a 360-degree feedback system does not exist or employees perceive it to be just a formality, when a 360-degree

feedback system is effective in leading to fair performance evaluations, the likelihood of managerial discretion to dominate the RPE process goes down by 20%.

Model (5) indicates that referrals-based hiring does not impact subjective managerial discretion under RPE. However, Model (6) shows that when the manager's manager makes "an effort to be fully aware of the abilities and efforts of subordinates without relying on the direct manager's report," it tends to mitigate the role of managerial discretion at the 10% level. Model (7) regresses managerial discretion under RPE on all management control systems. The only variable that significantly reduces managerial discretion under RPE is the effective enforcement of a 360-degree feedback system.

4.4 Culture and TDS

Thus far, our findings show that investment in direct control systems may not mitigate TDS or prevent subjective managerial discretion from overriding the RPE process unless MCS are effectively enforced. Theoretical literature in economics and management predicts that a strong organizational culture with shared beliefs and objectives among employees can help mitigate agency problems (Van den Steen, 2010). In this section, we explore the role of organizational culture as an informal control mechanism (Gibbons and Henderson, 2013) to reduce agency concerns due to TDS.

In the survey, we asked thirteen questions about organizational culture. To benefit from the richness of the data covering various dimensions of culture, we follow Jahoda (2012) and Hofstede and Minkov (2013) and perform principal components analysis (PCA) to extract elements of culture that particularly target TDS.

Figure 7a shows the correlation between all questions on corporate culture. None of the variables are uncorrelated. In fact, Pearson tests on correlations show that responses to all culture questions are significantly correlated with each other. Performing a simple OLS regression of TDS on culture variables could suffer from multicollinearity. Thus, we run PCA to reduce dimensionality and perform regression

on orthogonal variables that capture a large part of the variation in culture data. Figure 7b confirms that there is no correlation between principal components.

[INSERT FIGURE 7 HERE]

Figure 8 shows the cumulative variance explained by principal components (PC). The first principal component (PC1) explains about 36% of the variation in the data. PC2, or the second principal component, adds an additional 11% of the variation. Each additional principal component explains cumulative variation in the data at a decreasing rate. It is not until PC8 that 84% of the variation in data is explained by the principal components.

Each additional PC explains a greater proportion of variation in culture data at a diminishing rate. Note that the nature of PCA is such that a PC that explains a lower proportion of variation in the culture data than another may be more significantly associated with TDS. Thus, we test for the significance of all principal components rather than only those that explain the largest proportion of the variation in the culture data.

[INSERT FIGURE 8 HERE]

Table 6 reports the regression outcome of TDS on all principal components obtained from the PCA on responses to questions on organizational culture. While there are 13 questions on culture, the table reports only those principal components that are statistically significant. PC1, which explains the largest proportion of variation in the culture data, is highly significantly associated with TDS. Similarly, PC2, which explains the next largest proportion of variation in the culture data, is also significantly associated with TDS at the 1% level. Notice that PC4, but not PC3, is significantly associated with TDS, even though the latter explains a greater proportion of variation in the culture data. Some elements of culture tend to have a greater impact on TDS, and therefore, principal components that load more heavily on those elements will be more significantly associated with TDS than others.

[INSERT TABLE 6 HERE]

Following Jahoda (2012) and Hofstede and Minkov (2013), we explore how the culture variables load on each principal component to understand features that organizations could focus on to mitigate TDS. Note that the first four principal components explain approximately 63% of the total variation in the culture data. The regression of TDS on all principal components shows that only PC1, PC2, and PC4 are significant, while PC3 and other principal components are not. Table 7 shows the rotation matrix for the first four principal components, which allows us to distinguish the culture features that tend to be more correlated with PC1, PC2, and PC4 but not with PC3. The dimensions of culture that have a relatively stronger influence on PC1, PC2, and PC4, but not on PC3, are the sense of culture and belonging to the organization, being able to comfortably talk to colleagues and speak one's mind, organizational culture where efforts are recognized by the firm, and "keeping cards close to the chest." The positive loading of culture and belonging on PC1, PC2, and PC4 suggests that developing a sense of identity and belonging to the organization is important to mitigating TDS. Similarly, firms concerned with succession planning being hampered due to TDS may benefit from developing a culture where employees can comfortably speak their minds and talk to colleagues. Conversely, a culture where employees work in silos and keep cards close to their chest, suffers heavily from TDS.

[INSERT TABLE 7 HERE]

Sensitivity analysis performed (available on request) on all three significant principal components shows that both the coefficients and the associated t-statistics are highly robust to confounders one, two, or three times as strongly associated with the treatment (each significant principal component) and the outcome (TDS) as "Compensation below market."

5. Discussion and Conclusion

Our paper explores top-down sabotage (TDS) in organizations, where managers may abuse their hierarchical authority to sabotage potential successors and prevent future competition. Extending prior literature on peer-to-peer sabotage, we examine sabotage across hierarchy, where a managerial employee may see future competition in a high-ability subordinate. TDS can jeopardize succession planning, lead to incorrect performance attribution, and result in managerial rent-seeking, where managers unjustly claim credit for subordinates' work.

We conducted a survey of 335 corporate employees across various industries, including consulting, financial services, technology, and healthcare. Most respondents had over ten years of experience and worked in large organizations with over 1,000 employees. Our analysis focused on whether TDS is driven by organizational features and incentive systems at the firm level.

5.1 Key Findings

Deciphering the relative performance evaluation (RPE) process, we find that RPE by itself is not the primary driver of TDS. However, when weaknesses in management control systems allow subjective managerial discretion to dominate the compensation and promotion processes, TDS under RPE becomes prevalent. When employees perceive a firm’s performance evaluation process to be a transparent one that accurately attributes each individual’s contribution towards overall team output, the likelihood of TDS goes down significantly. Additionally, having a 360-degree feedback system alone is not sufficient to mitigate TDS. We find that mere presence of a 360-degree feedback system exacerbates TDS, except for organizations where employees report that the 360-degree feedback system is effectively enforced. Similarly, having an employee performance evaluation system, relying on referrals-based hiring, or involving a manager's manager in the evaluation process may not be sufficient to mitigate TDS. Effective enforcement of these systems is crucial.

Our findings indicate that TDS is strongly positively associated with organization size. This suggests challenges with monitoring employees in large organizations with multiple layers of hierarchy. We find

that TDS is not concentrated at a particular hierarchical level, calling for the need to explore bottlenecks in succession planning across organizational hierarchy. Prior literature on large organizations already highlights agency concerns such as managers engaging in empire building or enjoying the quiet life. TDS can be a major impediment to optimal succession planning for large organizations.

These findings lead us to analyze how organizational culture can serve as an effective control mechanism. The survey included numerous questions on culture, ranging from the sense of belonging to the organization to the role of diversity. The results show that developing an organizational identity with a strong sense of culture and belonging, and fostering a transparent culture where employees can comfortably speak their minds and talk to their colleagues, can mitigate TDS. Conversely, TDS is exacerbated in organizations where culture leads employees to work in silos. Appendix G provides a summary of our findings in a tabular form.

5.2 Limitations

While this study provides insights into TDS and its determinants, several limitations must be acknowledged. First, the reliance on self-reported survey data introduces potential biases, such as social desirability bias, where respondents may underreport undesirable behaviors or overreport virtuous behaviors. Although we implemented strategies to mitigate these biases, such as ensuring anonymity and careful survey design, they cannot be entirely eliminated. Second, the cross-sectional nature of the survey limits our ability to infer causality. While we have used advanced sensitivity analysis techniques to address potential confounders, longitudinal data would provide stronger evidence of causal relationships between managerial discretion, management control systems, organizational culture, and TDS. Third, the survey sample, while diverse in terms of industries and organizational sizes, may not be fully representative of all sectors or regions. Most respondents worked in large organizations in the United States, which may limit the generalizability of the findings to smaller firms or different cultural contexts. Lastly, the study focuses on a specific set of management control systems and cultural variables. There

may be other relevant factors influencing TDS that were not captured in our survey. Future research should consider a broader range of variables and potential interactions between them.

5.3 Theoretical Implications

This study makes three important contributions to the literature. First, we contribute to the literature on employee selection and succession planning. Prior literature in management has largely focused on CEO succession planning, which is the primary fiduciary responsibility of boards and has major consequences for firms. Researchers have discussed the informational challenges that boards face in overseeing managerial behavior. We extend the literature on succession planning across hierarchical levels, where the room for information asymmetry is greater as managers are not under the direct scrutiny of the board. While the literature has alluded to employee selection and promotion as input-based controls for skills-based matching and aligning worker preferences, we question the efficacy of selection and promotion processes as management control mechanisms when they can be manipulated by managers. Thus, identifying incentive schemes and mechanisms that make organizations vulnerable to TDS allows us to explore control systems that complement succession planning programs for organizations.

We also contribute to the growing literature on sabotage in organizations under RPE. Soon after formulating tournament theory, Lazear himself extended the model to account for the possibility of hawks sabotaging doves in contests due to the intensity of competition. A stream of literature followed, exploring conditions for peer-to-peer sabotage. In a recent article, Xiao and Zaman derived equilibrium predictions for TDS. To the best of our knowledge, we are the first to empirically explore the determinants of TDS using broad survey-based evidence.

Lastly, this paper extends the literature on organization design. Top management in organizations frequently faces the challenge of balancing the amount of discretion granted to managers with the design of incentive compensation that prevents employees from misusing this discretion. Given that our survey results point to managerial discretion under RPE as the single biggest source of TDS in organizations, we

examine ways in which firms can simultaneously achieve the desired management control outcomes while retaining RPE for its inherent benefits, such as high employee productivity combined with low monitoring costs.

5.4 Managerial Implications

The results of our analysis have practical implications for managers. We identify that the discretionary element in performance evaluation, rather than RPE itself, leads to TDS. In fact, TDS is not prevalent in a significant proportion of organizations that operate on RPE. Upon further investigation, we find that the failure of management control systems allows managerial discretion to dominate the performance evaluation process. Our survey results show that investment in controls such as costly performance feedback systems and 360-degree review processes will be redundant unless employees feel that these systems are effectively enforced. For example, our findings show that the mere presence of a 360-degree feedback system could exacerbate the problem of TDS if employees feel that the 360-degree process is just a formality. Therefore, firms investing in management control systems without figuring out an effective enforcement strategy could jeopardize succession planning due to TDS.

Our survey results show that organizational culture is the single biggest factor that mitigates TDS. Firms interested in implementing RPE to incentivize employees can prevent self-interested managers from jeopardizing succession planning, or agency concerns more broadly, by developing a strong culture. We precisely identify elements of culture, such as helping employees develop a sense of belonging to the organization, that can mitigate TDS. Our findings indicate that firms need to create incentives for employees to be transparent, comfortably talk to their colleagues, ask questions, and collaborate rather than work in silos.

5.5 Future Research

The survey findings open several possibilities for future research in this area. First, the succession planning literature has largely focused on CEO turnover, primarily due to data availability. Our analysis reveals a bottleneck for succession planning created by managers across organizational hierarchy. As data sources become more abundant, there is substantial room to empirically document challenges in succession planning arising from the middle of the organizational hierarchy.

Building on this agenda, how succession planning can be efficiently managed under a tournament-based incentive scheme remains underexplored. Ever since the advent of the tournament model by Lazear and Rosen (1981), the literature has heavily focused on competition among peers to incentivize employees to exert effort while minimizing monitoring costs for the firm. Future research on organization design can consider the extent of discretion to delegate to managers under tournaments when succession planning is of concern.

Our survey finds a significant role for organizational culture in mitigating TDS. There is room for understanding how personality types shape culture. Researchers can analyze the optimal personality types that can look beyond preventing future competition for themselves and see the big picture in growing the pie. Firms too can consider optimal control systems that complement culture and allow employees to exert effort to their potential without worrying about future competition.

Lastly, future research can analyze the role of homophily in succession planning. Ample literature has documented in-group favoritism exercised by managers towards subordinates based on various dimensions of homophily. However, it remains to be seen whether homophily mitigates or exacerbates sabotage and whether it complements or impedes growth when the underlying incentive scheme is designed to create competition among colleagues.

In conclusion, this study sheds light on the critical issue of TDS in organizations, emphasizing the need for robust management control systems and a supportive organizational culture. By addressing these

areas, organizations can better navigate the complexities of succession planning and foster a more collaborative and transparent work environment.

References

Abernethy, M.A., Dekker, H.C. and Schulz, A.K.D., 2015. Are employee selection and incentive contracts complements or substitutes?. *Journal of accounting research*, *53*(4), pp.633-668.

