Improving Workplace Climate in Large Corporations: A Clustered Randomized Intervention

Sule Alan
Gozde Corekcioglu
Matthias Sutter

MAX PLANCK SOCIETY

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September 2021

This version: August 2022

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Sule Alan[†], Gozde Corekcioglu[‡], Matthias Sutter[§]

Abstract

We evaluate the impact of a training program aimed at improving the relational atmosphere in the workplace. The program encourages prosocial behavior and the use of professional language, focusing primarily on leaders' behavior and leader-subordinate interactions. We implement this program using a clustered randomized design involving over 3000 headquarters employees of 20 large corporations in Turkey. We evaluate the program with respect to employee separation, pro and antisocial behavior, the prevalence of support networks, and perceived workplace climate. We find that treated firms have a lower likelihood of employee separation at the leadership level, fewer employees lacking professional and personal help, and denser, less segregated support networks. We also find that employees in treated corporations are less inclined to engage in toxic competition, exhibit higher reciprocity toward each other, and report higher workplace satisfaction and a more collegial environment. The program's success in improving leader-subordinate relationships emerges as a likely mechanism to explain these results. Treated subordinates report higher professionalism and empathy in their leaders and are more likely to consider their leaders as professional support providers.

JEL Codes: C93, M14, M53

Keywords: Workplace climate; relational atmosphere; leadership quality; employee separation

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[†]European University Institute, Bilkent University, salancrossley@gmail.com

[‡]Kadir Has University, gozde.corekcioglu@khas.edu.tr

[§]Max Planck Institute for Research on Collective Goods, University of Cologne, University of Innsbruck and IZA Bonn, matthias.sutter@coll.mpg.de

1 Introduction

Workplace climate, referring to the quality of the workplace and the relational atmosphere as perceived by employees, is an essential factor for the long-term success of corporations (Barney, 1986; Boyce et al., 2015; Guiso, Sapienza and Zingales, 2015; Martinez et al., 2015; Gartenberg, Prat and Serafeim, 2019). The benefits of a positive workplace climate are many. For employees, these benefits include psychological well-being, engagement, and motivation, which is ultimately reflected in their performance (Ostroff, 1992; Judge et al., 2001; Srivastava et al., 2018; Guadalupe, Kinias and Schloderer, 2020). For firms, a positive relational atmosphere implies employee retention, productivity, profitability, and innovation (Edmans, 2011; Boyce et al., 2015; Guiso, Sapienza and Zingales, 2015; Graham et al., 2016, 2017). Despite these benefits, dysfunctional workplace climates characterized by toxic relational dynamics and low employee satisfaction are prevalent and impose tremendous costs on firms worldwide. According to a 2019 report from the Society for Human Resource Management (SHRM), 20% of U.S. employees quit their jobs in the last five years due to the toxicity of workplace relationships. Toxicity in the relational atmosphere in a workplace is typically characterized by the prevalence of antisocial behavior such as bullying, mobbing, gossiping, and disrespectful language among colleagues. These undesirable behaviors tend to emerge in competitive work environments where communication is poor and individual performance is difficult to quantify (Akella and Lewis, 2019).

Leaders have a vital role in shaping the relational atmosphere of the workplace (Van den Steen, 2010; Inceoglu et al., 2018; Hoffman and Tadelis, 2021). This is clearly indicated in the 2019 report of SHRM, which reports that 76% of employees believe their manager sets the relational culture of their workplace, and 58 percent of employees who quit because of a poor workplace climate blame their managers.[1] Leaders are in a prime position to create an environment where interactions are prosocial, language is professional, and teamwork is championed; or alternatively, an environment where the communication is poor, the language is toxic, and interactions resemble zero-sum games (Bloom and Van Reenen, 2007; Bruhn, Karlan and Schoar, 2010; Bloom et al., 2013; Sharma and Tarp, 2018; Bandiera et al., 2020).[2] Employees' perceptions of workplace quality and their interactions with their colleagues

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[1]See https://pmq.shrm.org/wp-content/uploads/2020/07/SHRM-Culture-Report_2019-1.pdf

[2]There is an established literature on the importance of teamwork in corporations (Lindbeck and Snower, 2000; Hamilton, Nickerson and Owan, 2003), and some recent work showing that teamwork skills are highly valuable in corporations (Weidmann and Deming, 2020).

are often shaped by the relational culture their leaders establish. Employees who work in environments where they face regular mistreatment, disrespect, and condescending language are likely to adopt such behaviors as norms, pushing the firm's relational climate deeper into a dysfunctional state. In such circumstances, taking transformative actions may become a policy imperative.

This paper evaluates one such action, an unconventional workplace climate improvement program, offered to white-collar professionals in large corporations in Turkey. The program aims to improve the relational atmosphere in the workplace by encouraging prosociality and respectful language in professional relationships, focusing primarily on leaders' behavior and leader-subordinate interactions. The training comprises several modules implemented as a series of online workshops, followed by an 8-week project development phase monitored by a professional implementing partner. The implementing partner is a consulting firm established by burned-out professionals who offer training on relational culture to large corporations. The main concepts covered in the program are effective and peaceful communication, prosociality and professional support. The partner uses its extensive first-hand experience with highly destructive relationships in competitive corporations and employs unconventional methods to deliver the program. These include creative drama, active role-playing, vulnerability exercises, and imagery. An essential component of the program is a closely monitored 8-week follow-up, where participants develop projects focusing on prosocial interactions and propose them to their top executives.

We evaluate this program using a sample of 20 large corporations in Turkey operating in the energy, chemistry, defense, finance, construction, and textile sectors. All 20 participating corporations are major players in their respective sectors, and some are multinationals operating in Turkey.[3] Except for finance firms, these corporations employ a large blue-collar workforce. Our study concerns the white-collar professionals who work within the company headquarters. After securing the firms' cooperation, we collected rich baseline data from their employees from all ranks by visiting company headquarters in person in Fall 2019. The program was offered to randomly selected 10 corporations after baseline. Our initial plan to implement the program in person in early 2020 was interrupted by the COVID-19 pandemic. After deliberations with the treatment firms, we decided to implement the program using online tools throughout the fall of 2020 and the spring of 2021. We conducted our endline in Summer 2021. The total number of professionals involved in the evaluation is over 3000,

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[3]The relative market shares of the participating companies within their sectors range from 2.5% to 51%.

about 17% of whom hold a leadership (managerial) position.

The program is evaluated with respect to a wide range of outcomes that characterize the relational atmosphere and perceived workplace quality of a firm. Our toolkit contains administrative records of employee separation, incentivized games, social network elicitation templates, and a detailed survey inventory. We implemented incentivized games to elicit prosocial and antisocial behaviors. Specifically, we measured the degree of toxic competition among colleagues using a performance sabotage game, trust and reciprocity using a trust game, and a sense of fairness using the ultimatum game. We elicited social networks to measure the prevalence of support at the department level. For this, we asked all employees to nominate colleagues from whom they receive (i) professional (work-related) support and (ii) support in personal matters. Using survey items, we constructed indices to capture workplace satisfaction, perceptions of meritocracy in the firm, collegiality amongst employees, and descriptive and prescriptive behavioral norms. Finally, we additionally measured pandemic-induced social isolation feelings at endline, as the program implementation and endline unintentionally coincided with the COVID-19 pandemic, where many firms switched to hybrid work arrangements.

We find that the program has a substantial impact on the likelihood of employee separation, mainly at the leadership level. The employee separation rates were relatively low between November 1, 2020, and June 30, 2021 (the implementation period). In addition to the COVID-19 pandemic, this was partly due to a nationwide firing ban imposed by the Turkish government on April 1, 2020, and lifted on July 1, 2021. Only 5% of employees in control firms quit their jobs within the implementation period. We find that the intervention reduces the propensity to quit at the leadership level by 4 percentage points within the implementation period. We also find suggestive evidence that the program lowers employee separation at the subordinate level within the 5-month post-ban period.

We also find that the program significantly increases prosociality and lessens antisocial tendencies in the workplace. Treated professionals are significantly less inclined to sabotage their colleagues' performance for their own gain in a competitive game. Specifically, treated professionals used 12% less sabotage endowment to destroy their opponents' performance than the control. While we estimate no significant improvement in interpersonal trust, we find that treated professionals reciprocate their colleagues' trust more generously (by about 10%) than those in the control firms. At the departmental level, the program significantly lowers the proportion of employees lacking support and makes intra-department support

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networks denser and less segregated across cohorts.

We then show that the program successfully improves perceived workplace quality and relational atmosphere within departments. We estimate that the program improves workplace satisfaction by 0.27 standard deviations and perceived meritocratic values by 0.25 standard deviations. We also estimate a large and statistically significant improvement in the perceived collegiality in treated departments (0.21 standard deviations). We estimate null effects on perceived workplace quality and relational dynamics for the leader sample, indicating that improvements in these outcomes are driven by the subordinates.

We show that the program's positive effects likely stem from its success in improving leaders' behavior and leader-subordinate relationships. We find that the treated subordinates report 0.21 standard deviations higher professionalism and 0.22 standard deviations higher empathy in their leaders. Consistent with these results, treated subordinates are also 8 percentage points more likely to consider their leader as their primary professional support provider, representing a 13% increase relative to the control group. Contrary to these results, we find that treated leaders are significantly less likely to consider their own leaders as professional support providers. This large (28%) negative effect is accompanied by the finding that treated leaders are 19% more likely than untreated leaders to consider their peers and subordinates as primary support providers. These effects are driven by the leaders whose leaders did not participate in the study. This finding is consistent with our claim that the program generated positive effects by improving leader-subordinate relationships.

Our paper offers two main contributions. First, it represents the first clustered randomized controlled trial targeting the relational atmosphere in large corporations. We provide rigorous evidence on the effectiveness of an innovative training program that focuses exclusively on the quality of interactions between educated professionals in highly competitive work environments.[4] Our results suggest that targeted programs focusing on prosociality in professional interactions can improve the relational atmosphere of the workplace and that changing the behavior of leaders is key to achieving this. The second contribution pertains to the toolkit we used to evaluate this program. We designed a rich inventory to measure

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[4]Bruhn, Karlan and Schoar (2018) evaluate a management consulting intervention using small and medium enterprises in Mexico. Their focus is on firm performance. Azulai et al. (2020) evaluate the effectiveness of a motivational work process improvement program targeting bureaucrats in Ghana's Civil Service. Chang et al. (2019) test whether diversity training at a global organization changes attitudes and behavior toward women in the workplace. Our paper focuses exclusively on improving the relational climate in competitive corporations via a clustered randomized design and using outcomes measured in previously unavailable details.

outcomes that characterize the workplace climate. By combining administrative records, incentivized games, cognitive tests, and rich survey tools, we collected previously unavailable data from a large number of corporate professionals across different firms and sectors and used them as outcomes to evaluate a program. Furthermore, our results can be generalized to other contexts. Competitive workplaces with a toxic relational atmosphere are ubiquitous not only in the corporate world but also in the public sector and even in academia (Shallcross, Sheehan and Ramsay, 2008; Wu, 2018; Dupas et al., 2021). The results of this study imply that innovative behavioral interventions can go a long way in building a more positive relational environment in workplaces and eliminating antisocial interactions.

Our paper contributes to several strands of literature. In the last decade, there has been an increasing interest in field experiments on firms to understand the effect of different policies and interventions on firm productivity.[5] One branch of this literature looks at the role of managerial capital and leadership styles, as well as manager personality, in predicting firm performance (Bertrand and Schoar, 2003; Bloom and Van Reenen, 2007; Bruhn, Karlan and Schoar, 2010; Bloom et al., 2013; Lazear, Shaw and Stanton, 2015; Sharma and Tarp, 2018; Bandiera et al., 2020). There are a number of field experiments on the effects of management practices on employee productivity (Blader, Gartenberg and Prat, 2020; Gosnell, List and Metcalfe, 2020). Another branch deals with building human capital, using either worker training or the training of managers (Bruhn, Karlan and Schoar, 2018). Few studies investigate the effect of non-traditional employee training such as soft-skills training on firm-level productivity (Campos et al., 2017; Ubfal et al., 2019; Azulai et al., 2020). Our study contributes to this literature by providing results from a clustered randomized trial focusing on the relational environment in large corporations from a large set of different industry sectors.

Our paper also contributes to the literature on the importance of social skills in the labor market (Kosse and Tincani, 2020). Deming (2017) shows that the premium on these skills has been rising in the last few decades and Weidmann and Deming (2020) demonstrates that social skills improve team performance. We complement this new and growing literature by showing how social skills can be fostered at the intensive margin via innovative training programs and by showing how they affect workplace climate, social networks, and separation rates in large corporations. We also contribute to extensive literature that shows the

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[5]For example, in a recent study, Breza, Kaur and Shamdasani (2018) explores the productivity implications of relative pay concerns by conducting an experiment in an Indian firm. See also Quinn and Woodruff (2019) for a general review of experiments in firms.

importance of leadership quality and leadership styles in large corporations (Bolton, Brunnermeier and Veldkamp, 2013; Bandiera et al., 2020; Dessein and Santos, 2021; Hoffman and Tadelis, 2021). This literature often emphasizes the relationship between strong leadership and firm performance (Bertrand and Schoar, 2003; Bennedsen et al., 2007; Kaplan, Klebanov and Sorensen, 2012; Lazear, Shaw and Stanton, 2015; Bandiera et al., 2020) or worker productivity (Heinz et al., 2020).[6] Emerging literature highlights the role of leaders in shaping corporate culture as measured by beliefs and norms (d'Adda et al., 2017; Gächter and Renner, 2018), employee motivation (Kajackaite and Sliwka, 2020), creativity (Amabile et al., 2004), and well-being (Inceoglu et al., 2018). For example, Cai and Wang (2022) investigates the relationship between leadership and workplace climate. They explore how providing worker feedback to managers affects worker separation and self-reported happiness. By showing the importance of leadership and, in particular, leader-subordinate relationships in shaping the relational environment of firms causally, we complement these studies.

The rest of the paper is organized as follows. Section 2 provides information on the context, intervention content and evaluation design. Section 3 describes our primary outcomes and how we collected them. Our data and results are presented and discussed in Section 4. In Section 5, we explore potential mechanisms. We conclude in Section 6.

2 Background

2.1 Context for the Evaluation

The idea of this study was conceived during informal conversations with corporate professionals in Turkey in Spring 2019. These professionals repeatedly highlighted relational issues as primary reasons for early retirement, burnout, deteriorating mental well-being, or continuously being on the lookout for another job. We followed this up and conducted a more formal qualitative study to gain a deeper understanding of these relational issues. Using a professional network, we sent an online survey to 80 professionals of different ranks and years of experience. We asked them to state the most challenging problems a corporate professional faces when working in large and competitive corporations. Sixty-eight professionals responded to our short survey. Among these, 38 were in full-time employment in large firms, and 30 had left corporate life to do something else or retired. Exactly 50% of these profes-

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[6]Friebel et al. (2022), Friebel, Heinz and Zubanov (2022) and Hoffman and Tadelis (2021) show that managers are instrumental in reducing personnel separation rate.

sionals placed "toxic relationships and antisocial behavior" in the top 3 problems they faced. In addition, about 47% put "difficult leaders", 34% the lack of meritocratic values, 32% long hours, and 31% low pay in the top 3. We provide the exact wording of these questions and the detailed graphical results in the Online Appendix B; See Figure B.1.

Motivated by these results, we started reaching out to large corporations operating in Turkey. Of the 30 corporations we contacted, we made a formal agreement with 20 of them.[7] These 20 corporations are significant players in the energy, chemistry, defense, finance, construction, and textile sectors, and some are well-known multinationals operating in Turkey. Recruitment of these corporations involved multiple meetings with their CEOs, HR officials, compliance departments, and, occasionally, their foreign headquarters. Upon agreement, each recruited firm signed a data confidentiality agreement and a research collaboration protocol with Kadir Has University. In recruiting these firms, we made sure that the participating firm was a significant player in its sector in terms of market share. We also made every effort to recruit similar firms in a given sector. For example, after recruiting a prominent firm in a sector, we made sure we also recruited at least one of their major competitors.

Finally, we made sure that participating firms had understood and accepted the condition that, while we promised to offer the training program to all participating firms, we could not say when, within a given one-year window, a given firm would have access to the program. The latter criterion implied a phase-in design and was applied to ensure that, after collecting our baseline data, we could randomize the firms into treatment and control and offer the program to the former immediately while holding the latter until after endline.

The study was offered only to the white-collar employees working in the company headquarters. Participation in the study was voluntary. The general information about the program was provided via material prepared by the research team. Potential participants were informed about the academic nature of the study and the fact that no personal data would ever be shared with third parties, and data would be processed in anonymized form only for research purposes.[8] Out of 4329 eligible employees, about 71% of white-collar em-

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[7]Three firms allowed us to collect baseline data but did not want to be part of the program. Therefore, while collecting baseline data from 23 firms, we conducted our randomization, after baseline data collection, with the remaining 20 corporations. We stopped at 20 corporations due to logistical reasons. It is important to note that we, not our partner, recruited these companies. Our partner had a prior relationship with only one company in our sample. This company's blue-collar workers received completely unrelated training (workplace safety) from our partner years before our study.

[8]When soliciting participation in the study, we gave minimal information on the content of the training.

ployees in company headquarters signed up (gave consent) for the study, 70% from control companies, 72% from treatment companies. The non-participation in the study was generally at the departmental level. Some departments could not participate in the study due to the nature of their departmental tasks, for example, having to be at the desk during stock market sessions for finance firms. Moreover, some small departments were considered low priority for this study by the firms themselves and excluded at the outset.

2.2 Evaluation Design

We collected rich baseline data by visiting all companies in person in the fall of 2019. For this, we visited each firm, gathered employees, department by department, in meeting rooms, and collected our data. An average baseline data collection session lasted about 3 hours. Each session started with a brief introduction and signing individual consents.[9] We first played incentivized games to elicit social and economic preferences (lab-in-the-field experiments). Then, we conducted cognition tests, followed by a detailed social network elicitation. Finally, participants were directed to a detailed survey. Preventing participants' communication with other departments for the incentivized games was the most important logistical challenge we faced. To overcome this, we conducted our incentivized experiments in parallel, department by department, using different meeting rooms. Participants used their smartphones to enter our data collection platforms, following our instructions step by step.

After baseline data collection, we randomly assigned 10 corporations to treatment and 10 to control. Our initial plan was to implement the intervention in early 2020. Unfortunately, this plan was disrupted by the COVID-19 pandemic. After waiting until Fall 2020, hoping that business would go back to normal, we realized that this expectation was too optimistic and decided to implement the program by designing an online training platform. Our switch to the online platform was welcomed by our implementing partner and all our participating companies. We then implemented the program between November 1, 2020, and June 30, 2021.

The training program was open to all white-collar employees in the treated firms' head-

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The employees were informed that some reputable academics would run a project about workplace climate. They were also informed that the project would involve intensive data collection and, eventually, a training activity.

[9]Designated HR coordinators informed all white-collar workers prior to our visit, and only those who wanted to participate in the study came to the meeting rooms. We ensured that companies informed their workers that the participation was voluntary and that not joining would not have any consequences for them.

quarters. However, we particularly encouraged leaders to participate in the training. We define the term "leader" broadly in this study. Anybody responsible for leading a group of professionals is considered a leader. Since most corporations have a hierarchical management structure, most leaders have leaders themselves. We also encouraged subordinates we found central in their networks at baseline to take part in the training. The network centrality was established using professional in-degree ties (nominations received for professional help). We labeled the subordinates with more in-degree ties than a median leader as a "de facto leader". All treated companies sent extra messages and reminders to leaders and de facto leaders to encourage them to participate in the training activities.

About 40% of the study participants in treated headquarters took part in the training program. While only 15% of the employees hold an official leadership title in treated companies, the representation of official leaders in training activities was 25%. The remaining 75% of the training participants were composed of subordinates, 29% of whom stand out as de facto leaders. When we compare the baseline characteristics of the training participants with non-participants in the treated firms, we observe that those who took part in the activities were slightly older, more likely to be married, had a higher IQ and emotional intelligence score, and were more cooperative on average.