Akerlof, G.A. and Kranton, R.E., 2000. Economics and identity. *The quarterly journal of economics*, *115*(3), pp.715-753.

Akerlof, G.A. and Kranton, R.E., 2005. Identity and the Economics of Organizations. *Journal of Economic perspectives*, *19*(1), pp.9-32.

Arrow, K.J., 1964. Control in large organizations. *Management science*, *10*(3), pp.397-408.

Au, S.Y., Dong, M. and Tremblay, A., 2024. How much does workplace sexual harassment hurt firm value?. *Journal of Business Ethics*, *190*(4), pp.861-883.

Atwater, L., Roush, P. and Fischthal, A., 1995. The influence of upward feedback on self-and follower ratings of leadership. *Personnel Psychology*, *48*(1), pp.35-59.

Balafoutas, L., Lindner, F. and Sutter, M., 2012. Sabotage in tournaments: Evidence from a natural experiment. *Kyklos*, *65*(4), pp.425-441.

Bandiera, O., Barankay, I. and Rasul, I., 2013. Team incentives: Evidence from a firm level experiment. *Journal of the European Economic Association*, *11*(5), pp.1079-1114.

Bénabou, R. and Tirole, J., 2003. Intrinsic and extrinsic motivation. *The review of economic studies*, *70*(3), pp.489-520.

Blau, P.M., 1968. The hierarchy of authority in organizations. *American journal of Sociology*, *73*(4), pp.453-467.

Boeker, W., 1992. Power and managerial dismissal: Scapegoating at the top. *Administrative science quarterly*, pp.400-421.

Campbell, D., 2012. Employee selection as a control system. *Journal of Accounting Research*, *50*(4), pp.931-966.

Carney, John. 2010. “SandyWeill: I Fired Jamie Dimon Because HeWanted to Be CEO.” Business Insider. https://www.businessinsider.com/sandy-weil-i-fired-jamie-dimon-because-he-wantedto-be-ceo-2010-1.

Carpenter, J., Matthews, P.H. and Schirm, J., 2010. Tournaments and office politics: Evidence from a real effort experiment. *American Economic Review*, *100*(1), pp.504-517.

Carter, Twanna. 2022. “When Your Boss Is Sabotaging You At Work.” https://www.linkedin.com/pulse/when-your-boss-sabotaging-you-work-secret-reclaiming-carter-pcc/

Casas-Arce, P. and Martinez-Jerez, F.A., 2009. Relative performance compensation, contests, and dynamic incentives. *Management Science*, *55*(8), pp.1306-1320.

Casas-Arce, P., Lourenço, S.M. and Martínez-Jerez, F.A., 2017. The performance effect of feedback frequency and detail: Evidence from a field experiment in customer satisfaction. *Journal of Accounting Research*, *55*(5), pp.1051-1088.

Cinelli, C., Ferwerda, J. and Hazlett, C., 2020. sensemakr: Sensitivity analysis tools for OLS in R and Stata. *Available at SSRN 3588978*.

Cinelli, C. and Hazlett, C., 2020. Making sense of sensitivity: Extending omitted variable bias. *Journal of the Royal Statistical Society Series B: Statistical Methodology*, *82*(1), pp.39-67.
Charness, G., Masclet, D. and Villeval, M.C., 2014. The dark side of competition for status. *Management Science*, *60*(1), pp.38-55.
Chen, K.P., 2003. Sabotage in promotion tournaments. *Journal of Law, Economics, and Organization*, *19*(1), pp.119-140.
Cohen, Y. and Pfeffer, J., 1986. Organizational hiring standards. *Administrative Science Quarterly*, pp.1-24.
Crémer, J., 1993. Corporate culture and shared knowledge. *Industrial and corporate change*, *2*(3), pp.351-386.
Deutscher, C., Frick, B., Gürtler, O. and Prinz, J., 2013. Sabotage in tournaments with heterogeneous contestants: Empirical evidence from the soccer pitch. *The Scandinavian Journal of Economics*, *115*(4), pp.1138-1157.
Du, F., Erkens, D.H., Young, S.M. and Tang, G., 2018. How adopting new performance measures affects subjective performance evaluations: Evidence from EVA adoption by Chinese state-owned enterprises. *The Accounting Review*, *93*(1), pp.161-185.
Dye, R.A., 1984. The trouble with tournaments. *Economic Inquiry*, *22*(1), p.147.
Edelman, B. and Larkin, I., 2015. Social comparisons and deception across workplace hierarchies: Field and experimental evidence. *Organization Science*, *26*(1), pp.78-98.
Falk, A., Fehr, E. and Huffman, D., 2008. The power and limits of tournament incentives. *Work in progress*.
Fernandez, R.M., Castilla, E.J. and Moore, P., 2000. Social capital at work: Networks and employment at a phone center. *American journal of sociology*, *105*(5), pp.1288-1356.
Friebel, G. and Raith, M., 2004. Abuse of authority and hierarchical communication. *RAND Journal of Economics*, pp.224-244.
Gagné, M. and Deci, E.L., 2005. Self-determination theory and work motivation. *Journal of Organizational behavior*, *26*(4), pp.331-362.
Ghorpade, J., 2000. Managing five paradoxes of 360-degree feedback. *Academy of Management Perspectives*, *14*(1), pp.140-150.
Gibbons, R. and Henderson, R., 2012. *What do managers do?: Exploring persistent performance differences among seemingly similar enterprises* (pp. 13-020). Harvard Business School.
Gorton, G.B. and Zentefis, A.K., 2020. Corporate culture as a theory of the firm. *Economica*.
Gorton, G.B., Grennan, J. and Zentefis, A.K., 2022. Corporate culture. *Annual Review of Financial Economics*, *14*(1), pp.535-561.
Green, J.R. and Stokey, N.L., 1983. A comparison of tournaments and contracts. *Journal of Political Economy*, *91*(3), pp.349-364.
Gürtler, O. and Münster, J., 2010. Sabotage in dynamic tournaments. *Journal of Mathematical Economics*, *46*(2), pp.179-190.
Harris, M. and Raviv, A., 2002. Organization design. *Management science*, *48*(7), pp.852-865.
Haegele, I., 2022. Talent hoarding in organizations. *arXiv preprint arXiv:2206.15098*.
Harbring, C. and Irlenbusch, B., 2005. Incentives in tournaments with endogenous prize selection. *Journal of Institutional and Theoretical Economics (JITE)/Zeitschrift für die gesamte Staatswissenschaft*, pp.636-663.

Harbring, C. and Irlenbusch, B., 2008. How many winners are good to have?: On tournaments with sabotage. *Journal of Economic Behavior & Organization*, *65*(3-4), pp.682-702.
Harbring, C. and Irlenbusch, B., 2011. Sabotage in tournaments: Evidence from a laboratory experiment. *Management Science*, *57*(4), pp.611-627.
Hecht, G., Maas, V.S. and Van Rinsum, M., 2020. The Effects of Group Incentives and Transparency on Managers' Strategic Promotion Behavior. *Available at SSRN 3116797*.
Hofstede, G. and Minkov, M., 2013. VSM 2013. *Values survey module*.
Holland, P.W., 1986. Statistics and causal inference. *Journal of the American Statistical Association*, *81*(396), pp.945-960.
Holmström, B., 1979. Moral hazard and observability. *The Bell journal of economics*, pp.74-91.
Jahoda, G., 2012. Critical reflections on some recent definitions of "culture". *culture & psychology*, *18*(3), pp.289-303.
Jensen, M.C. and Meckling, W.H., 2019. Theory of the firm: Managerial behavior, agency costs and ownership structure. In *Corporate governance* (pp. 77-132). Gower.
Kim, S., 2003. Linking employee assessments to succession planning. *Public Personnel Management*, *32*(4), pp.533-547.
Konrad, K.A., 2009. *Strategy and dynamics in contests*. Oxford University Press.
Kräkel, M., 2005. Helping and sabotaging in tournaments. *International Game Theory Review*, *7*(02), pp.211-228.
Kreps, D.M., 1990. Corporate culture and economic theory. *Perspectives on positive political economy*, *90*(109-110), p.8.
Kurter, Heidi L. 2021. "4 Useful Tips For When Your Manager Is Sabotaging Your Career". https://www.forbes.com/sites/heidilynnekurter/2021/08/19/4-useful-tips-for-when-your-boss-is-sabotaging-your-career-growth/?sh=b7b76e33c862
Lazear, E.P. and Rosen, S., 1981. Rank-order tournaments as optimum labor contracts. *Journal of political Economy*, *89*(5), pp.841-864.
Lazear, E.P., 1989. Pay equality and industrial politics. *Journal of political economy*, *97*(3), pp.561-580.
Lazear, Edward P. 1995. Personnel Economics. MIT Press.
Lowe, E.A., 1971. On the idea of a management control system: Integrating accounting and management control. *Journal of Management Studies (Wiley-Blackwell)*, *8*(1).
Ma, S., Kor, Y.Y. and Seidl, D., 2022. Top management team role structure: A vantage point for advancing upper echelons research. *Strategic Management Journal*, *43*(8), pp.O1-O28.
Malcomson, J.M., 1984. Work incentives, hierarchy, and internal labor markets. *Journal of political economy*, *92*(3), pp.486-507.
Merchant, K.A., 1985. Organizational controls and discretionary program decision making: A field study. *Accounting, Organizations and Society*, *10*(1), pp.67-85.
Merchant, K.A. and Van der Stede, W.A., 2007. Management control systems: performance measurement, evaluation and incentives. Pearson education.
Nalebuff, B.J. and Stiglitz, J.E., 1983. Prizes and incentives: towards a general theory of compensation and competition. *The Bell Journal of Economics*, pp.21-43.
Ocasio, W., 1994. Political dynamics and the circulation of power: CEO succession in US industrial corporations, 1960-1990. *Administrative science quarterly*, pp.285-312.
Ouchi, W.G. and Dowling, J.B., 1974. Defining the span of control. *Administrative Science Quarterly*, pp.357-365.

Oremus, W. 2013. The poisonous employee-ranking system that helps explain Microsoft's decline. http://www.slate.com
Prendergast, C., 2008. Intrinsic motivation and incentives. *American Economic Review*, *98*(2), pp.201-205.
Prendergast, C., 2011. What have we learnt about pay for performance? Geary Lecture Winter 2010. *The Economic and Social Review*, *42*(2), p.113.
Rantakari, H., 2012. Employee initiative and managerial control. *American Economic Journal: Microeconomics*, *4*(3), pp.171-211.
Reidl, C., Grad, T. and Lettl, C., 2024. Competition and Collaboration in Crowdsourcing Communities: What happens when peers evaluate each other?. *Organization Science*.
Reilly, R.R., Smither, J.W. and Vasilopoulos, N.L., 1996. A longitudinal study of upward feedback. *Personnel Psychology*, *49*(3), pp.599-612.
Romme, A.G.L., 2019. Climbing up and down the hierarchy of accountability: implications for organization design. *Journal of Organization Design*, *8*(1), p.20.
Salop, S.C. and Scheffman, D.T., 1983. Raising rivals' costs. *The American economic review*, *73*(2), pp.267-271.
Schein, E.H., 2010. *Organizational culture and leadership* (Vol. 2). John Wiley & Sons.
Simons, R. Performance Measurement and Control Systems for Implementing Strategy. Upper Saddle River, NJ: Prentice Hall, 2000.
Skaperdas, S. and Grofman, B., 1995. Modeling negative campaigning. *American Political Science Review*, *89*(1), pp.49-61.
Van den Steen, E., 2005. Organizational beliefs and managerial vision. *Journal of Law, Economics, and organization*, *21*(1), pp.256-283.
Van den Steen, E., 2010. On the origin of shared beliefs (and corporate culture). *The RAND Journal of Economics*, *41*(4), pp.617-648.
Van den Steen, E., 2010. Culture clash: The costs and benefits of homogeneity. *Management Science*, *56*(10), pp.1718-1738.
Vandegrift, D. and Yavas, A., 2010. An experimental test of sabotage in tournaments. *Journal of Institutional and Theoretical Economics (JITE)/Zeitschrift für die gesamte Staatswissenschaft*, pp.259-285.
Wernerfelt, B., 2007. Delegation, committees, and managers. *Journal of Economics & Management Strategy*, *16*(1), pp.35-51.
Wintour, Patrick. 2013. "How Tony Blair's team fought and failed to see-off Gordon Brown's coup." https://www.theguardian.com/politics/2013/sep/19/tony-blair-gordon-brown.
Xiao, P. and Zaman, H., 2024. Selection, Succession, and Sabotage. *Available at SSRN 4810486*.
Zaman, Hashim. 2022. "Top-down Sabotage in Promotion Tournaments." Harvard Business School working paper.