We collected endline data from participating employees in 20 companies in Summer 2021, using the online tools we developed. Our online tools allowed us to bring together departments using Zoom rooms and enabled us to mimic our on-site data collection system. Figure 1 provides the timeline of the trial. Given the imperfect compliance with the training, we provide intent-to-treat estimates throughout the paper. We also present the estimated program effects on the training participants (Local Average Treatment Effects) in the Online Appendix, Table A.1.

2.3 Intervention: Transforming the Relational Atmosphere in Large Corporations

Our implementing partner is a highly specialized consulting firm. The firm was founded in 2007 by several ex-corporate professionals who had first-hand experience of the highly toxic relational atmosphere in large corporations. As part of their movement coined as "Does not have to be this way", they developed unique training methods to improve the workplace environment. They use unconventional tools, including creative drama, role-playing, and imagery techniques. In addition, they employ real actors and scenario writers who blend in

with the trainees and conduct theatrical plays on topics relevant to their target concepts. We partnered with them to evaluate their training module called "Transforming the Relational Atmosphere in Firms", aimed at improving workplace relations and eliminating employee burnout. The partner agreed first to revise their existing module substantially to target only the relational issues. For this, we provided the partner with hands-on feedback to narrow the program's focus exclusively toward prosociality and professional communication. The partner also accepted that we would conduct a randomized evaluation to test the effectiveness of this training program and agreed to provide the training to all 20 firms within a schedule that we would determine.

The training program focuses on the following themes: 1) Respectful and peaceful communication with colleagues, subordinates, and leaders, by exerting deliberate effort to eliminate toxic and condescending language. 2) Understanding the others' points of view and tolerating the differences in opinions. 3) Learning to rely on colleagues and leaders by accepting vulnerability. We targeted employees of all ranks in all these themes, but particular attention was given to leaders.

The training module comprises two components. The first component is a series of online workshops involving several interactive group activities.[10] In these activities, participants were randomly allocated to groups mixed in terms of departments and rank. In one session, group activities included time travel to the company's future, imagining an aspired workplace environment, sharing their vision, and openly discussing the obstacles to achieving these ends. In another session, participants engaged in several role-playing exercises (assuming the roles of executives, regular employees, and families of employees). In these exercises, employees expressed what they expected from their leaders and colleagues, stating their definitions of a good leader and peaceful and professional language, and discussed good leadership practices. In another session, participants experimented on proactive and reactive behavior in relationships. These involved some group activities that implicitly require reliance on colleagues and leaders.[11] The module includes numerous other activities along these lines, all encouraging professional and humane treatment of one another.

The second component of the module was a monitored 8-week follow-up. For this, all

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[10]Each online session was about 2 hours, with a total of 5 online sessions. During these training sessions, the trainers were always online, while the employees were generally physically present in their workplaces.

[11]In one of these activities, each participant let themselves fall backward, hoping that their colleague would hold their back.

participating departments in each firm were given a task that involved developing a project that would help improve the relational atmosphere. The core theme of these projects was "improving communication and relational culture." In each department, participants formed groups to develop their own projects by either embedding this theme in their existing work-related project or creating a stand-alone project. They first prepared a detailed outline of a project idea that would touch upon the given theme, often adapted to their company's needs. For example, a group of professionals developed prosocial codes of conduct in everyday interactions for their department by first assessing the needs and collecting feedback from their colleagues. Another group designed what they referred to as the "desk-exchange" project. The project required colleagues to switch desks and try to do each others' tasks for a few hours to see what these tasks entailed. This project was an extended version of leader-subordinate "hat-change" exercises implemented during the online workshops. The implementing partner regularly interacted with the participants throughout the process, gave feedback to project proposals, helped participants fine-tune details, and discussed feasibility issues. The team leaders were also heavily involved in this process, often as project team members. Participating teams started working on their projects immediately after the online workshops. They had a total of 8 weeks to develop their projects, including receiving feedback from the implementing partner via regular presentations. At the end of this 8-week period, all groups presented their projects to each other and their higher executives (CEOs, CFOs and COOs) in the presence of the implementing partner. Endline data collection was implemented after online workshops had been completed and all proposals presented to the upper management. See Appendix C for more information on the module's content, example follow-up projects, and some snapshots of actual training sessions.

In April 2022 (post-trial), we reached back out to all our treated firms via a short survey to be answered by the HR executives. The purpose of the survey was to receive some testimonial feedback about how this training was perceived by the treated firms. When asked how differently they perceived the training program compared to the other training activities they had organized, 4 HR executives out of 10 stated that the training program was completely different from previous training programs. Five firms indicated that the training program had some points in common with previous training programs, but it was generally very different. In addition, 9 out of 10 HR executives in treated firms stated that the training program was much more intensive than previous training programs they had organized regarding the methods used and the content and duration of the activities. We provide the survey items in the Online Appendix G.

Given the targeted concepts and how activities were structured, we expect this training program to improve social and professional relationships amongst colleagues. As elaborated in our pre-analysis plan, our main conjecture is that the program, given its high emphasis on leaders' behavior and leader-subordinate relationships, will improve the relational atmosphere by improving leadership quality. It is important to note that the control firms did not implement training programs for their headquarters professionals during the implementation period. However, they did have business as usual regarding their formal and informal get-togethers. The former includes in-person and online meetings, and the latter includes in-person coffee and lunch get-togethers. We will revisit this in Section 5 when discussing potential mechanisms. The next section will explain how we measure our workplace climate indicators using a comprehensive toolkit.

3   Outcomes

Our target conceptual outcome is workplace climate. We are primarily concerned with the way employees interact, which we refer to as the relational atmosphere in the workplace. The relational atmosphere is a construct. Measuring such a construct requires a comprehensive toolkit to capture as many aspects of a relational atmosphere as possible. We use four measurement tools to describe the relational atmosphere in our study. Our first tool is administrative data on employee separations/quits. While acknowledging that not all quits are related to the relational climate in the workplace, our data and qualitative evidence suggest that some certainly are. Our second tool measures the prevalence of pro and antisocial behaviors in the workplace using incentivized games. Our third tool aims to gauge the relational environment by quantifying the structure of personal and professional support networks within departments. Finally, our fourth tool seeks to capture the perceived workplace quality and behavioral norms using standard survey items. Figure 2 depicts the theory of change we postulate in this study, which also reports our summary results. In what follows, we will explain each of our measurement tools and how we use them to build our outcome space.

3.1   Employee Separation

We requested and were granted access to administrative records of job separations from November 1, 2020, until June 30, 2021 (8 months), which we refer to as the implementation period. The reason for imposing this end date is that the government of Turkey imposed a

nationwide ban on dismissing employees on April 1, 2020. This ban was lifted on July 1, 2021. Therefore, throughout our training and endline period, employee separation refers to voluntary job separations. In December 2021, we re-contacted all our participating firms and asked for additional data covering the post-ban period. These follow-up data contain all job separations (quits and layoffs) covering the period between July 1 and November 30, 2021 (5 months), which we refer to as the post-decree period. Note that we have access to these administrative data also for employees who did not participate in our study (about 29% of the employees in headquarters). This access allows us to estimate possible spillover effects on separation probabilities. We expect the program to lower the probability of employee separation, especially voluntary separations (quits).[12]

3.2 Experimental Outcomes: Prosocial and Antisocial Behavior

We played several incentivized games to measure various individual characteristics. At baseline, we elicited risk aversion, competitiveness, and cooperation between department colleagues. We explain these games in the Online Appendix D. At endline, to measure pro and antisocial behavior, we designed a performance sabotage game, a trust game, and an ultimatum game using online tools. The participants were given instructions for each game via a pre-programmed voice. First, they were informed that they would play 3 games, each offering monetary rewards. Second, they were told that the amount of money each participant earned would depend on their own decisions and the decisions of their department colleagues. Third, they were informed that rewards from the games would not accumulate; they would receive the payment of one randomly chosen game at the end of the session. Rewards were given in the form of a gift card from a major supermarket chain in Turkey, mailed to the participants one week after the session.

3.2.1 Performance Sabotage in Competition

Competitive behavior is considered essential to personal success as it generally inspires hard work and leads to high productivity (Backus, 2020). However, there are forms of intra-group

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[12]When we pre-registered our trial, we did not have an agreement with the firms to access their data on separations. In need of an objective outcome (after the feedback we received in various seminars), we decided to reach out to the companies and request employee separation information. We also gained access to promotions data within the same periods, implementation, and post-decree. Because there are large differences across firms and sectors regarding job titles and the degree of hierarchy, and the fact that we do not have an a priori hypothesis as to how this program might affect promotion, we present and discuss the results on promotions only in the Online Appendix; see Appendix Table A.2.

competition propelled by envy that reflects antisocial behavior. In an environment where the assigned task requires teamwork but promotions depend on individual performance, which is usually hard to quantify, competition may take an aggressive form with teammates blocking or outright sabotaging each other's performance to improve their status. The prevalence of this antisocial behavior is one of the indicators of the relational health status of a workplace.

To assess the prevalence of this behavior in an incentive-compatible way, we designed a novel game that involved randomly matching two colleagues within a department. Each participant, remaining anonymous to their opponent, was asked to perform a task with no ability requirement. Specifically, they were asked to type a meaningless jumble of four letters (lower and upper case mixed) and numbers that appeared in the middle of their screen. The participants were given 2 minutes to type as many words as possible. A participant could earn 150TL (worth about 20 US dollars at the time) if and only if their performance exceeded that of their anonymous opponent. After completing the task, without knowing the result of the competition, participants were given the option to sabotage their opponent's performance by incurring a monetary cost. For this, we endowed all participants with an extra 50TL and asked them to decide which amount of this endowment they would like to use to destroy their opponent's performance. The cost of destroying one correct answer was set to 10TL, so that the maximum number of answers one could destroy was capped at 5. The outcome of interest in this game is the cost incurred (sabotage endowment used) to sabotage the opponent. This novel measure has high predictive validity. In Table A.3 in the Online Appendix, we show that employees with higher IQ are significantly less likely to sabotage their colleagues. While we do not detect a significant correlation between emotional intelligence and sabotage behavior, we find that people with higher trust and reciprocity are less likely to sabotage (the latter is not statistically significant). We also find that cooperative and competitive people are less likely to sabotage. We expect the treatment to reduce this antisocial behavior, i.e., decrease the amount of sabotage endowment used.

3.2.2 Trust and Reciprocity

Interpersonal trust and reciprocity are essential social skills for making groups cohesive and collegial (Johannsen and Zak, 2021). To assess the degree of interpersonal trust and reciprocity, we played a version of the standard trust game (Berg, Dickhaut and McCabe, 1995). For this, we endowed all participants with 100TL and informed them that they were randomly (and anonymously) paired with a colleague within their department. They were told that there were two roles one could assume in this game; a sender and a receiver. They

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were to be randomly assigned to one of these roles, but before that, they were asked to make decisions assuming each role sequentially. In the role of a sender, participants needed to decide how much of the 100TL they wanted to send to their anonymous colleague (receiver), including the option of sending nothing. The participants were informed that the amount they sent would be tripled by the experimenters before being sent to the receiver. In the role of a receiver, the participant needed to decide what fraction of the money they had received they wanted to send back to their anonymous colleague. Because the receiver's decision was based on the sender's decision, we elicited the decisions of the receiver with the strategy method by letting participants react to hypothetical discrete options. Specifically, we began with the case where the sender sent 10TL, tripled to 30TL. The receiver then decided how much of this 30TL to send back to the sender. Then, we elicited the case where the sender sent 20TL, tripled to 60TL in a similar fashion, and this hypothetical elicitation continued until the case of the full amount (100TL, tripled to 300TL).

The amount of money sent as a sender is our measure of trust, and the amount sent back as a receiver is our measure of reciprocity. For the latter, we use the average fraction across all options sent back to the sender. At the beginning of the game, the participants were informed that, after all the decisions had been made, our system would assign the roles randomly and determine their earnings. Overall, we expected the treatment to increase trust and reciprocity among department colleagues.

3.2.3 Sense of Fairness and Generosity

Our final game is a version of the ultimatum game. The game also involves pairing two colleagues within a department anonymously. There are two roles in this game, a proposer and a responder, and participants play again both roles. As proposers, they offer a two-way split of 200TL, and as responders, they decide on a minimum acceptable offer. If the latter is below or equal to a matched proposer's offer, the money is split according to the proposer's offer; otherwise, the offer is rejected, and neither receives any money. Our outcomes of interest are the proposed offer and the minimum acceptable offer. We expect a fairer split and perhaps some generosity (in the form of offering more than 50% of the proposer's endowment) in the treatment group.[13] If treatment lowers the feeling of spite, we

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[13]Contrary to the dictator game, which measures generosity (by the amount of money sent to an anonymous recipient), the ultimatum game has a strategic component. Therefore, the proposer's offer cannot be simply interpreted as a measure for generosity. Rather, it can be interpreted as a measure of what subjects interpret as a fair offer in such a strategic situation where the responder has the power to destroy both parties' endowments; see Güth and Kocher (2014).

expect that treated individuals tend to accept lower offers implied as a decline in minimum acceptable offers.

3.3 Professional and Personal Support Networks

Another way to assess the health status of the relational climate in a workplace is to measure the prevalence of support networks; see Bandiera, Barankay and Rasul (2010) for the relationship between friendship and productivity in the workplace and Dimitriadis and Koning (2020) for the importance of social skills in fostering meaningful and productive social networks. To elicit these networks, we asked each participant to list up to three of their colleagues in the firm from whom they receive regular professional help in work-related matters. Then, we asked them to list up to three colleagues from whom they receive regular help on personal issues. The participants were informed that the ranking in this elicitation mattered so that the colleague they thought was the most helpful should be listed first. We prepared our template by first obtaining the list of all employees in the firm's headquarters and offered the names in a drop-down menu to ease the nomination process. The participants were also given an option to select "I receive no help" in the menu. They could also nominate fewer than 3 colleagues in each of the two categories, but not more than 3.

From these nominations, we construct three department-level outcomes that we expect the treatment to influence: (i) the proportion of isolated individuals in the department, (ii) department network density, and (iii) cohort segregation. We construct each of these outcomes for professional and personal support categories separately. The proportion of isolated individuals refers to those who had chosen "I receive no help" in the menu, i.e., those who report having no support from their colleagues. The department network density is an index that gives the ratio of actual connections to all potential connections that could be made in a department. Therefore, its range is between zero and 1, with higher numbers indicating a denser network. As for cohort segregation, we are interested in segregation between millennial and younger cohorts (below 40) and older cohorts (40 and older), based on the year of birth. The choice of this particular cutoff is based on our qualitative interviews with out-of-sample professionals, who suggest that communication and social disconnect between these two groups are prevalent, contributing to the toxic relational climate. We provide details regarding the construction of our cohort segregation index following Schelling (1969) in the Online Appendix E. We expect the treatment to lower the proportion of isolated

individuals and cohort segregation and to increase department network density.[14]

3.4 Workplace Climate: Perceived Workplace Quality and Relational Atmosphere (Survey Outcomes)

Using a detailed item-response questionnaire, we constructed two indices that characterize the perceived workplace quality and three indices for relational atmosphere. The first of the former is the index "workplace satisfaction", constructed using questions such as "I am very glad that I chose to work in this company", with five response options. Our second measure of workplace quality relates to the perceptions of the firm's "meritocratic values" (or lack thereof). We constructed the related index using questions such as "I believe my chances of advancing in my profession and career are very high in this firm". We constructed three indices to capture the relational atmosphere within departments. The first of these is "collegial department", constructed using questions such as "My colleagues attack each other disrespectfully during department meetings." Second, we construct behavioral norms using questions such as "How often do you observe your department colleagues: Helping someone" and prescriptive norms using questions such as "What percentage of your department colleagues think: Gossiping is bad." The latter comes with response items of "almost no one, around 25%, around 50%, around 75%, almost everyone".

Because the program has a heavy emphasis on leader behavior and, in particular, leader-subordinate relationships, we conjecture that any positive impact may come mainly through improving leader behavior and leader-subordinate relationships. Therefore, an important component of our inventory involves eliciting in detail the leadership quality from the perspective of subordinates. In addition to utilizing our network measures, we constructed two measures of leadership quality. The first one is "leader's professionalism", constructed using item-response questions such as "My team leader claims achievements, but blames mistakes on others" and "I receive regular and motivating feedback from my team leader." The second one relates to the leader's ability to take actions in an empathetic way, "leader's empathy." Again, we constructed this measure using item-response questions such as "My team leader listens to disagreements carefully and considers all angles" and "my team leader makes sudden emotional decisions."

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[14]In our pre-analysis plan (PAP), we specified department-level network closeness as another outcome. However, this measure is not well-defined in the presence of isolated nodes; therefore, we did not use it (Rochat, 2009; Brandes, Borgatti and Freeman, 2016).

We construct all indices mentioned above by extracting the common factor for each, normalizing the factor to have a mean zero and standard deviation of one. We provide our full survey inventory in the Online Appendix F.

3.5 COVID-19-related Well-being

As we mentioned before, the intended timing of program implementation was disrupted by the COVID-19 pandemic. The COVID-19 pandemic has had a tremendous impact on working people. It is plausible that these effects were felt differently across firms and possibly across employees within firms. During the implementation period, the companies were operating in hybrid mode, where they diluted the number of employees in workspaces based on a rotating schedule. Overall, the experiences of pandemic-related changes are likely to diminish working people's morale and generate feelings of isolation.

Because the program was highly interactive and entertaining, we conjectured that it would help employees feel less disconnected from their colleagues. To test this conjecture, we added several COVID-19-related social isolation questions to our survey inventory at endline by making an explicit reference to the pandemic. In particular, we asked respondents whether they (i) rather work at home than work in the office, (ii) feel lonely lately, (iii) feel disconnected from their colleagues, (iv) feel disconnected from their leaders, and (v) have increased the use of alcohol and cigarettes. Thus, by offering unusual (and fun) activities in these difficult times, we conjectured that the program would help employees cope with the social isolation imposed by the pandemic response measures.

4 Results

4.1 Internal Validity

We collected our baseline data in Fall 2019 by visiting the headquarters of all firms in person. We collected data on individual characteristics in these visits, including demographics, education, and tenure. In addition, we implemented two cognitive tests: (i) Raven's progressive matrices to measure fluid IQ (Raven, Raven and Court, 1962) and (ii) Reading the Mind in the Eyes Test to measure emotional intelligence (Baron-Cohen et al., 2001). We also implemented three incentivized games to measure baseline risk attitude, competitiveness, and cooperation. Finally, we collected data on networks and workplace climate indicators; see the details of incentivized games and our survey inventory in the Online Appendices D and

, respectively.

Within the course of a single year, many changes took place in the firms, and when we decided to implement the program in Fall 2020, we found that a large number of additional employees (some recently joined their firms) expressed their willingness to participate in the study, both in treatment and control firms. Before the program rollout, we conducted a swift baseline for these new participants, a shorter version of our initial baseline. These new employees comprise 32% of our evaluation sample, and their distribution across treatment status is balanced (p-value=0.59). Our attrition rate, calculated as the fraction of those who were present at baseline but not at endline is 23% and balanced across treatment status (p-value=0.44). Our final sample consists of 4329 employees for whom we have administrative records of separations. Out of those, 3083 gave consent to participate in our study. Among those, we have survey responses, test scores, and decisions in incentivized games for over 2200 employees. The number of departments included in the study is 135 (163), with an average size of 22 (26) employees at baseline (endline). Males comprise approximately 72 percent of all employees in our sample, and the annual separation rate at baseline stands at 14.5%.

We present detailed descriptive statistics where we also show sectoral differences in a wide range of employee characteristics in Table 1. We note sectoral heterogeneity in several dimensions. First, there is significant gender sorting across sectors, with the proportion of female employees ranging from 17% in the construction sector to 52% in the finance sector. Second, the professionals in the defense and energy sectors scored much higher on the innate IQ test. However, their emotional intelligence (cognitive empathy) test scores are among the lowest, along with those in the construction sector. The finance sector has the highest employee separation rate in both implementation and post-decree periods (7% and 12%), energy the lowest in the implementation period (2%), and chemicals the lowest in the post-decree period (4%). Overall, workplace quality and relational metrics indicate a dismal climate in the defense and textile sectors but a more positive environment in the finance sector.