Figures

Figure 1: Prevalence of top-down sabotage (TDS). The figure shows the prevalence of TDS reported by survey takers in their current departments (three bars on the left), in their current organization (three bars in the center), and throughout their careers (three bars on the right). The length of each bar indicates the percentage of survey takers that report observing TDS (light gray bars), being victims of TDS (blue bars), and being guilty of TDS (dark gray bars).

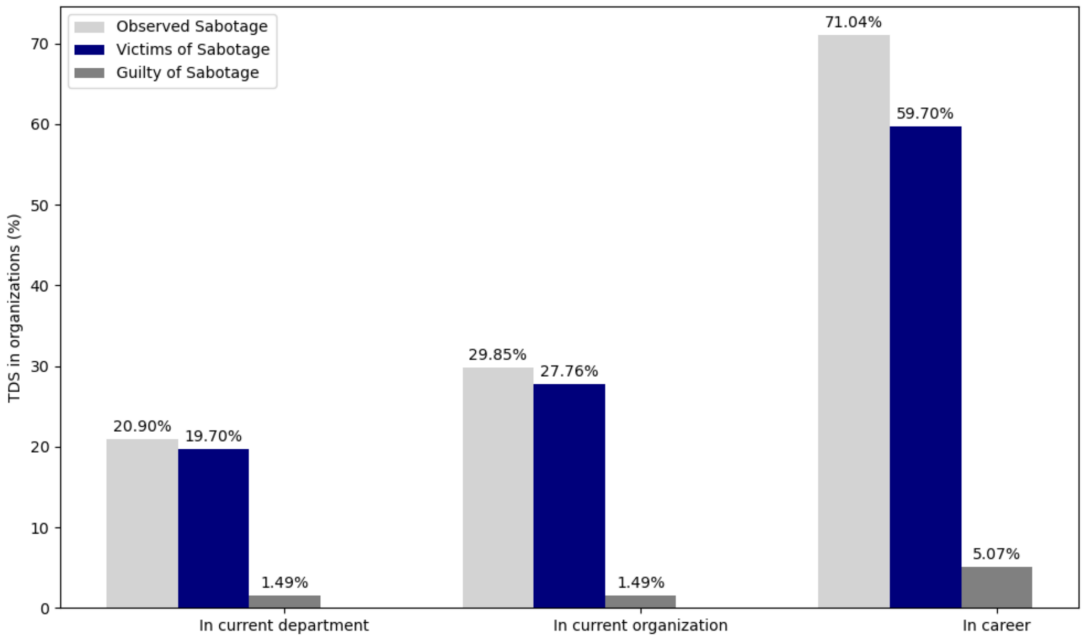


Figure 2: Reasons for top-down sabotage (TDS). The figure shows the percentage of people that report seeing managers in their organizations engage in TDS for monetary concerns (light steel blue), for status concerns (light blue), for both monetary and status concerns (blue). The last (dark blue) bar indicates people who have not seen managers resort to TDS in their organizations for either monetary or status concerns.

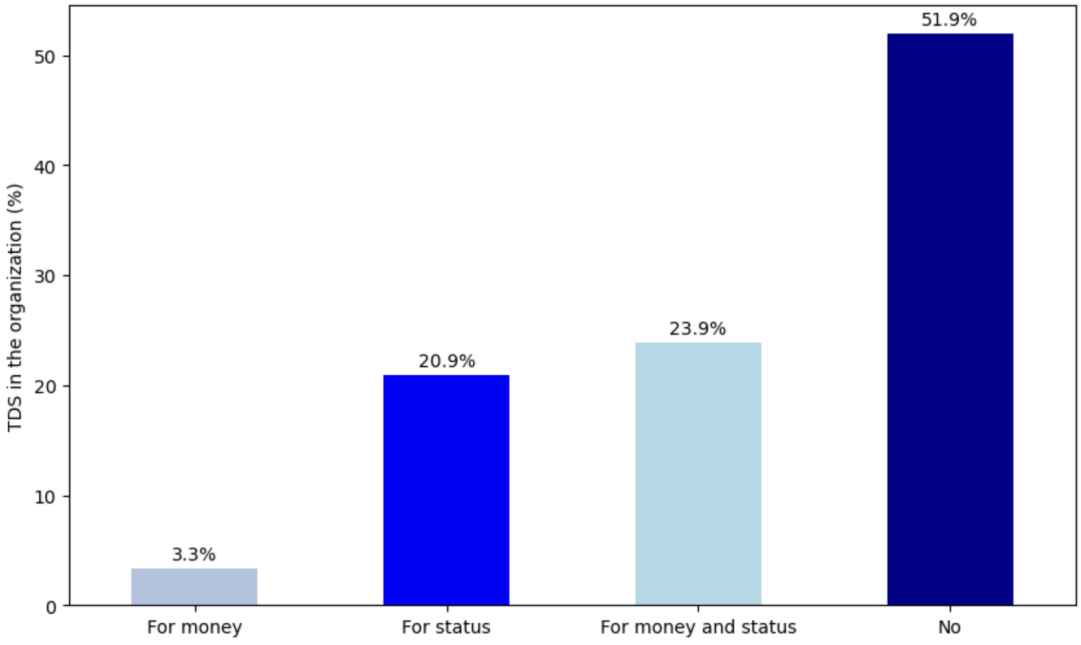


Figure 3: Incentive scheme and top-down sabotage (TDS). The figure shows how TDS varies by incentive scheme. Panel A shows the percentage of people reporting TDS when a firm operates on RPE (light blue bar) and when it does not operate on RPE (navy bar). Panel B shows the percentage of people reporting TDS when a firm operates on RPE without managerial discretion (light blue bar), RPE with managerial discretion (blue bar) and when it does not operate on RPE (navy bar).

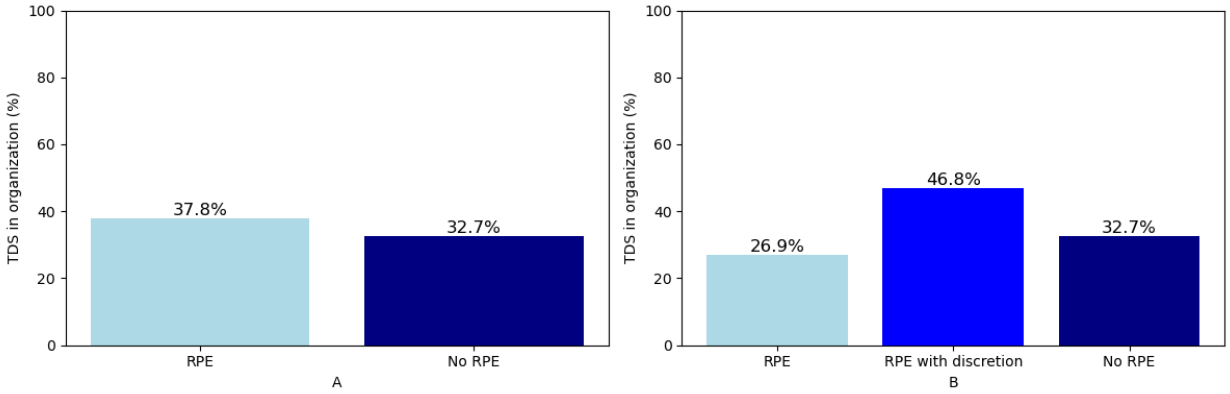


Figure 4: Organization size and top-down sabotage (TDS). The figure shows how the TDS varies by organization size, measured by the number of employees in the organization. Each value on x-axis represents the number of employees in the firm that the survey respondent works at. Figure 4A reports the percentage of TDS for each organization size. Figure 4B shows TDS by organization size as a percentage of the total number of people who report observing TDS.

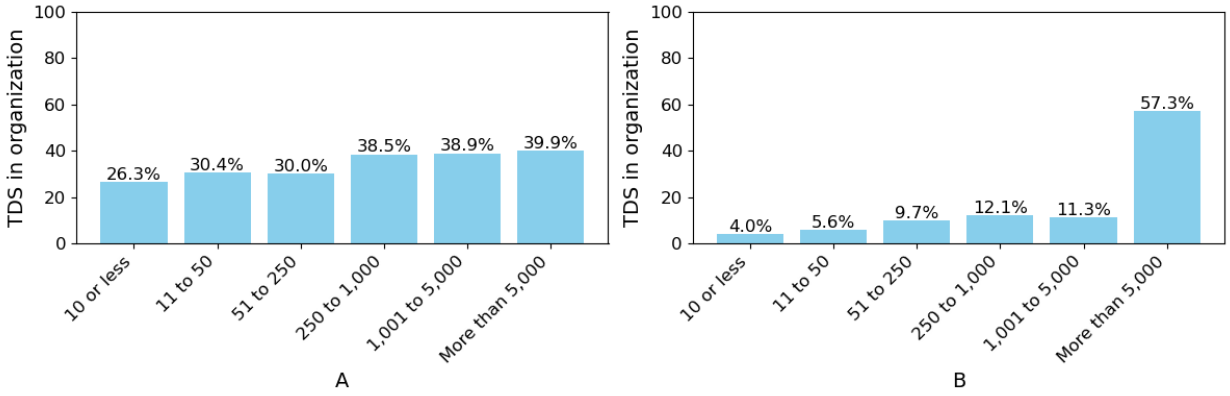


Figure 5: Organizational hierarchy and top-down sabotage (TDS). The figure shows the magnitude of TDS reported by those who are one level below the CEO (light blue bar), two to three levels below the CEO (dark blue bar), four to six levels below the CEO (gray bar) and more than six levels below the CEO (black bar).

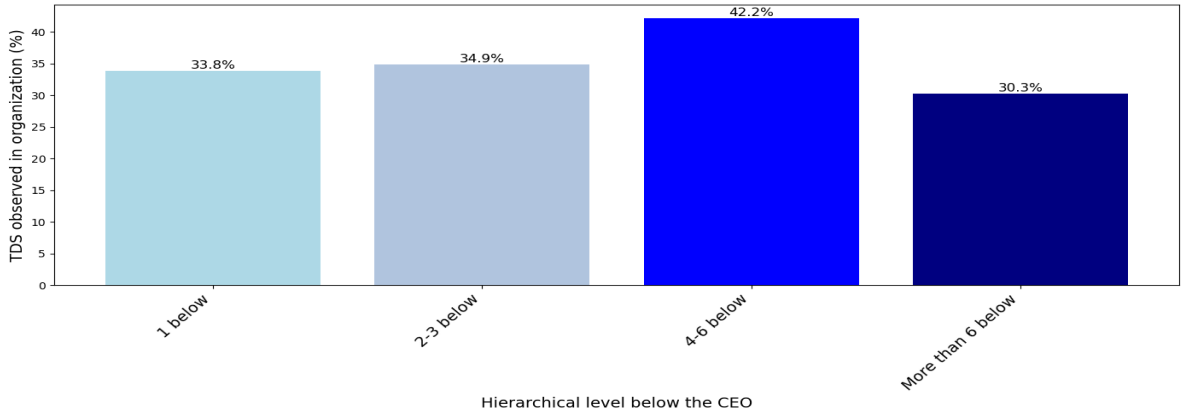


Figure 6: Sensitivity analysis: managerial discretion in RPE and TDS. The figure shows the sensitivity plots of the A) point estimate, B) t-value, and C) point estimate under hypothetical extreme scenarios. Plots "a" and "b" measure the extent to which the residual variance of the treatment (x-axis) and outcome (y-axis) is explained by the confounder. For each pair of partial R^2, a contour line indicates the precise point estimate in plot A, and t-value in plot B, that would have been obtained had the confounder been included in the regression. Moving outwards from the origin to the right, the red diamond-shaped points indicate the point estimate in plot A and t-value in plot B, if the confounder was one, two or three times as strong as the observed covariate "Compensation below market". The red-dotted contour line is the threshold beyond which the point estimates would change value and t-value would lose significance at the 5% significance level. Plot C considers confounding that explains 100% (solid line), 75% (broken line), and 50% (dotted line) of the residual variance of the outcome. The red ticks on the horizontal axis are the bounds on the strength of association of a confounder once, twice or three times as strongly associated with the treatment as "Compensation below market".

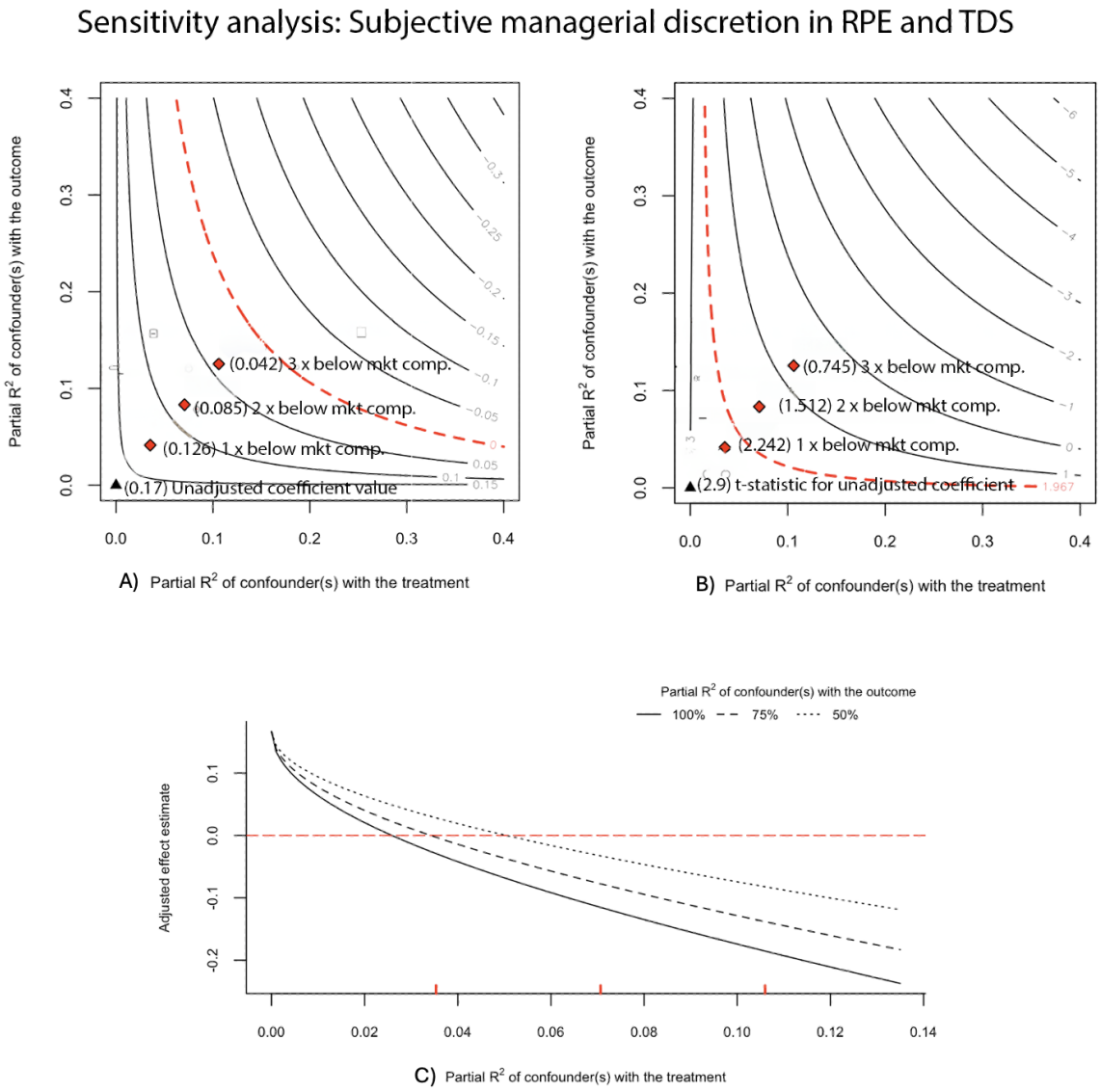


Figure 7: Correlation between corporate culture variables. Figure "a" shows the correlation between responses to all questions on corporate culture. Each square in the plot represents a pair of variables. The color of the square indicates the strength and direction of the correlation between the corresponding variables. The intensity or darkness of the color indicates the magnitude of the correlation. Darker colors represent stronger correlations, while lighter colors represent weaker correlations. The variables (columns and rows) are reordered based on hierarchical clustering, which groups similar variables together. Figure "b" shows the correlation between principal components. Off diagonal elements are totally white, indicating no correlation among principal components.

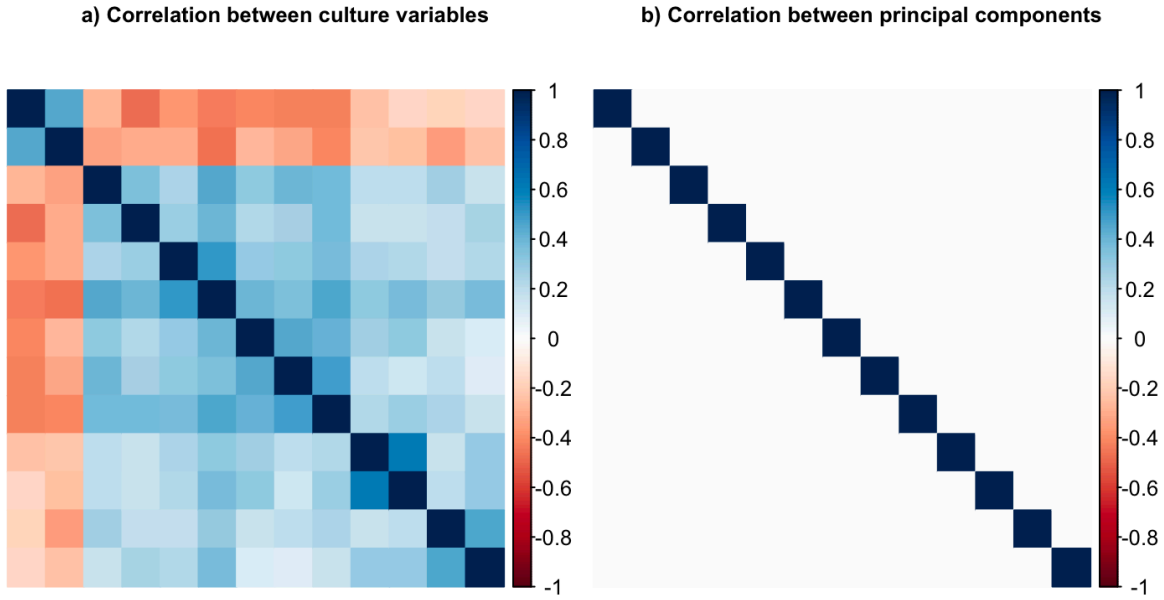
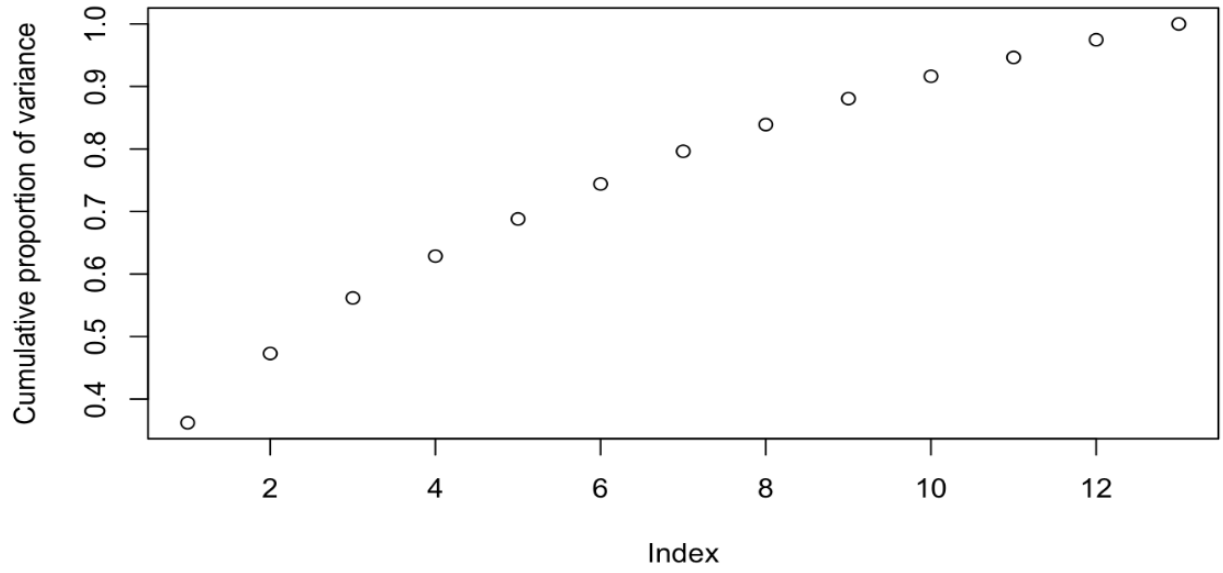


Figure 8: Cumulative proportion of variation explained by principal components. X-axis represents principal components and the y-axis represents the cumulative proportion of variance explained by principal components (going from left to right).



Tables

Table 1: Correlation in TDS reported by survey respondents (TDS). The table shows the correlation in TDS between organization (Org.), department (Dept.), and career (Career) reported by survey respondents. These correlations are based on whether the respondents observed sabotage, were victims of sabotage, or were guilty of sabotage.

		Observed			Victim			Guilty		
		Dept.	Org.	Career	Dept.	Org.	Career	Dept.	Org.	Career
Observed	Dept.	1	0.76*	0.09	0.74*	0.6*	0.06	0.12*	0.06	0.12*
	Org.		1	0.19*	0.6*	0.6*	0.16*	0.13*	0.08	0.15*
	Career			1	0.1*	0.16*	0.58*	0.08	0.08	0.12*
Victim	Dept.				1	0.73*	0.1*	0.12*	0.06	0.12*
	Org.					1	0.17*	0.14*	0.2*	0.11*
	Career						1	0.05	0	0.11*
Guilty	Dept.							1	0.8*	0.42*
	Org.								1	0.31*
	Career									1

Table 2: Descriptive statistics. The table summarizes descriptive statistics based on responses to the survey questions that are used to empirically analyze the determinants of TDS. The table reports the mean, median, and the standard deviation (SD) of variables used in empirical analysis. Detailed description of each variable and its numerical construction can be found in Appendix D.

	Mean	SD	Median
Panel A: Dependent variables			
TDS in organization	0.37	0.48	0.00
Managerial discretion in RPE	0.47	0.50	0.00
Panel B: Independent variables: Organizational features			
RPE	0.85	0.35	1.00
RPE discretion	0.47	0.50	0.00
Org. size	3.74	1.61	5.00
Hierarchical level	1.62	0.92	2.00
Panel C: Independent variables: Management control systems			
Feedback system	0.90	0.30	1.00
Performance transparency	1.64	0.88	2.00
360 system exists	0.50	0.50	1.00
360 is enforced	0.28	0.45	0.00
Referrals based hiring	2.56	0.76	3.00
Manager's manager monitors	2.04	0.96	2.00
Panel D: Independent variables: Organizational culture			
Culture and belonging	2.91	0.96	3.00
Comfortably talk to colleagues	2.41	1.09	3.00
Comfortably ask colleagues	3.11	0.94	3.00
Being able to speak ones mind	2.59	1.03	3.00
Collaborative colleagues	2.73	1.24	3.00
Effort are recognized	2.55	1.06	3.00
Skills are valued	2.93	0.87	3.00
Keeping cards close to chest	1.81	1.14	2.00
Organization demographically diverse	3.63	1.13	4.00
Organization intellectually diverse	3.64	1.15	4.00
Disregarding outgroup perspective	1.17	1.25	1.00
Peers support based on shared identity	2.88	0.82	3.00
Managers support based on shared identity	2.73	0.86	3.00
Panel E: Additional control variable			
Current compensation level	Frequency	Proportion	
Above market compensation	59.00	0.18	
At market compensation	157.00	0.47	
Below market compensation	93.00	0.28	
I am not sure	26.00	0.08	

Table 3: Organizational features and TDS. The table shows the OLS results from a linear probability model that measures the impact of different organizational features on change in TDS in the survey-taker's organization. The binary dependent variable is top-down sabotage (TDS) in the organization. Model (1) shows the impact of relative performance evaluation (RPE) incentive scheme on TDS. Model (2) shows the impact of complete managerial discretion in the RPE process (RPE discretion) on TDS. Model (3) shows the impact of organizational size (Org. size) on TDS. Model (4) shows the impact of the respondent's hierarchical level in the organization on the TDS. Model (5) collectively estimates the impact of all organizational features on TDS.