Table 2 presents the balance at baseline. All test scores, risk attitude, cooperation, and workplace climate indices are normalized to have a mean zero and variance of 1 for the control group. Our rich baseline data allow us to test many variables to check our randomization balance. As can be seen in the table, we observe imbalance only for one variable, meritocratic values at the 5% level. We also provide the balance checks of the combined sample we use

in our analyses, amended by data from our shorter baseline we conducted in Fall 2020 in Table A.4 in the Online Appendix A. Finally, because we conduct our empirical analyses separately for subordinates and leaders as well for the full sample, we provide balance at baseline within these subgroups in the Online Appendix A (see Table A.5).

We requested and got access to monthly employee separation rates from all firms in June 2022, covering January 2018 to April 2022 for 18 firms and January 2019 to April 2022 for 2 firms. These data, however, are not directly comparable with our measure of separation for two reasons: First, these separation rates cover the entire white-collar workforce of the company, not just the headquarters. Nevertheless, given that the average share of headquarters employees in all white-collars stands at 75% in our data, it is likely that the behavior of separation rates is mainly driven by the headquarters employees. Second, as we explain in Section 3, our main analysis of employee separation concerns separations that occurred within a period (8 months for the implementation period and 5 months for the post-decree period). Nevertheless, we believe these monthly aggregate data can complement our data and, in particular, help us provide more evidence on the balance of our design. Figure 3 Panel A depicts mean monthly separation rates for treatment and control firms, and Panel B depicts differences in means, both weighted by the share of headquarters employees. As can be seen in the figures, there is no evidence of differential trends across treatment status, neither in pre-trial, in baseline, nor during the COVID-19 lockdown period. The randomization also rules out level differences across treatment status over time. Almost all mean differences are statistically zero between January 2018 and October 2020, ensuring that the randomization was successful and our results are internally valid.

4.2 Empirical Specification

To test the null hypothesis that the program had no impact on the outcome y, we estimate the average treatment effect by conditioning on baseline covariates that are predictive of the outcome of interest:

$$y_{idf} = \alpha_0 + \alpha_1 T_f + X'_{idf}\gamma + \delta_s + \varepsilon_{idf}$$

where y_{idf} is the outcome of employee i, in department d, firm f. T_f is a dummy variable that equals 1 if firm f is in the treatment group and zero otherwise, and X'_{idf} is a vector of observables for worker i in department d and firm f that are potentially predictive of the outcome y. These include age, gender, marital status, number of children, tenure, and baseline cognitive and sociocognitive skills (Raven's score and Eyes test score). We also

control for department and firm size as well as the share of males in the department. δ_s indicates strata (sector) fixed effects.

The use of baseline covariates serves the purpose of powering our design. Baseline covariates that are highly predictive of the outcomes of interest lower the variation in the outcomes and allow us to estimate the program effects with more precision. Tables A.6 – A.8 in the Online Appendix show that employee characteristics such as gender, cognitive ability, marital status, and the number of kids, as well as some firm and department characteristics, are predictive of our primary outcomes. These correlations motivate our empirical specification. Nevertheless, we also present our results without covariates in the Online Appendix A (see Tables A.9-A.13).

Among the treated who took part in the training program (40% of all participants in treatment firms), 25% had an official leadership title and 75% were subordinates, 29% of whom were de facto leaders (i.e., influential nodes in professional support networks). Therefore, the estimated $\hat{\alpha}_1$ is the intent-to-treat effect (ITT), depicted in visual clarity in Figure 4. Because the sample contains a small number of clusters (20 corporations), in addition to clustered-robust standard errors, we also present wild bootstrapped p-values adjusted for the small sample. Moreover, because we test several hypotheses using multiple outcomes, we also present sharpened False Discovery Rate (FDR) adjusted q-values as described in Anderson (2008), and Romano-Wolf p-values (Romano and Wolf, 2005). For the latter, we aggregate our main outcomes following Kling, Liebman and Katz (2007). Finally, we also present our main results using firm-level averages (Table A.14 in the Online Appendix). Most of our results survive these adjustments.

In what follows, we present our estimated treatment effects in the same format: First for the entire sample of participants and then for subordinates and official leaders separately. These subsample analyses are motivated by our pre-trial qualitative interviews, the content of our intervention, and our mechanism claims, which we discuss further in section 5.

4.3 Treatment Effect on Employee Separation

We acknowledge that not all job separations are related to the relational climate in the workplace. However, our qualitative interviews with many HR officials and CEOs suggest that some certainly are. That the bad relational climate is associated with a high probability of separation is also evident in our data. Table A.15 in the Online Appendix shows significant associations between job separations and workplace climate indicators. Job separations are

more likely when employees are less satisfied with the relational environment, perceive the company as non-meritocratic, consider behavioral norms undesirable and view the leadership quality low. Motivated by these correlations, we consider voluntary job separations as one of the indicators of the workplace climate.

Table 3 presents the treatment effect on the probability of job separation within the implementation period (November 1, 2020, and June 30, 2021). Recall that this period spans the nationwide firing ban, which was imposed on April 1, 2020, and lifted on July 1, 2021. Panel I presents the effects on the full sample, panel II on the subordinates, and panel III on the leaders. Finally, Panel IV presents the treatment effects on the sample that did not participate in the study. The proportion of employees who quit their jobs within the firing-ban (implementation) period is quite low in the control group (about 5%), considering the 2019 baseline separation rate of 14.5% presented in Table 2.[15] We estimate 2 percentage points lower likelihood of employee separation in treated companies between November 1, 2020 and June 30, 2021, and this difference is statistically significant at the 5% level. The estimated treatment effect is larger (4.8 percentage points) and more precisely estimated for the leader sample, with the wild bootstrapped p-value of 0.027. Although regressions with controls are our preferred specifications, we report our results with only firm and department level covariates (firm size, department size, and share of males in the department) and without covariates in Column 3 of Table 3. Adding baseline covariates should not significantly affect the estimated sizes but should improve precision in a balanced design. We find that the coefficient estimates are unaffected but lose precision when we do not include covariates for the full sample and the subordinates. However, the effects we estimate for the leaders seem robust to covariate adjustment.

Because we have administrative data on all employees in company headquarters regardless of their participation in the study, we can also investigate whether these positive treatment effects on separations spilled over to nonparticipants. As can be seen in Panel IV of Table 3, we find no evidence of spillover effects of the treatment on nonparticipants during the implementation period. One reason for this could be that most non-participation was at the departmental level. As mentioned before, some departments could not participate due to the nature of their tasks, and some small departments were considered low priority and excluded by the firms. Given that most training activities targeted departmental relationships, the

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[15] 2019 (baseline) separation rate stood at 14.5% on average. This refers to the annual department-level separation rate and, as such, it is not directly comparable with the 8-month rate of 5%. However, one can still infer that the incidence of separation was lower than usual during the firing-ban/pandemic period.

likelihood of spillovers from participants to nonparticipants was low by design. The lack of spillover effects may also be exacerbated by the context in which we evaluate this program. All activities took place during the COVID-19 pandemic. It is possible that hybrid working arrangements led to less frequent inter-departmental interactions within this period, dampening any possible spillover effects. The lack of spillover effects is also evident in Figure 3, which plots monthly separation rates of the entire white-collar workforce between January 2018 and April 2022. While we do observe predominantly negative point estimates (lower monthly separation rates) in the implementation and post-decree period for treated firms, mean differences do not reach statistical significance.

In Appendix Table A.16 we show the treatment effect on the probability of separation in the post-firing ban period (July 1, 2021-November 30, 2021), as well as the implementation period (November 1, 2020 and June 30, 2021). We exclude the finance sector from this analysis because all the firms (control and treated) in this sector had received the treatment by the time we collected the post-decree data in December 2021. Looking at the control mean of 7% separations in the post-firing ban data, notice that it already exceeds the 8-month separation rate of the implementation period (Column 4). As in the implementation period, we estimate a significant treatment effect on the likelihood of separation for the post-firing ban period. The estimated effect size is minus 3 percentage points, implying a 43% decline in employee separation in this period. The estimated effect is statistically significant at the 5% level indicated by the wild bootstrapped p-value of 0.024. Column 4 in Panel II shows that the effect on post-decree separations is driven entirely by the subordinates. The estimated effects for the post-firing ban period strongly suggest that the effects of the intervention persist beyond the implementation period.[16]

4.4   Treatment Effect on Pro and Antisocial Behavior

Table 4 presents the estimated treatment effects on experimentally elicited pro and antisocial behavior. About 23TL of 50TL sabotage endowment was used on average to destroy an opponent's performance in the control group. On average, employees in the treatment firms spent 2.75TL less for sabotage activity, and this 12% effect is statistically significant at the 1% level. The effects for subordinates and leaders are similar for this outcome, with 12%

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[16]Most of the separations in the post-firing ban period are voluntary quits. Of the 6.4% separations recorded in this period, 1.3 percentage points constitute layoffs. We find no treatment effect on layoffs, implying that the overall effect on separations is driven mainly by voluntary quits. This result is presented in the Online Appendix table A.17.

for subordinates and 15% for leaders. We do not detect a statistically different effect in this outcome across the two groups (p-value=0.66).

We find that, of the 100TL endowment in the trust game, the control employees sent about 52TL to their anonymous department colleague. We do not estimate a statistically significant treatment effect for this outcome, either for the full sample or for the sub-groups. However, we find a statistically significant effect on reciprocity. About 37% of the money received was sent back to the sender in the control group. This value is 4 percentage points (about 10%) higher in the treatment group for the full sample, and this difference is statistically significant at the 1% level. The effect on reciprocity is strong for the subordinate group but much smaller and imprecisely estimated for the leaders, although we cannot reject the equality of coefficient estimates across the two groups (p-value=0.42).

Finally, we find that a little more than half of the endowment in the ultimatum game was offered in the control group. Even though we estimate a positive treatment effect on the size of the offer, this effect is statistically insignificant for the full and the subordinate sample. However, it is larger and statistically significant for the leader sample, indicating more generosity on the part of leaders, but again, we cannot reject the equality across the two groups (p-value=0.23). In summary, these results suggest that the treatment significantly lowered toxic competition, measured by the sabotage endowment used in the sabotage game, and improved prosociality, measured as reciprocity in the trust game.