	Dep var: TDS in organization				
	(1)	(2)	(3)	(4)	(5)
RPE	0.09				−0.03
	(0.07)				(0.08)
RPE discretion		0.16***			0.17***
		(0.05)			(0.06)
Org. size			0.03**		0.04*
			(0.02)		(0.02)
Hierarchical level				−0.02	0.03
				(0.03)	(0.04)
Compensation below market	0.32***	0.28***	0.32***	0.31***	0.28***
	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)
Constant	0.17**	0.20***	0.13	0.29***	0.02
	(0.08)	(0.06)	(0.09)	(0.07)	(0.14)
Number of Observations	335	335	335	335	335
R-squared	0.06	0.09	0.07	0.06	0.10
Adjusted R-squared	0.05	0.08	0.06	0.05	0.08

Note: *p<0.1; **p<0.05; ***p<0.01

Table 4: Sensitivity analysis of managerial discretion under RPE and TDS. This table summarizes the sensitivity analysis that associates RPE discretion and TDS. The partial $R^2_{Y\sim D|X}$ measures the amount of residual variance of the outcome explained by the treatment after taking into account what the observed covariates explain. It shows the minimum strength that confounders must have to explain away the observed association between the outcome and the treatment. $RV_{q=1}$ is the robustness value for eliminating the observed effect of the point estimate of the treatment. If the confounder explains the residual variation of both the outcome and the treatment by at least $RV_{q=1}$, that is sufficient to explain away the point estimate. To account for sampling uncertainty, $RV_{q=1;\ \alpha=0:05}$ is the robustness value for testing the null hypothesis that the coefficient of the treatment is zero.

Outcome: *TDS in organization*

Treatment:	Est.	S.E.	t-value	$R^2_{Y\sim D\|\mathbf{X}}$	$RV_{q=1}$	$RV_{q=1,\alpha=0.05}$
RPE discretion	0.166	0.056	2.944	2.6%	15%	5.2%

df = 327 *Bound (1x Below mkt comp)*: $R^2_{Y\sim Z|\mathbf{X},D} = 4.2\%$, $R^2_{D\sim Z|\mathbf{X}} = 3.5\%$

Table 5: Management control systems, TDS and managerial discretion. **Panel A** shows the OLS results from a linear probability model that measures the impact of different management control systems on change in TDS in the survey-taker's organization. The binary dependent variable is top-down sabotage (TDS) in the organization. **Panel B** shows the OLS results from a linear probability model that measures the impact of management control systems on change in managerial discretion in the RPE process in the survey-taker's organization. The binary dependent variable is RPE under managerial discretion for either compensation or promotion purposes. Model (1) shows the impact of an organization having an employee performance feedback system in place. Model (2) shows the impact of performance transparency. Model (3) shows the impact of having a 360-degree feedback process. Model (4) shows the impact of an effectively enforced 360-degree feedback process. Model (5) estimates the impact of referrals based hiring. Model (6) shows the impact of having a manager's manager involved in the feedback process. Model (7) collectively estimates the impact of all management control systems.

Panel A: TDS in organization							
	Dep var: TDS in organization						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Feedback system	−0.03						−0.07
	(0.09)						(0.09)
Performance transparency		−0.08***					−0.07**
		(0.03)					(0.03)
360 system exists			0.06				0.22***
			(0.05)				(0.07)
360 is enforced				−0.15***			−0.26***
				(0.05)			(0.07)
Referrals based hiring					0.01		0.02
					(0.03)		(0.03)
Manager's manager monitors						−0.05	−0.03
						(0.03)	(0.03)
Compensation below market	0.31***	0.27***	0.31***	0.29***	0.31***	0.30***	0.26***
	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)
Constant	0.28***	0.41***	0.22***	0.30***	0.22**	0.35***	0.42***
	(0.09)	(0.08)	(0.07)	(0.06)	(0.11)	(0.08)	(0.15)
Panel B: Managerial discretion in RPE							
	Dep var: Managerial discretion in RPE						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Feedback system	0.06						0.07
	(0.09)						(0.09)
Performance transparency		−0.06**					−0.04
		(0.03)					(0.03)
360 system exists			−0.06				0.06
			(0.05)				(0.07)
360 is enforced				−0.20***			−0.23***
				(0.06)			(0.08)
Referrals based hiring					−0.02		−0.01
					(0.04)		(0.04)
Manager's manager monitors						−0.05*	−0.04
						(0.03)	(0.03)
Compensation below market	0.18**	0.16*	0.18**	0.16*	0.18**	0.18**	0.14
	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)
Constant	0.30***	0.47***	0.39***	0.42***	0.41***	0.47***	0.50***
	(0.10)	(0.09)	(0.07)	(0.06)	(0.11)	(0.09)	(0.16)

Table 6: Organizational culture and TDS. The table shows the impact of organizational culture on TDS observed and experienced in the organization. Principal components analysis was performed on responses to all organizational culture variables. Then TDS was regressed on all principal components. The table displays only the statistically significant principal components.

	Dep var: TDS in organization
PC1	-0.20^{***}
	(0.02)
PC2	-0.08^{**}
	(0.04)
PC4	0.14^{***}
	(0.05)
Compensation below market	0.50^{***}
	(0.15)
Constant	-0.18
	(0.11)
R-squared	0.28
Adjusted R-squared	0.243

Note: *p<0.1; **p<0.05; ***p<0.01

Table 7: Rotation matrix from principal components analysis (PCA). Rotation matrix represents the correlation between the original variables on which PCA was performed and the resulting principal component. There are 13 culture variables which were included in the PCA. The rotation matrix above is for the first four principal components. Each value represents the correlation between a dimension of culture and a principal component.

	Rotation matrix: first four principal components			
Dimension of culture	**PC1**	**PC2**	**PC3**	**PC4**
Culture and belonging	0.277	0.129	0.089	0.338
Comfortably talk to colleagues	0.283	0.327	-0.126	0.377
Comfortably ask colleagues	0.280	0.159	-0.344	0.280
Being able to speak one's mind	0.323	0.197	-0.062	0.104
Keeping cards close to chest	-0.304	-0.278	0.002	0.326
Collaborative colleagues	0.269	0.149	0.194	-0.469
Efforts are recognized	0.276	0.046	-0.002	-0.343
Skills are valued	0.355	-0.029	0.066	-0.137
Organization demographically diverse	0.220	-0.278	0.501	0.426
Organization intellectually diverse	0.212	-0.461	0.404	-0.057
Diregarding outgroup perspective	-0.295	-0.046	-0.200	0.026
Peer support based on shared identity	0.236	-0.444	-0.428	-0.077
Manager support based on shared identity	0.240	-0.470	-0.418	0.000

Appendix A

Survey Questionnaire

Q1. WHAT IS YOUR TITLE AT YOUR ORGANIZATION?

A	C-class (CEO, CFO, COO, CIO, CTO, President, Chairman of the Board or equivalent)
B	Senior Vice President or Executive Vice President or equivalent
C	Managing Director or equivalent
D	Vice President or equivalent
E	Director or equivalent
F	Manager or equivalent
G	Associate or equivalent
H	Other

Q2. IN YOUR CURRENT ROLE, OFFICIALLY, HOW MANY PEOPLE DIRECTLY REPORT TO YOU?

A	1
B	2
C	Less than 5
D	Less than 10
E	11 or more
F	None

Q3. HOW MANY OF YOUR DIRECT REPORTS MANAGE THEIR OWN TEAMS?

A	1
B	2
C	Less than 5
D	Less than 10
E	11 or more
F	None

Q4. IN YOUR ESTIMATE, HOW MANY PEOPLE DIRECTLY REPORT TO YOUR CURRENT MANAGER?

A	1

B	2
C	Less than 5
D	Less than 10
E	11 or more

Q5. GIVEN THE STRUCTURE OF YOUR FIRM, WHERE IN THE ORGANIZATIONAL HIERARCHY DO YOU SIT?

A	1 level below the CEO (or equivalent)
B	2-3 levels below the CEO (or equivalent)
C	4-6 levels below the CEO (or equivalent)
D	More than 6 levels below the CEO

Q6. WHAT TYPE OF ORGANIZATION DO YOU BELONG TO?

A	For-profit company
B	Non-profit organization
C	Government organization
D	Family owned enterprise

Q7. HOW MANY EMPLOYEES DOES YOUR ORGANIZATION HAVE?

A	10 or less
B	11 to 50
C	51 to 250
D	250 to 1,000
E	1,001 to 5,000
F	More than 5,000

Q8. SINCE YOU JOINED THE FIRM, THE NUMBER OF EMPLOYEES HAS:

A	Grown by up to 10%
B	Grown by more than 10%
C	Remained the same
D	Decreased by up to 10%
E	Decreased by more than 10%
F	Do not know

Q9. SINCE YOU JOINED THE FIRM, THE PROFITABILITY OF THE FIRM HAS:

A	Grown by up to 10%
B	Grown by more than 10%
C	Remained the same
D	Decreased by up to 10%
E	Decreased by more than 10%
F	Do not know

Q10. SINCE YOUR JOINED THE FIRM, THE RATE OF INNOVATION IN TERMS OF NEW PATENTS AND TRADEMARKS HAS:

A	Increased
B	Remained the same
C	Decreased
D	Do not know

Q11. SINCE YOU JOINED THE FIRM, THE RATE OF EMPLOYEE TURNOVER HAS:

A	Increased
B	Remained the same
C	Decreased
D	Do not know

Q12 WHEN EVALUATING EMPLOYEES FOR PROMOTION PURPOSES, ARE EMPLOYEES AT THE SAME LEVEL IN YOUR ORGANIZATION EVALUATED RELATIVE TO EACH OTHER?

A	Yes

B	No
C	Yes, but who gets promoted largely depends on subjective evaluation of the manager

Q13 WHEN EVALUATING EMPLOYEES FOR COMPENSATION PURPOSES, ARE EMPLOYEES AT THE SAME LEVEL IN YOUR ORGANIZATION EVALUATED RELATIVE TO EACH OTHER?

A	Yes
B	No
C	Yes, but how performance gets noticed largely depends on subjective evaluation of the manager

Q14. IN YOUR OPINION, HOW DOES EVALUATING EMPLOYEES RELATIVE TO EACH OTHER IMPACT TEAMWORK AND IDEA-SHARING AMONG COLLEAGUES IN AN ORGANIZATION?

A	Strong negative impact
B	Somewhat negative impact
C	No significant impact
D	Somewhat positive impact
E	Strong positive impact

Q15 DOES YOUR FIRM OPERATE ON A PARTNERSHIP MODEL I.E., ARE THERE A LIMITED NUMBER OF PARTNERS AND MOST EMPLOYEES ARE LARGELY IN A RACE FOR PROMOTION TO PARTNERSHIP?

A	Yes
B	No

Q16 AN EMPLOYEE PERFORMANCE EVALUATION SYSTEM IS A STRUCTURED PROCESS USED BY ORGANIZATIONS TO ASSESS AND MEASURE THE JOB PERFORMANCE AND CONTRIBUTIONS OF THEIR EMPLOYEES. IT TYPICALLY INVOLVES A FORMAL EVALUATION CONDUCTED BY A MANAGER OR SUPERVISOR TO PROVIDE FEEDBACK ON AN EMPLOYEE'S PERFORMANCE AND TO IDENTIFY AREAS OF STRENGTH AND AREAS THAT NEED IMPROVEMENT.

DOES YOUR ORGANIZATION HAVE AN EMPLOYEE PERFORMANCE FEEDBACK SYSTEM IN PLACE?

A	Yes
B	No

Q17 AT YOUR FIRM, HOW EASY IS IT TO TRANSPARENTLY AND ACCURATELY ATTRIBUTE EACH INDIVIDUAL’S CONTRIBUTION TOWARDS OVERALL TEAM OUTPUT FOR EMPLOYEE'S PERFORMANCE EVALUATION?

A	Very difficult
B	Somewhat difficult
C	Very easy
D	Somewhat easy

Q18 A 360 REVIEW, ALSO KNOWN AS A 360-DEGREE FEEDBACK OR MULTI-RATER FEEDBACK, IS A PERFORMANCE EVALUATION PROCESS THAT GATHERS FEEDBACK FROM MULTIPLE SOURCES ABOUT AN INDIVIDUAL'S PERFORMANCE, SKILLS, AND BEHAVIORS.

DOES YOUR ORGANIZATION USE 360-DEGREE FEEDBACK SYSTEM IN PLACE?