4.5   Treatment Effect on Department Network Structure

As mentioned in Section 3, we constructed several department-level indicators that characterize the relational atmosphere of departments using social networks. These are the proportion of isolated individuals (those who participated in the study but stated that they receive no support from any colleague), department network density, and cohort segregation indices. We constructed these department-level measures for the full sample and the subordinate sample, as such measures for only leaders do not make much sense at the departmental level since most departments have a small number of leaders. Table 5 presents the treatment effects on our three department-level network measures for professional support and personal support categories. Note that, because these outcomes are at the department level, our number of observations reflects the number of departments in this analysis. In some departments, segregation measures are not defined because of the insufficient number of members in a group, reflected in the large decline in the number of departments used in the respective

analyses. Similarly, network density measures cannot be constructed for departments with an insufficient number of participants.

Looking at Panel I, first, we note that, on average, 13% (24%) of employees in the control firms report that they do not receive professional (personal) support from anyone in their firm. We estimate a 5 (7) percentage points decline in professional and personal isolation in treated departments, but the estimates are not statistically significant based on the wild bootstrapped p-values. Looking only at the subordinates, we see similar effects but slightly better precision. Note that the estimated effect sizes are large. For example, we estimate a 29% reduction in the proportion of individuals who lack support for personal matters in the full sample. The effect size for the subordinates is even larger (41%).[17]

Consistent with the isolation results, we estimate a significant increase in departmental network density for both professional and personal networks. The estimated effects are substantial in size, corresponding to a 38% increase in the network density indices. Finally, we also estimate a substantial decline in our cohort segregation indices. We find evidence of a significant decline in cohort segregation in personal support domain for the full sample. These results altogether suggest that the treatment helped employees establish more network ties with their colleagues, lowered the number of people lacking support and created denser and less segregated social networks across cohorts.

4.6 Treatment Effect on Perceived Workplace Quality and Relational Atmosphere

Table 6 presents the estimated program effects on our survey measures. Recall that we normalized these measures to have a mean zero and a standard deviation of 1 for the control sample so that estimates can be interpreted as standard deviation effects. We observe that the program was highly effective in improving perceived workplace quality and relational atmosphere within departments. We estimate large and significant effects on workplace satisfaction and perceived meritocratic values. Treated employees report 0.27 standard deviations higher workplace satisfaction and 0.25 standard deviations higher perceived meritocratic values. In terms of the relational atmosphere, treated professionals report 0.21

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[17]We also estimate the treatment effects on isolation at the individual level. The results are similar. While we find sizeable but imprecisely estimated treatment effects in the both support domain for the full sample. Specifically, we find a 6.5 percentage points decline in isolation for personal support, which is not statistically significant based on the wild bootstrapped p-value. The effect size is 7.6 percentage points for the subordinates (significant at the 5% level) and statistically zero for the leaders.

standard deviations higher collegial behavior in their department, 0.10 and 0.15 standard deviations better behavioral and prescriptive norms, with the latter two not reaching statistical significance. The results on the subordinates are even stronger. Here, we estimate 0.32 standard deviations higher workplace satisfaction and 0.30 standard deviations higher meritocratic values in the treatment group. We also estimate 0.24 standard deviations higher collegial behavior, and again, despite being positive, the effects on behavioral and prescriptive norms are statistically weak based on wild bootstrapped p-values. Interestingly, we estimate null effects for the leaders and reject decisively the equality of estimates between subordinates and leaders for workplace satisfaction, meritocratic values, collegial department and prescriptive norms measures.

These results are consistent with the effects we estimate for pandemic-related well-being indicators. Table 7 presents the estimated treatment effects on our five COVID-19 related outcomes. Employees in treated firms are 6 percentage points less likely to prefer to work from home, and this difference is statistically significant at the 5% level considering the wild bootstrapped p-value. Further consistent with this result, the employees in treated firms are 4 percentage points less likely to report losing connection with their leaders during the pandemic. The point estimate is similar for subordinates and leaders, although it is statistically significant for the former but not for the latter.

Overall, we estimate positive treatment effects consistently across all outcome categories, and most of our results survive multiple hypothesis corrections. Table 8 presents our summary results where we estimate the treatment effects on summary indices for each outcome family following Kling, Liebman and Katz (2007). Our prosociality index represents a combination (equally weighted average of z-scores) of sabotage behavior (reversed), trust, reciprocity, and fairness. The workplace climate index combines workplace satisfaction, meritocratic values, collegial department, and prescriptive and descriptive norms, and the leadership quality index combines leader professionalism and empathy. We keep separation probability as a single-member family in this analysis. As can be seen, both Romano-Wolf p-values and sharpened q-values (calculated using wild bootstrapped p-values) indicate genuine treatment effects.

Besides estimating treatment effects separately for subordinates and leaders, we explored several other subgroups to assess treatment effect heterogeneity. Specifically, we checked whether the effects exhibited any differential pattern based on employee tenure, gender, and the gender of leaders. Overall, we do not find any notable heterogeneity in treatment effects

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along these dimensions. We present our heterogeneity analyses in the Online Appendix, Tables A.18, A.19 and A.20.

5 Potential Mechanisms

All in all, we find that the program was remarkably successful in improving the relational climate in the workplace. It lowered the likelihood of employee separation, improved workplace satisfaction, reduced antisocial tendencies, increased prosociality, and created denser and less segregated support networks. What are the possible mechanisms behind these favorable results?

One possible but rather uninteresting mechanism could be that the training activities may have created extra socialization opportunities and, therefore, more contact between colleagues, which improved the relational climate indicators regardless of the content of the training. Such additional contact may be even more critical given that we evaluate our program in a context where a long-lasting pandemic created considerable social isolation. However, we believe this mechanism is unlikely to drive our results for the following reason. We asked the HR executives of all participating firms how frequently department colleagues got together online or in person during the implementation period. 80% of the firms stated every day or almost every day (7 firms in treatment (T) and 9 firms in control (C)). We also asked the reason for these get-togethers. 45% of the firms stated mainly work-related (5 firms in T, 4 firms in C), and the rest stated both work and social reasons (5 firms in T, 6 firms in C). These testimonies suggest no notable difference in the degree of socialization across treatment status. We take these testimonies as evidence against the "mere human contact" mechanism.

We believe that the content of the training is the primary channel driving the results. The training program was intensive compared to standard corporate training programs. Moreover, while it was open to all white-collar workers, leaders of all ranks were particularly encouraged to participate in training sessions and the follow-up project development activities. The idea, motivated by our earlier qualitative interviews, was that improving leaders' attitudes toward subordinates might reset the tone of communications, encourage more prosociality in everyday interactions, and lead to a more collegial atmosphere in the workplace. We hypothesize, therefore, that the program's effects work mainly through improved leader behavior and leader-subordinate relationships.

Before testing our conjecture that the training program improved the workplace climate through improving leader-subordinate relationships, we provide evidence that the subordinates' assessment of workplace quality and the relational atmosphere correlates highly with how subordinates perceive their leaders. Appendix Table A.21 shows the association between leadership quality (summary index of leader's professionalism and empathy) and subordinates' perceived workplace quality and relational atmosphere in their departments for the control sample. We observe very strong associations of expected direction between leadership quality and all indicators of workplace climate. While only representing correlations, these findings set the stage for our mechanism explorations. If the program's positive effects stem from improved leader-subordinate relationships, we expect to estimate significant treatment effects on reported leadership quality.

We estimate the effect of the program on several leadership quality indicators. The first two are leader professionalism and leader empathy, which we constructed using survey items. In addition, we have network data with which we can construct binary indicators of whether a participant nominated her leader as a professional and personal support provider. We consider nominating one's leader as a professional or personal support provider to indicate high-quality leadership and a good leader-subordinate relationship.

Table 9 presents the estimated treatment effects on leader professionalism, leader empathy, whether the employee nominated their leader as a professional and personal help provider, and own empathy for the full sample, as well as subordinates and leaders separately. We observe striking treatment effects on reported leadership quality, especially for the subordinate sample. We find that the treated subordinates report 0.21 standard deviations higher professionalism and 0.22 standard deviations higher empathy in their leaders. We estimate that treated subordinates are about 8 percentage points more likely to nominate their leaders as professional support providers. We find no statistically significant effect on the probability of nominating leaders as personal support providers in the subordinate sample.

Interestingly, we estimate strong negative treatment effects on nominations for the leader sample. The treated leaders are 18 (12) percentage points less likely to nominate their leaders as professional (personal) support providers. We explore possible explanations for this unexpected result. The first thing that comes to mind is that by being part of an interactive program together with subordinates, leaders may have turned to their subordinates for professional and personal help. This substitution may be exacerbated by the fact that the

program participation amongst higher management was low. Supporting this explanation, we find that the treatment increased the probability of a leader nominating a subordinate as a professional and personal help provider by 9 and 5 percentage points, respectively. We also find suggestive evidence that the negative treatment effects we report in Table 9 are much stronger for leaders whose leaders did not participate in the study. We find that the probability of a treated leader nominating her own leader as a professional support provider is 33 percentage points lower than that of an untreated leader if the leader's leader did not sign up for the project. We estimate no difference between treatment and control in this respect for leaders whose leaders participated in the study. This finding also suggests that employees might have viewed their leaders' participation in the project as a signal of commitment to improving the relational climate. This is consistent with our claim that the program generated its positive effects by improving leader-subordinate relationships.

In Appendix Table A.22, we explore the mediating effects of leadership quality following Imai, Keele and Tingley (2010). While the effect on prosocial behavior does not seem to be mediated by leadership quality, we find that 55% of the effect we estimate on workplace climate and 8.2% of the effect we estimate on employee separation are mediated by leadership quality.

While we conjecture that the primary channel is improved leader attitude and leader-subordinate relationships, there may be other mechanisms at play. For example, the program may also have increased the empathy of employees towards each other and towards their leaders. This is likely since one of the core messages of the program was to teach employees to exchange roles to understand where the other person was coming from in any social situation. However, as can be seen in Table 9, we estimate null effects on self-reported empathy. Finally, further supporting our claim via testimonial evidence, 7 out of 10 HR executives in treated firms indicated a visible positive shift in trained leaders' relations with their subordinates. In summary, while we cannot rule out all possible channels through which the program led to these positive impacts, the evidence on the improved leader-subordinate relationships is compelling.