A	Yes
B	No

Q19 IF YOUR FIRM HAS 360-DEGREE SYSTEM IN PLACE, HOW EFFECTIVE IS IT IN LEADING TO FAIR PERFORMANCE EVALUATIONS:

A	360 is effective
B	360 is just a formality
C	There is no 360-degree feedback system at the firm

Q20 TO WHAT EXTENT DOES YOUR ORGANIZATION RELY ON REFERRALS FOR HIRING?

A	Always
B	Often
C	Sometimes
D	Rarely
E	Never

Q21 IN YOUR ORGANIZATION, HOW OFTEN DO EMPLOYEES REPLACE THEIR MANAGERS AS PART OF A SUCCESSION PLANNING STRATEGY BY SENIOR LEADERSHIP WITHIN YOUR ORGANIZATION?

A	Always
B	Often
C	Sometimes
D	Rarely
E	Never

Q22 IN YOUR EXPERIENCE, WHEN IT COMES TO UPWARD MOBILITY WITHIN YOUR ORGANIZATION, WHICH OF THE FOLLOWING IS MORE COMMON:

A	Employees can be promoted to the same level as their manager while their current manager stays in the position
B	Employees can only move up if their current manager leaves or is promoted to a different position

Q23 IN YOUR DEPARTMENT, ARE YOU AWARE OF A SUCCESSION PLANNING PROCESS FOR EMPLOYEES?

A	Yes
B	No

Q24 WHICH OF THE FOLLOWING DO YOU CONSIDER TO BE REALISTIC SOURCES OF DRIVERS OF MANAGERIAL INSECURITY IN ORGANIZATIONS? PLEASE SELECT ALL THAT APPLY.

A	Manager’s fear of eventually being replaced or outperformed by a subordinate.
B	Manager’s fear of losing status or pride if a subordinate eventually replaces or outperforms the manager.
C	Manager’s concern with sharing compensation pool more evenly if a subordinate is promoted.
D	As a subordinate grows in the organization and the hierarchical gap between the manager and the subordinate closes, managers can begin to feel more competitive towards that subordinate.
E	None of the above.

Q25 BASED ON THIS DEFINITION OF MANAGERIAL INSECURITY, ARE MANAGERS MORE LIKELY TO FEEL INSECURE WITH SUBORDINATES WHEN (PLEASE SELECT ALL THAT APPLY):

A	Greater financial rewards are at stake.
B	The ability levels of subordinates are higher than their own.
C	Subordinates express greater ambition to grow.
D	Managers that have pride and status concerns in the organization.
E	None of the above.

Q26 IN YOUR ORGANIZATION, IS IT COMMON FOR A MANAGER’S MANAGER (I.E., THAT IS YOUR MANAGER'S SUPERVISOR) TO MAKE AN EFFORT TO BE FULLY AWARE OF THE ABILITIES AND EFFORTS OF SUBORDINATES WITHOUT RELYING ON THE DIRECT MANAGER'S REPORT?

A	Always
B	Often
C	Sometimes
D	Rarely
E	Never

Q27 HAVE YOU EVER OBSERVED A COLLEAGUE DISAPPROVE HIRING OF A HIGH-ABILITY CANDIDATE TO AVOID POTENTIAL COMPETITION FOR HIMSELF OR HERSELF?

A	Yes
B	No

Q28 IN YOUR ORGANIZATION, HOW OFTEN HAVE YOU OBSERVED MANAGERS CLAIM CREDIT FOR A SUBORDINATE'S OUTPUT WITHOUT ATTRIBUTING THE FAIR SHARE OF THE CREDIT TO THE JUNIOR PERSON?

A	Always
B	Often
C	Sometimes
D	Rarely
E	Never

Q29 HAVE YOU OBSERVED MANAGERS SABOTAGE HIGH-PERFORMING SUBORDINATES TO KEEP THEIR OWN JOBS SECURE OR TO PREVENT FUTURE COMPETITION FOR THEMSELVES IN YOUR:

	Yes	No
CURRENT ORGANIZATION		
CURRENT DEPARTMENT		
THROUGHOUT CAREER		

Q30 IN YOUR ORGANIZATION, HAVE YOU SEEN MANAGERS SABOTAGE HIGH-PERFORMING SUBORDINATES FOR EITHER MONETARY OR STATUS CONCERNS?

A	Yes, but only for monetary reasons
B	Yes, but only for status concerns
C	Yes, for both monetary and status concerns
D	No

Q31 BASED ON YOUR EXPERIENCE, HAS A MANAGER OR A SUPERVISOR EVER TRIED TO SABOTAGE YOUR CAREER GROWTH IN YOUR:

	Yes	No
CURRENT ORGANIZATION		
CURRENT DEPARTMENT		
THROUGHOUT CAREER		

Q32 HAVE YOU EVER TRIED TO SABOTAGE THE CAREER GROWTH OF A SUBORDINATE IN YOUR:

	Yes	No
CURRENT ORGANIZATION		
CURRENT DEPARTMENT		
THROUGHOUT CAREER		

Q33 PLEASE GIVE US YOUR LEVEL OF AGREEMENT AND/OR DISAGREEMENT WITH THE FOLLOWING STATEMENTS ABOUT SABOTAGE IN YOUR ORGANIZATION:

	Strongly agree	Somewhat agree	Niether agree nor disagree	Somewhat disagree	Strongly disagree
TOP MANAGEMENT IS OBLIVIOUS TO TOP-DOWN SABOTAGE PRACTICES BY MID-LEVEL MANAGERS					
TOP-DOWN SABOTAGE IS HARD TO DETECT BECAUSE MANAGERS CAN ALWAYS MAKE UP PROFESSIONAL REASONS TO UNDERMINE THE SUBORDINATE					

THE COST OF MONITORING MANAGERIAL BIASES AND TOP-DOWN SABOTAGE MIGHT BE MORE THAN THE BENEFITS FROM REDUCED SABOTAGE	
MANAGERS OFTEN FORM COALITIONS WITH EACH OTHER SO JUNIORS DO NOT KNOW WHO TO COMPLAIN TO	
TOP-DOWN SABOTAGE IS RARE IN MY ORGANIZATION	
SABOTAGE ACROSS HIERARCHY DOES NOT EXIST AT ALL IN MY ORGANIZATION	

Q34 CAN YOU SUGGEST POSSIBLE WAYS TO MITIGATE SABOTAGE IN 25 WORDS OR LESS ?

Q35 AMONG EMPLOYEES, HOW STRONG IS SENSE OF CULTURE AND BELONGING TO THE ORGANIZATION AT YOUR PRESENT EMPLOYER?

A	Very strong
B	Somewhat strong
C	Neither strong nor weak

D	Somewhat weak
E	Extremely weak

Q36 TO WHAT EXTENT DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENT ABOUT YOUR ORGANIZATION:

"*People in this organization sometimes disregard the perspective of others just because they are different in terms of race, ethnic origin, religion, or gender etc?"*

A	Strongly agree
B	Somewhat agree
C	Neither agree nor disagree
D	Somewhat disagree
E	Strongly disagree

Q37 HOW COLLABORATION/COMPETITIVE IS THE ENVIRONMENT IN YOUR ORGANIZATION?

A	Highly collaborative
B	Somewhat collaborative
C	Neither collaborative nor competitive
D	Somewhat competitive
E	Highly competitive

Q38 TO WHAT EXTENT DO YOU AGREE WITH THE STATEMENT ABOUT YOUR ORGANIZATION:
"*Keeping your cards close to your chest is the best way to get ahead in this organization?"*

A	Strongly agree
B	Somewhat agree
C	Neither agree nor disagree
D	Somewhat disagree
E	Strongly disagree

Q39 IN YOUR ORGANIZATION, HOW COMFORTABLE DO YOU FEEL TALKING ABOUT PROBLEMS AND DISAGREEMENTS?

A	Extremely uncomfortable
B	Moderately uncomfortable
C	Neutral
D	Moderately comfortable
E	Extremely comfortable

Q40 IN YOUR ORGANIZATION, HOW COMFORTABLE DO YOU FEEL CHECKING WITH EACH OTHER IF YOU HAVE QUESTIONS ABOUT THE RIGHT WAY TO DO SOMETHING?

A	Extremely uncomfortable
B	Moderately uncomfortable
C	Neutral
D	Moderately comfortable
E	Extremely comfortable

Q41 IN YOUR ORGANIZATION, HOW EASY IT IS TO SPEAK YOUR MIND?

A	Very easy
B	Somewhat easy
C	Nor easy, neither difficult
D	Somewhat difficult
E	Very difficult

Q42 HOW MUCH DO YOU AGREE WITH THE FOLLOWING STATEMENT ABOUT YOUR CURRENT TEAM:

"No one on this team would deliberately act in a way that undermines my efforts."

A	Strongly agree
B	Somewhat agree
C	Neither agree nor disagree
D	Somewhat disagree
E	Strongly disagree

Q43 HOW MUCH DO YOU AGREE WITH THE FOLLOWING STATEMENT:

"The people in our organization value others' unique skills and talents."

A	Strongly agree
B	Somewhat agree
C	Neither agree nor disagree
D	Somewhat disagree
E	Strongly disagree

Q44 DEMOGRAPHIC DIVERSITY IS OBSERVED ALONG DIMENSIONS SUCH AS AGE, GENDER, RELIGION, SEXUAL ORIENTATION, NATIONAL ORIGIN, ETC.

ON A SCALE OF 1-5, WHERE 1 STAR INDICATES THAT YOUR ORGANIZATION HAS LOW DEMOGRAPHIC DIVERSITY AND 5 STARS INDICATE THAT YOUR ORGANIZATION HAS HIGH DEMOGRAPHIC DIVERSITY, HOW WOULD YOU RATE THE LEVEL OF DEMOGRAPHIC DIVERSITY IN YOUR ORGANIZATION?

Q45 INTELLECTUAL DIVERSITY REFERS TO THE ACADEMIC, INDUSTRIAL AND EXPERIENTIAL BACKGROUND OF EMPLOYEES IN A COMPANY.

ON A SCALE OF 1-5, WHERE 1 STAR INDICATES LOW INTELLECTUAL DIVERSITY AND 5 STARS INDICATE HIGH INTELLECTUAL DIVERSITY, HOW WOULD YOU RATE THE LEVEL OF INTELLECTUAL DIVERSITY IN YOUR ORGANIZATION?

Q46 IN YOUR ORGANIZATION, HOW WOULD YOU RATE THE LEVEL OF SUPPORT PEERS PROVIDE TO EACH OTHER BASED ON SHARED IDENTITY SUCH AS RACE, ETHNIC ORIGIN, RELIGION, OR GENDER ?

A	Not supportive
B	Rarely supportive
C	Indifferent
D	Often supportive
E	Highly supportive

Q47 IN YOUR ORGANIZATION, HOW WOULD YOU RATE THE LEVEL OF SUPPORT MANAGERS PROVIDE TO SUBORDINATES BASED ON SHARED IDENTITY SUCH AS RACE, ETHNIC ORIGIN, RELIGION, OR GENDER ?

A	Not supportive
B	Rarely supportive
C	Indifferent
D	Often supportive
E	Highly supportive

Q46 IN YOUR ORGANIZATION, HOW WOULD YOU RATE THE LEVEL OF SUPPORT PEERS PROVIDE TO EACH OTHER BASED ON SHARED IDENTITY SUCH AS RACE, ETHNIC ORIGIN, RELIGION, OR GENDER ?

A	Financial services
B	Healthcare
C	Technology
D	Consulting, business or legal services
E	Consumer goods
F	Marketing, media, or entertainment
G	Industrial goods
H	Non-profit
I	Consumer services
J	Materials and materials science
K	Utilities
L	Other
M	None of the above

Q49 HOW LONG HAVE YOU BEEN EMPLOYED AT YOUR CURRENT ORGANIZATION?

A	Less than one year
B	1 to 2 years
C	3 to 5 years
D	6 to 10 years
E	11 to 20 years
F	More than 20 years

Q50 HOW MANY YEARS OF TOTAL WORK EXPERIENCE DO YOU HAVE?

A	Less than one year
B	1 to 2 years
C	3 to 5 years
D	6 to 10 years
E	11 to 20 years
F	More than 20 years

Q51 PLEASE INDICATE YOUR GENDER.

A	Male
B	Female

Q52 PLEASE INDICATE YOUR HIGHEST LEVEL OF EDUCATION.