6 Conclusion

While ubiquitous, relational toxicity in the workplace is a vastly overlooked issue in large and highly competitive workplaces. Yet, it imposes high costs on firms through employee dissatisfaction, inner resignation, or outright quits. Thus, innovative training programs that

aim to improve the relational environment in workplaces may be a cost-effective way to address this problem. This paper shows the effectiveness of one such training program.

The program, implemented as a clustered randomized design, is evaluated with respect to a wide range of outcomes constructed using incentivized games, social networks, survey instruments, and administrative records. We find that the program improves perceived workplace quality and the relational atmosphere. It reduces anti-social behaviors, improves network density, lessens social isolation, and lowers the likelihood of employee separation, the latter even beyond the implementation period. We show that the program's success stems mainly from improved leader-subordinate relationships. Our findings provide evidence that innovative interventions focusing on improving the relational atmosphere in work environments may go a long way in increasing employee engagement and satisfaction with leaders, lowering separation rates, and ultimately transforming the relational culture in large corporations. The monetary cost of the program was about 5000 Euros per firm, which is not higher than what large corporations usually pay to purchase training from well-known consulting firms. Given that the HR officials in our participating firms state that the estimated cost of separation of a white-collar professional ranges between 10-18 months' salary, the program seems cost-effective.

We note two external validity concerns. First, our study covers a particular country. While there is overwhelming evidence that relational issues in workplaces are prevalent, we are aware that the Turkish corporate sector does not represent the corporate sector around the world. However, besides enabling us to execute a clustered randomized controlled trial on large corporations and to collect detailed data from a large number of professionals, Turkey offers an ideal setting to study the relational atmosphere in workplaces. It is a large OECD country hosting many multinational and holding companies in all sectors. Given that we reached out to prominent corporations across different sectors that employ highly-educated professionals, our study is likely to be relevant for corporations in other OECD countries, as well as many similar middle-income countries.

Second, our study was conducted in a context created by a global health shock, the COVID-19 pandemic. Therefore, it is not clear how effective the program we evaluate would be in normal circumstances (even though COVID-19 might prevent a full return to global normality for some more years to come). Nevertheless, it is entirely plausible that a program that shows such promise in such difficult times might be at least as effective in normal times. Moreover, recent evidence has shown that exposure to COVID-19 has a negative

effect on prosociality in high-school students close to entering the job market (Terrier, Chen and Sutter, 2021). Given the importance of prosociality for labor market success (Kosse and Tincani, 2020), a reduction in prosociality of future labor market cohorts might pose threats to a good workplace climate. Against this background, it seems necessary and timely to implement interventions such as ours that show promising effects on the workplace climate in large corporations.

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7 Tables

<div align="center">

Table 1: Descriptive Statistics by Sector

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Panel I: Individual Characteristics	Chemicals	Construction	Defense	Energy	Finance	Textile
Male	0.769	0.832	0.683	0.678	0.482	0.554
	(0.422)	(0.374)	(0.466)	(0.468)	(0.500)	(0.498)
Age	34.847	38.966	33.573	36.590	36.007	34.806
	(7.030)	(7.791)	(7.117)	(7.642)	(8.114)	(7.560)
Married	0.648	0.760	0.590	0.610	0.515	0.637
	(0.478)	(0.428)	(0.493)	(0.488)	(0.500)	(0.482)
Tenure (years)	5.574	9.904	5.880	8.195	3.522	7.655
	(4.440)	(7.433)	(4.773)	(5.876)	(3.645)	(5.801)
Raven's Score (IQ)	0.001	-0.056	0.216	0.159	-0.258	-0.121
	(1.106)	(1.239)	(1.104)	(1.157)	(1.347)	(1.094)
Eyes Score (Emotional Intelligence)	0.162	-0.226	-0.605	0.067	0.106	0.104
	(1.087)	(1.349)	(1.762)	(1.278)	(1.241)	(1.093)
Sabotage	19.829	22.665	19.392	22.706	21.762	21.850
	(15.735)	(16.709)	(17.767)	(16.478)	(15.481)	(16.000)
Trust	53.671	51.170	45.541	53.688	51.701	52.389
	(26.873)	(27.689)	(28.783)	(27.486)	(27.171)	(24.268)
Reciprocity	0.400	0.383	0.346	0.387	0.358	0.381
	(0.214)	(0.213)	(0.204)	(0.210)	(0.202)	(0.195)
Ultimatum Offer	107.054	99.927	90.383	102.881	101.724	104.075
	(41.886)	(41.673)	(38.426)	(41.894)	(41.812)	(44.440)
Min. Accepted	99.944	95.057	84.095	97.115	98.997	99.593
	(43.382)	(40.749)	(38.961)	(44.383)	(41.785)	(44.090)
Workplace Satisfaction	0.238	0.125	-0.158	0.138	0.155	-0.330
	(1.018)	(0.961)	(1.008)	(0.918)	(1.033)	(1.041)
Meritocratic Values	0.235	0.096	-0.143	0.007	0.331	-0.166
	(1.042)	(0.950)	(0.982)	(0.958)	(1.027)	(0.969)
Collegial Department	0.140	0.141	-0.147	0.120	0.146	-0.265
	(0.984)	(0.928)	(1.022)	(0.972)	(1.026)	(1.095)
Behavioral Norms	0.088	0.036	-0.097	-0.013	0.251	-0.049
	(1.014)	(0.968)	(0.939)	(1.006)	(0.953)	(1.106)
Prescriptive Norms	0.157	0.125	-0.178	0.061	0.106	-0.152
	(0.972)	(0.966)	(0.997)	(0.999)	(0.978)	(1.105)
Leader Professionalism	0.120	0.118	-0.129	0.080	0.232	-0.234
	(0.975)	(0.970)	(1.012)	(1.015)	(0.970)	(1.028)
Leader Empathy	0.094	0.091	-0.147	0.105	0.221	-0.229
	(1.015)	(0.955)	(0.990)	(1.001)	(0.957)	(1.057)
Nominated Leader as Professional Help	0.737	0.627	0.636	0.636	0.623	0.500
	(0.441)	(0.484)	(0.482)	(0.482)	(0.485)	(0.502)
Nominated Leader as Personal Help	0.622	0.553	0.447	0.498	0.546	0.389
	(0.485)	(0.498)	(0.498)	(0.501)	(0.499)	(0.489)
N	636	566	293	851	423	314
Panel II: Department Characteristics						
Log Department Size	3.126	2.780	2.958	3.216	3.011	2.742
	(0.624)	(0.627)	(1.020)	(1.106)	(0.758)	(0.628)
Male Share	0.782	0.838	0.665	0.750	0.508	0.633
	(0.192)	(0.143)	(0.197)	(0.189)	(0.185)	(0.281)
Separation (Implementation)	0.054	0.066	0.045	0.024	0.068	0.053
	(0.070)	(0.089)	(0.090)	(0.043)	(0.083)	(0.070)
Separation (Post-decree)	0.037	0.055	0.109	0.081	0.119	0.056
	(0.065)	(0.083)	(0.127)	(0.139)	(0.092)	(0.083)
N	37	40	12	29	20	26

Reported statistics use the participant sample. Panel I presents the mean and standard deviations of individual-level variables and Panel II department-level characteristics. Cognitive tests and survey measures are standardized to have a mean of zero and a variance of 1.

Table 2: Balance at Baseline

Panel I: Individual Characteristics

	N	Control Mean	Treatment Mean	Difference (T-C)	P-value of Difference
Male	1988	0.636	0.566	-0.070	0.130
Age	1989	36.090	35.795	-0.008	0.991
Married	1799	0.672	0.623	-0.048	0.155
Tenure (yearly)	1785	7.373	7.637	0.257	0.758
Leader Age	1060	42.404	41.989	-0.308	0.796
Under Male Leader	1397	0.744	0.710	-0.039	0.334
Holding Leadership Position	1989	0.178	0.177	0.016	0.462
Raven Score (IQ)	1852	0.004	0.078	0.027	0.743
Eyes Score (Emotional Intelligence)	1858	-0.040	-0.250	-0.122	0.237
Risk Attitude	1805	-0.000	0.008	-0.046	0.276
Competitiveness	1797	0.502	0.495	-0.008	0.635
Cooperation	1805	-0.000	0.054	0.031	0.567
Workplace Satisfaction	1331	-0.000	0.081	0.130	0.137
Collegial Department	1402	-0.000	-0.091	-0.023	0.691
Meritocratic Values	1287	-0.000	0.128	0.212	0.011**
Behavioral Norms	1333	0.000	0.025	0.065	0.459
Prescriptive Norms	1194	-0.000	0.013	0.042	0.635
Leader Quality	1234	-0.000	0.003	0.040	0.534
Nominated Leader as Professional Help	1492	0.556	0.616	0.060	0.145
Nominated Leader as Personal Help	1492	0.453	0.467	0.035	0.396

Panel II: Department Characteristics

	N	Control Mean	Treatment Mean	Difference (T-C)	P-value of Difference
Log Department Size	135	2.822	2.603	-0.218	0.418
Male Share	135	0.700	0.629	-0.055	0.419
Proportion of Isolated Nodes (Professional Support)	135	0.122	0.156	0.046	0.272
Proportion of Isolated Nodes (Personal Support)	135	0.167	0.208	0.057	0.107
Density of the Department (Professional Support)	131	0.086	0.092	0.009	0.770
Density of the Department (Personal Support)	131	0.065	0.069	0.006	0.835
Cohort Segregation Coefficient (Professional Support)	106	0.004	-0.014	-0.011	0.605
Cohort Segregation Coefficient (Personal Support)	106	0.040	-0.004	-0.035	0.135
Separation	134	14.075	14.850	-1.064	0.673

Panel III: Firm Characteristics

	N	Control Mean	Treatment Mean	Difference (T-C)	P-value of Difference
Log of Firm Size (Headquarters)	20	5.005	4.789	-0.175	0.523

Reported statistics use the Fall 2019 baseline sample. Panel I presents the balance of individual-level variables. Panel II presents the balance of department-level characteristics and Panel III firm-level characteristics. Cognitive tests, risk attitude, cooperation, and survey measures are standardized to have a mean of zero and a variance of 1. P-values are obtained by controlling for randomization strata (sector). In Panels I and II, standard errors are clustered at the firm level (unit of randomization). Panel III uses robust standard errors.