A	Less than a high school degree
B	High school graduate
C	Non-college post-high school (technical school)
D	Some college
E	College graduate
F	Post college / graduate school
G	Prefer not to answer

Q53 FOR STATISTICAL PURPOSES ONLY, WHICH OF THE FOLLOWING BEST DESCRIBES YOUR RACE?

A	White/Caucasian
B	Black/African-American
C	Caribbean-American
D	Hispanic/Latino
E	Asian
F	Native American
G	South Asian
H	Other
I	Prefer not to answer

Q54 HOW LONG HAVE YOU BEEN IN YOUR CURRENT ROLE?

A	Less than one year
B	1 to 2 years
C	3 to 5 years
D	6 to 10 years
E	11 to 20 years
F	More than 20 years

Q55 IN YOUR OPINION, HOW ARE YOU COMPENSATED RELATIVE TO THE MARKET?

A	Above market compensation
B	Below market compensation
C	At market compensation
D	I am not sure

Q56. EXCLUDING ANY INCREASE IN BASE SALARY, WHAT PROPORTION OF YOUR TOTAL COMPENSATION IS THE ANNUAL BONUS (INCLUDING DEFERRED EQUITY OR OPTIONS, IF ANY)?

A	Up to 10%

B	Up to 25%
C	Up to 50%
D	More than 50%
E	There is no separate bonus in my role

Q57 IN YOUR CURRENT ROLE, DOES YOUR BONUS HEAVILY DEPEND ON:

	Yes	No
HOW PROFITABLE THE FIRM IS THIS YEAR		
HOW MUCH YOUR DEPARTMENT HAS CONTRIBUTED TO THE FIRM'S PROFIT THIS YEAR		
HOW MUCH YOU HAVE CONTRIBUTED TO THE FIRM'S PROFIT THIS YEAR		
THERE IS NO BONUS IN MY POSITION		

Q58 THANK YOU FOR COMPLETING THE SURVEY. TO ENTER THE DRAW TO WIN THE BOOK, PLEASE ENTER YOUR EMAIL ADDRESS:

Appendix B

Message used to invite survey participants to take the survey on LinkedIn

Dear XXXXX,

I hope you are doing well. I am working on a research project at [university name redacted] with the principal investigator [name hidden for peer review], a post-doctoral fellow. I am the faculty sponsor on the project. We are focusing on managerial issues in organizations. Given your professional background, I think your insights would be quite valuable for us to learn from. You are among a select group of people from my connections that I am asking to take the following survey before July 2023.

[Managerial issues in organizations survey link]

This should take about 10 minutes of your time. We aim to have approximately 500 executives complete the survey. Those who complete the entire survey will have the option to enter a draw to receive one of the 100 copies of my book "[redacted book name]." Your email address will only be used to contact you if you win the draw and will be removed from the database afterwards.

Thanks,

[name hidden for peer review]

Appendix C

Description of the survey population. The table describes the survey participants. **Panel A** shows their titles, confirming that the majority of them hold senior positions in their organizations. **Panel B** shows the amount of industry experience they have (in years). **Panel C** describes the size of the organization they work at in terms of the number of employees. **Panel D** shows the breakdown of the sample by gender. **Panel E** shows the industries that participants work at.

Table 1: Description of the survey population

Panel A: What is your title at your organization?	n	%
C-class (CEO, CFO, COO, CIO, CTO, President, Board Chairman or equivalent)	39	11.6
Managing Director or equivalent	20	6.0
Senior Vice President or Executive Vice President or equivalent	13	3.9
Director or equivalent	71	21.2
Vice President or equivalent	44	13.1
Manager or equivalent	91	27.2
Associate or equivalent	42	12.5
Other	15	4.5
Panel B: How many years of total work experience do you have?		
More than 20 years	118	35.2
11 to 20 years	134	40.0
6 to 10 years	45	13.4
3 to 5 years	26	7.8
1 to 2 years	8	2.4
Less than one year	4	1.2
Panel C: How many employees does your organization have?		
More than 5,000	178	53.1
1,001 to 5,000	36	10.7
250 to 1,000	39	11.6
51 to 250	40	11.9
11 to 50	23	6.9
10 or less	19	5.7
Panel D: What is your gender?		
Male	267	79.7
Female	68	20.3
Panel E: In which industry does your organization primarily operate?		
Technology	101	30.1
Financial services	56	16.7
Healthcare	43	12.8
Consulting, business or legal services	42	12.5
Other	25	7.5
Consumer goods	24	7.2
Consumer services	24	7.2
Industrial goods	11	3.3
Marketing, media, or entertainment	11	3.3
Materials and materials science	6	1.8
None of the above	6	1.8
Non-profit	5	1.5
Utilities	2	0.6

Appendix D

Variables used in empirical analysis

Variable	**Type**	**Definition**	**Relevant Survey Question Number(s)**
TDS	Binary	1, if the survey respondent: ● Observed TDS in the organization, or ● Victim of TDS in the organization, or ● Guilty of TDS in the organization. 0, otherwise.	29, 31, 32
RPE	Binary	1, if the firm operates on RPE for compensation or promotion purposes. 0, otherwise.	12, 13
Managerial discretion in RPE	Binary	1, if firm operates on RPE for compensation or promotion purposes and: ● Who gets promoted largely depends on subjective evaluation of the manager, or ● How performance gets noticed largely depends on subjective evaluation of the manager. 0, otherwise.	12, 13
Organization size	Ordinal	Classification based on the number of employees in the organization: 10 or less = 0, 11 to 50 = 1, 51 to 250 = 2, 250 to 1,000 = 3, 1,001 to 5,000 = 4, More than 5,000 = 5	7

Hierarchical level	Ordinal	Classification based on current position in the hierarchy: More than 6 levels below the CEO = 0, 4-6 levels below the CEO (or equivalent) = 1, 2-3 levels below the CEO (or equivalent) = 2, 1 level below the CEO (or equivalent) = 3	5
Feedback system	Binary	1, if a firm has an employee performance feedback system in place. 0, otherwise.	16
Performance transparency	Ordinal	Classification based on how easy is it to transparently and accurately attribute each individual's contribution towards overall team output for employee's performance evaluation: Very difficult = 0, Somewhat difficult = 1, Somewhat easy = 2, Very easy = 3	17
360 system exists	Binary	1, if the organization uses a 360-degree feedback system. 0, otherwise.	18
360 is enforced	Binary	1, if the 360-degree feedback system is effective in leading to fair performance evaluations. 0, if a 360-degree feedback system does not exist or employees perceive it to be just a formality.	19
Referrals based hiring	Ordinal	Classification based on the extent to which the organization relies on referrals-based hiring. Never = 0, Rarely = 1, Sometimes = 2, Often = 3, Always = 4	20

Manager's manager monitors	Ordinal	Classification based on the extent to which it is common for a manager's manager to make an effort to be fully aware of the abilities and efforts of subordinates without relying on their direct manager's report: Never = 0, Rarely = 1, Sometimes = 2, Often = 3, Always = 4	26
Culture and belonging	Ordinal	Classification based on how strong the sense of culture and belonging to the organization is: Extremely weak = 0, Somewhat weak = 1, Neither strong nor weak = 2, Somewhat strong = 3, Very strong = 4	35
Comfortably talk to colleagues	Ordinal	Classification based on the extent to which colleagues feel comfortable talking about problems and disagreements: Extremely uncomfortable = 0, Moderately uncomfortable = 1, Neutral = 2, Moderately comfortable = 3, Extremely comfortable = 4	39
Comfortably ask colleagues	Ordinal	Classification based on the extent to which colleagues feel checking with each other if they have questions about the right way to do something: Extremely uncomfortable = 0, Moderately uncomfortable = 1, Neutral = 2, Moderately comfortable = 3, Extremely comfortable = 4	40

Being able to speak one's mind	Ordinal	Classification based on the ease with which it is to speak one's mind in the organization: Very difficult = 0, Somewhat difficult = 1, Nor easy, neither difficult = 2, Somewhat easy = 3, Very easy = 4	41
Collaborative colleagues	Ordinal	Classification based on the extent to which the environment in the organization is collaborative or competitive: Highly competitive = 0, Somewhat competitive = 1, Neither collaborative nor competitive = 2, Somewhat collaborative = 3, Highly collaborative = 4	37
Effort are recognized	Ordinal	*"No one on this team would deliberately act in a way that undermines my efforts."* Strongly disagree = 0, Disagree = 1, Neither agree nor disagree = 2, Agree = 3, Strongly agree = 4	42
Skills are valued	Ordinal	*"The people in our organization value others' unique skills and talents."* Strongly disagree = 0, Disagree = 1, Neither agree nor disagree = 2, Agree = 3, Strongly agree = 4	43

Keeping cards close to chest	Ordinal	*"Keeping your cards close to your chest is the best way to get ahead in this organization"* Strongly disagree = 0, Disagree = 1, Neither agree nor disagree = 2, Agree = 3, Strongly agree = 4	38
Organization demographically diverse	Ordinal	Star rating on a scale of 1 to 5 based on the extent to which the high demographic diversity is observed in the organization along dimensions such as age, gender, religion, sexual orientation, national origin, etc.	44
Organization intellectually diverse	Ordinal	Star rating on a scale of 1 to 5 based on the extent to which the high intellectual diversity is observed in the organization along dimensions such as academic, industrial and experiential background of employees in a company.	45
Disregarding outgroup perspective	Ordinal	*"People in this organization sometimes disregard the perspective of others just because they are different in terms of race, ethnic origin, religion, or gender etc."* Strongly disagree = 0, Somewhat disagree = 1, Neither agree nor disagree = 2, Somewhat agree = 3, Strongly agree = 4	36
Peers support based on shared identity	Ordinal	Classification based on the level of support **peers** provide to each other based on shared identity such as race, ethnic origin, religion, or gender: Not supportive = 0, Rarely supportive = 1, Indifferent = 2, Often supportive = 3, Highly supportive = 4	46

Managers support based on shared identity	Ordinal	Classification based on the level of support **managers** provide to subordinates based on shared identity such as race, ethnic origin, religion, or gender: Not supportive = 0, Rarely supportive = 1, Indifferent = 2, Often supportive = 3, Highly supportive = 4	47

Appendix E

Correlation matrix for all variables used in the analysis. The table shows the correlation between variables used in empirical analysis. Panel A shows the correlation of all features with organizational features and management control systems. Panel B shows the correlation of all features with features of organizational culture. Detailed description of each variable and its numerical construction can be found in Appendix D.

Panel A

	TDS	RPE	RPE discretion	Org size	Hierarchical level	Feedback system	Performance transparency	360 system exists	360 is enforced	Referrals based hiring	Manager's manager monitors
TDS	1.00	0.04	0.19	0.09	-0.03	-0.01	-0.18	0.05	-0.16	0.00	-0.09
RPE	0.04	1.00	0.39	0.11	-0.04	0.08	-0.04	0.08	0.09	0.12	0.03
RPE discretion	0.19	0.39	1.00	0.05	-0.09	0.04	-0.13	-0.07	-0.19	-0.04	-0.11
Org size	0.09	0.11	0.05	1.00	-0.62	0.34	-0.14	0.32	0.15	0.02	-0.08
Hierarchical level	-0.03	-0.04	-0.09	-0.62	1.00	-0.21	0.09	-0.19	-0.03	0.00	0.05
Feedback system	-0.01	0.08	0.04	0.34	-0.21	1.00	-0.03	0.24	0.12	-0.02	-0.04
Performance transparency	-0.18	-0.04	-0.13	-0.14	0.09	-0.03	1.00	0.05	0.13	0.07	0.23
360 system exists	0.05	0.08	-0.07	0.32	-0.19	0.24	0.05	1.00	0.59	0.01	0.11
360 is enforced	-0.16	0.09	-0.19	0.15	-0.03	0.12	0.13	0.59	1.00	0.05	0.11
Referrals based hiring	0.00	0.12	-0.04	0.02	0.00	-0.02	0.07	0.01	0.05	1.00	0.06
Manager's manager monitors	-0.09	0.03	-0.11	-0.08	0.05	-0.04	0.23	0.11	0.11	0.06	1.00
Culture and belonging	-0.20	0.03	-0.08	-0.02	0.11	-0.07	0.18	0.04	0.20	0.16	0.18
Comfortably talk to colleagues	-0.26	-0.01	-0.16	-0.13	0.22	-0.02	0.21	-0.04	0.10	0.05	0.16
Comfortably ask colleagues	-0.27	0.02	-0.09	-0.05	0.12	0.00	0.21	0.05	0.16	0.09	0.19
Being able to speak one's mind	-0.37	0.04	-0.17	-0.10	0.13	0.01	0.26	-0.01	0.12	0.10	0.27
Collaborative colleagues	-0.31	0.01	-0.02	-0.20	0.19	-0.08	0.16	0.06	0.19	0.06	0.17
Effort are recognized	-0.31	-0.05	-0.11	-0.13	0.08	-0.03	0.23	0.02	0.10	0.03	0.19
Skills are valued	-0.34	0.01	-0.21	-0.07	0.08	-0.02	0.31	0.08	0.15	0.12	0.23
Keeping cards close to chest	0.37	0.00	0.18	0.22	-0.26	0.00	-0.17	-0.06	-0.19	0.01	-0.16
Organization demographically diverse	-0.14	0.00	-0.15	0.12	-0.08	0.03	0.05	0.00	0.11	0.08	0.18
Organization intellectually diverse	-0.18	0.05	-0.07	0.03	-0.08	-0.02	0.08	0.07	0.13	0.06	0.02
Disregarding outgroup perspective	0.34	0.08	0.21	0.13	-0.11	0.02	-0.10	-0.03	-0.15	-0.07	-0.07
Peers support based on shared identity	-0.17	0.02	-0.04	0.06	-0.06	0.01	0.12	0.10	0.13	0.13	0.07
Managers support based on shared identity	-0.18	0.01	-0.11	0.04	-0.01	-0.02	0.17	0.12	0.15	0.19	0.14

Panel B

	Culture and belonging	Comfortably talk to colleagues	Comfortably ask colleagues	Being able to speak one's mind	Collaborative colleagues	Effort are recognized	Skills are valued	Keeping cards close to chest	Organization demographically diverse	Organization intellectually diverse	Disregarding outgroup perspective	Peers support based on shared identity	Managers support based on shared identity
TDS	-0.20	-0.26	-0.27	-0.37	-0.31	-0.31	-0.34	0.37	-0.14	-0.18	0.34	-0.17	-0.18
RPE	0.03	-0.01	0.02	0.04	0.01	-0.05	0.01	0.00	0.00	0.05	0.08	0.02	0.01
RPE discretion	-0.08	-0.16	-0.09	-0.17	-0.02	-0.11	-0.21	0.18	-0.15	-0.07	0.21	-0.04	-0.11
Org size	-0.02	-0.13	-0.05	-0.10	-0.20	-0.13	-0.07	0.22	0.12	0.03	0.13	0.06	0.04
Hierarchical level	0.11	0.22	0.12	0.13	0.19	0.08	0.08	-0.26	-0.08	-0.08	-0.11	-0.06	-0.01
Feedback system	-0.07	-0.02	0.00	0.01	-0.08	-0.03	-0.02	0.00	0.03	-0.02	0.02	0.01	-0.02
Performance transparency	0.18	0.21	0.21	0.26	0.16	0.23	0.31	-0.17	0.05	0.08	-0.10	0.12	0.17
360 system exists	0.04	-0.04	0.05	-0.01	0.06	0.02	0.08	-0.06	0.00	0.07	-0.03	0.10	0.12
360 is enforced	0.20	0.10	0.16	0.12	0.19	0.10	0.15	-0.19	0.11	0.13	-0.15	0.13	0.15
Referrals based hiring	0.16	0.05	0.09	0.10	0.06	0.03	0.12	0.01	0.08	0.06	-0.07	0.13	0.19
Manager's manager monitors	0.18	0.16	0.19	0.27	0.17	0.19	0.23	-0.16	0.18	0.02	-0.07	0.07	0.14
Culture and belonging	1.00	0.40	0.31	0.39	0.36	0.25	0.45	-0.28	0.27	0.17	-0.33	0.20	0.21
Comfortably talk to colleagues	0.40	1.00	0.46	0.48	0.27	0.31	0.36	-0.43	0.20	0.09	-0.32	0.19	0.15
Comfortably ask colleagues	0.31	0.46	1.00	0.42	0.23	0.30	0.40	-0.40	0.17	0.11	-0.26	0.27	0.31
Being able to speak one's mind	0.39	0.48	0.42	1.00	0.38	0.37	0.46	-0.43	0.25	0.18	-0.41	0.23	0.28
Collaborative colleagues	0.36	0.27	0.23	0.38	1.00	0.28	0.41	-0.47	0.18	0.26	-0.31	0.18	0.17
Effort are recognized	0.25	0.31	0.30	0.37	0.28	1.00	0.51	-0.36	0.19	0.24	-0.31	0.24	0.23
Skills are valued	0.45	0.36	0.40	0.46	0.41	0.51	1.00	-0.43	0.31	0.37	-0.46	0.31	0.37
Keeping cards close to chest	-0.28	-0.43	-0.40	-0.43	-0.47	-0.36	-0.43	1.00	-0.17	-0.16	0.45	-0.23	-0.16
Organization demographically diverse	0.27	0.20	0.17	0.25	0.18	0.19	0.31	-0.17	1.00	0.47	-0.35	0.18	0.20
Organization intellectually diverse	0.17	0.09	0.11	0.18	0.26	0.24	0.37	-0.16	0.47	1.00	-0.23	0.29	0.29
Disregarding outgroup perspective	-0.33	-0.32	-0.26	-0.41	-0.31	-0.31	-0.46	0.45	-0.35	-0.23	1.00	-0.22	-0.25
Peers support based on shared identity	0.20	0.19	0.27	0.23	0.18	0.24	0.31	-0.23	0.18	0.29	-0.22	1.00	0.62
Managers support based on shared identity	0.21	0.15	0.31	0.28	0.17	0.23	0.37	-0.16	0.20	0.29	-0.25	0.62	1.00

Appendix F

Summary of "Making sense of sensitivity: Extending omitted variable bias"

By Carlos Cinelli and Chad Hazlett[3]

We follow the methodology suggested by Cinelli and Hazlett (2020a) to address the following three questions:

1) "How strong would an unobserved confounder (or a group of confounders) have to be to change a research conclusion?
2) In a worst-case scenario, how robust are the results to all unobserved confounders acting together, possibly non-linearly?
3) How strong would confounding need to be, relative to the strength of observed covariates, to change the answer by a certain amount?"[4]

The methodology relies on the omitted variable bias (OVB) framework which assumes that a full model in an ideal world without any confounding errors would be as follows:

$$Y = \hat{\tau}D + \mathbf{X}\hat{\beta} + \hat{\gamma}Z + \hat{\epsilon}_{\text{full}} \qquad (1)$$

where Y is the outcome of interest, D is the main treatment variable, **X** represents a set of covariates including the constant and Z is the unobserved variable, whose omission leads to endogeneity concerns. Thus, the omission of Z from the full model leads to the following restricted model:

[3] Cinelli, C. and Hazlett, C., 2020. Making sense of sensitivity: Extending omitted variable bias. *Journal of the Royal Statistical Society Series B: Statistical Methodology*, *82*(1), pp.39-67.
[4] See Cinelli, Ferwerda, and Hazlett (2022, working paper). "sensemakr: Sensitivity Analysis Tools for OLS in R and Stata."

$$Y = \hat{\tau}_{\text{res}} D + \mathbf{X}\hat{\beta}_{\text{res}} + \hat{\epsilon}_{\text{res}} \tag{2}$$

Define bias in the restricted model as the difference in the point estimate of the coefficient of interest of the full model and that of the restricted model as follows:

$$\widehat{\text{bias}} \;:=\; \hat{\tau}_{\text{res}} \;-\; \hat{\tau}.$$

Cinelli and Hazlett (2020a) obtain the following expression for bias and standard error of the point estimates:

$$|\widehat{\text{bias}}| = \widehat{\text{se}}(\hat{\tau}_{\text{res}}) \sqrt{\frac{R^2_{Y\sim Z|D,\mathbf{X}}\; R^2_{D\sim Z|\mathbf{X}}}{1 - R^2_{D\sim Z|\mathbf{X}}}(\text{df})} \tag{3}$$

$$\widehat{\text{se}}(\hat{\tau}) = \widehat{\text{se}}(\hat{\tau}_{\text{res}}) \sqrt{\frac{1 - R^2_{Y\sim Z|D,\mathbf{X}}}{1 - R^2_{D\sim Z|\mathbf{X}}} \left(\frac{\text{df}}{\text{df} - 1}\right)}. \tag{4}$$

where:

df: degrees of freedom of the restricted model;

$R^2_{Y\sim Z|D,X}$: The proportion of the residual variance of the outcome attributed to the omitted variable, after accounting for the variance explained by the observed covariates, including the treatment variable;

$R^2_{D\sim Z|X}$: The proportion of the residual variance of the treatment attributed to the omitted variable, after accounting for the variance explained by the observed covariates.

Cinelli and Hazlett (2020a) find that by assuming hypothetical values for $R^2_{Y\sim Z|D,X}$ and $R^2_{D\sim Z|X}$, one can figure out the strength of the omitted variable Z that will reduce the point estimate to the point of insignificance, or any other threshold for that matter. In other words, (3) and (4) allow researchers to estimate the bias resulting from omitted variable Z that can take the value and the statistical significance of the point estimate to a desired threshold. Thus, one can test the robustness of the causal relationship between the treatment variable (D) and the outcome variable (Y) by performing a sensitivity analysis that relies on varying the hypothesized strength of a potential confounder (Z).

Additionally, Cinelli and Hazlett (2020a) propose two sensitivity statistics that can help determine the robustness of the causal relationship to unobserved confounding.

1) $R^2_{Y\sim D|X}$ shows what proportion of the residual variance of the outcome is explained by the treatment, after taking into account that explained by observed covariates. Holding $R^2_{Y\sim Z|D,X} = 1$ constant, such that the unobserved confounder explains all of the residual variance of the outcome, the partial $R^2_{D\sim Z|X}$ that explains the residual variance of the treatment with the unobserved confounder must be at least as much as $R^2_{Y\sim D|X}$ (since the outcome has already been entirely explained by the confounder). Thus, $R^2_{Y\sim D|X}$ allows testing for the robustness of the point estimate to extreme confounding.
2) $RV_{q,\alpha}$ is the robustness value that accounts for sampling uncertainty. Any unobserved confounder would need to explain at least $RV_{q,\alpha}$% of the residual variance of *both* the treatment and the outcome to be able to bring down the lower bound of the (1-α)% confidence interval of the coefficient estimate to zero.

Using observed covariates, this framework derives bounds on the strength of confounding to estimate the maximum bias a hypothetical confounder could cause. This allows researchers to evaluate if a confounder as strong as an observed covariate can alter the research conclusion.

In the main text, we apply this sensitivity analysis framework to test the robustness of our findings on TDS. By varying the hypothesized strength of potential confounders, we determine the robustness of the causal relationship between organizational features and TDS.

Appendix G: Summary of findings.

Category	Description	Findings	Reference
Incentive Systems			
RPE	RPE itself is not associated with TDS.	Not Supported	Table 4, Model (1)
Managerial discretion in RPE	Subjective managerial discretion under RPE increases the likelihood of TDS.	Supported	Table 4, Model (2)
Organizational Features			
Organization size	TDS is positively associated with organization size.	Supported	Table 4, Model (3)
Hierarchical level	Being at a particular hierarchical level does not impact the incidence of TDS.	Not Supported	Table 4, Model (4)
Management Control Systems (MCS)			
Feedback system	Implementing a feedback system does not reduce TDS.	Not Supported	Table 5, Model (1)
Performance transparency	Accurate and transparent performance attribution mitigates TDS.	Supported	Table 5, Model (2)
360-Degree feedback system exists	Having a 360-degree feedback system alone is not sufficient to mitigate TDS.	Not Supported	Table 5, Model (3)
Effective enforcement of 360-degree feedback	Effective enforcement of 360-degree feedback significantly reduces TDS.	Supported	Table 5, Model (4)
Referrals-based hiring	Referrals-based hiring does not significantly impact TDS.	Not Supported	Table 5, Model (5)
Involvement of higher-level managers	Involvement of a manager's manager in performance evaluation does not significantly reduce TDS.	Not Supported	Table 5, Model (6)
Organizational Culture			
Culture and belonging	A strong sense of culture and belonging to the organization reduces TDS.	Supported	Tables 7 and 8
Comfortably talk to colleagues	Colleagues feeling comfortable talking about problems and disagreements reduces TDS.	Supported	Tables 7 and 8
Being able to speak one's mind	Ease of being able to speak one's mind in the organization reduces TDS.	Supported	Tables 7 and 8
Keeping cards close to chest	Cultures that promote siloed work environments exacerbate TDS.	Supported	Tables 7 and 8