Table 3: Treatment Effects on Employee Separation

Panel I: Full sample

	Separation (Implementation)		
Treatment	-0.022**	-0.021**	-0.017
	(0.008)	(0.009)	(0.010)
Wild Bootstrap P-value	0.029	0.079	0.173
Control Mean	0.053	0.053	0.053
N	3076	3076	3076
Covariates	Yes	Yes	No

Panel II: Subordinates only

Treatment	-0.017*	-0.016*	-0.011
	(0.009)	(0.009)	(0.011)
Wild Bootstrap P-value	0.135	0.177	0.380
Control Mean	0.053	0.053	0.053
N	2547	2547	2547
Covariates	Yes	Yes	No

Panel III: Leaders only

Treatment	-0.048**	-0.043**	-0.044**
	(0.019)	(0.020)	(0.018)
Wild Bootstrap P-value	0.027	0.058	0.019
Subordinate = Leader	0.116	0.176	0.088
Control Mean	0.057	0.057	0.057
N	529	529	529
Covariates	Yes	Yes	No

Panel IV: Non-participant sample

Treatment	-0.008	-0.007	-0.008
	(0.023)	(0.023)	(0.020)
Wild Bootstrap P-value	0.900	0.902	0.859
Control Mean	0.061	0.061	0.061
N	1240	1240	1240
Covariates	Yes	Yes	No

Reported estimates are obtained from ordinary least squares (OLS) regressions. The implementation period refers to November 1, 2020-June 30, 2021. Panel I provides estimated treatment effects using the full sample, Panel II, subordinate sample, Panel III leader sample, and Panel IV non-participant sample. Regressions in columns 1 control for Raven's score, Eye Test score, gender, age, marital status, number of children, tenure, department size, the share of males in the department, and firm size. Regressions in column 2 control for department size, the share of males in the department, and firm size. Non-participant sample regressions in columns 1 control for gender, department size, share of males in the department, and firm size (only available covariates for the non-participant sample). All regressions control for sector fixed effects. Standard errors are clustered at the firm level (unit of randomization) and wild bootstrapped p-values, adjusted for small sample, are provided. The separation status of 13 employees is missing in the data.

Table 4: Treatment Effects on Experimentally Elicited Pro and Antisocial Behavior

Panel I: Full sample

	Sabotage	Trust	Reciprocity	Ultimatum Offer	Min. Accepted
Treatment	-2.749***	0.792	0.037***	3.623	-0.885
	(0.364)	(1.580)	(0.010)	(2.216)	(1.424)
Wild Bootstrap P-value	0.001	0.743	0.004	0.218	0.559
Sharpened q-value	0.001	0.332	0.003	0.135	0.332
Control Mean	23.128	52.149	0.371	101.145	97.966
N	2233	2233	2233	2233	2233

Panel II: Subordinates only

	Sabotage	Trust	Reciprocity	Ultimatum Offer	Min. Accepted
Treatment	-2.764***	0.124	0.039***	2.876	-1.551
	(0.435)	(1.331)	(0.012)	(2.363)	(1.709)
Wild Bootstrap P-value	0.000	0.954	0.005	0.350	0.476
Sharpened q-value	0.001	0.660	0.006	0.314	0.392
Control Mean	22.678	51.443	0.362	101.086	98.375
N	1839	1839	1839	1839	1839

Panel III: Leaders only

	Sabotage	Trust	Reciprocity	Ultimatum Offer	Min. Accepted
Treatment	-3.905	1.513	0.013	6.548***	3.776
	(2.386)	(3.196)	(0.026)	(2.271)	(6.676)
Wild Bootstrap P-value	0.316	0.742	0.690	0.043	0.684
Sharpened q-value	0.310	0.626	0.626	0.050	0.626
Subordinate = Leader	0.660	0.621	0.415	0.227	0.471
Control Mean	25.344	55.628	0.415	101.437	95.949
N	394	394	394	394	394

Reported estimates are obtained from ordinary least squares (OLS) regressions. The dependent variables are: Sabotage: the amount of sabotage endowment used, Trust: the amount of money sent to the anonymous receiver, Reciprocity: average fraction sent back to the sender, Ultimatum offered: the amount offered by the proposer, and Min. Accepted: the minimum acceptable offer reported. Panel I provides estimated treatment effects using the full sample, Panel II, subordinate sample, and Panel III leader sample. Regressions control for Raven's score, Eye Test score, gender, age, marital status, number of children, tenure, department size, the share of males in the department, firm size and sector dummies. Standard errors are clustered at the firm level (unit of randomization). Wild bootstrapped p-values, adjusted for small sample, and sharpened q-values are provided.

Table 5: Treatment Effects on Support Networks

Panel I: Full sample

	Proportion Isolated		Department Density		Cohort Segregation	
	Professional S.	Personal S.	Professional S.	Personal S.	Professional S.	Personal S.
Treatment	-0.049	-0.069**	0.023*	0.019**	-0.028	-0.057**
	(0.032)	(0.027)	(0.011)	(0.009)	(0.018)	(0.021)
Wild Bootstrap P-value	0.352	0.148	0.156	0.129	0.196	0.047
Sharpened q-value	0.097	0.065	0.065	0.065	0.097	0.065
Control Mean	0.132	0.237	0.060	0.050	0.026	0.050
N	163	163	162	161	138	137

Panel II: Subordinates only

	Proportion Isolated		Department Density		Cohort Segregation	
Treatment	-0.061*	-0.073***	0.018*	0.020***	-0.023	-0.025
	(0.031)	(0.022)	(0.009)	(0.007)	(0.022)	(0.031)
Wild Bootstrap P-value	0.244	0.037	0.110	0.039	0.299	0.566
Sharpened q-value	0.066	0.022	0.066	0.024	0.137	0.170
Control Mean	0.136	0.178	0.046	0.038	0.043	0.105
N	161	161	160	159	120	119

Reported estimates are obtained from ordinary least squares (OLS) regressions. All dependent variables are constructed at the department level. Panel I provides estimated treatment effects using the full sample and Panel II subordinate sample. Constructing the department-level network measures for the leaders only sample is not feasible as this would produce sparse networks for which our outcomes are not well-defined. Regressions control for mean Raven's score and Eye Test score, average tenure, average age, proportion married, the average number of children and average tenure in the department, department size, the share of males in the department, and sector dummies. Standard errors are clustered at the firm level (unit of randomization), and wild bootstrapped p-values, adjusted for the small sample, and sharpened q-values are provided.

Table 6: Treatment Effects on Workplace Climate

Panel I: Full sample

	Workplace Quality		Relational Atmosphere		
	Workplace S.	Meritocratic Values	Collegial Dept.	Behavioral Norms	Prescriptive Norms
Treatment	0.268**	0.253**	0.212**	0.104	0.150
	(0.113)	(0.107)	(0.091)	(0.087)	(0.093)
Wild Bootstrap P-value	0.071	0.075	0.074	0.342	0.215
Sharpened q-value	0.059	0.059	0.059	0.085	0.059
Control Mean	0.000	-0.000	0.000	0.000	-0.000
N	2155	2155	2194	2183	2174

Panel II: Subordinates only

	Workplace Quality		Relational Atmosphere		
Treatment	0.320***	0.299***	0.238**	0.115	0.176*
	(0.104)	(0.100)	(0.090)	(0.089)	(0.093)
Wild Bootstrap P-value	0.014	0.026	0.051	0.305	0.154
Sharpened q-value	0.020	0.020	0.020	0.092	0.038
Control Mean	-0.052	-0.056	-0.033	0.001	-0.034
N	1772	1772	1804	1796	1789

Panel III: Leaders only

	Workplace Quality		Relational Atmosphere		
Treatment	-0.018	-0.030	0.082	0.062	-0.088
	(0.166)	(0.133)	(0.124)	(0.095)	(0.112)
Wild Bootstrap P-value	0.935	0.876	0.602	0.588	0.551
Sharpened q-value	1.000	1.000	1.000	1.000	1.000
Subordinate = Leader	0.001	0.000	0.060	0.501	0.000
Control Mean	0.255	0.271	0.160	-0.004	0.165
N	383	383	390	387	385

Reported estimates are obtained from ordinary least squares (OLS) regressions. Panel I provides estimated treatment effects using the full sample, Panel II, subordinate sample, and Panel III leader sample. Regressions control for Raven's score, Eye Test score, gender, age, marital status, number of children, tenure, department size, the share of males in the department, firm size and sector dummies. Standard errors are clustered at the firm level (unit of randomization). Wild bootstrapped p-values, adjusted for small sample, and sharpened q-values are provided.

Table 7: Treatment Effects on COVID-19 Related Well-Being

Panel I: Full sample

	Prefer to Work at Home	Feel Lonely	Not Connected to Colleagues	Not Connected to Leader	Increased Vice Consumption
Treatment	-0.063***	-0.008	0.009	-0.044**	0.008
	(0.020)	(0.025)	(0.025)	(0.017)	(0.008)
Wild Bootstrap P-value	0.027	0.817	0.780	0.034	0.486
Sharpened q-value	0.029	0.842	0.842	0.035	0.540
Control Mean	0.611	0.448	0.352	0.361	0.027
N	2150	2150	2150	2150	2150

Panel II: Subordinates only

	Prefer to Work at Home	Feel Lonely	Not Connected to Colleagues	Not Connected to Leader	Increased Vice Consumption
Treatment	-0.064**	-0.024	-0.007	-0.040**	0.009
	(0.026)	(0.024)	(0.024)	(0.017)	(0.009)
Wild Bootstrap P-value	0.091	0.469	0.808	0.057	0.489
Sharpened q-value	0.080	0.372	0.824	0.080	0.372
Control Mean	0.631	0.449	0.353	0.362	0.026
N	1767	1767	1767	1767	1767

Panel III: Leaders only

	Prefer to Work at Home	Feel Lonely	Not Connected to Colleagues	Not Connected to Leader	Increased Vice Consumption
Treatment	-0.088	0.068	0.110*	-0.057	-0.009
	(0.057)	(0.084)	(0.057)	(0.057)	(0.026)
Wild Bootstrap P-value	0.338	0.587	0.172	0.447	0.773
Sharpened q-value	0.527	0.541	0.527	0.541	0.804
Subordinate = Leader	0.738	0.274	0.028	0.775	0.541
Control Mean	0.512	0.440	0.344	0.354	0.033
N	383	383	383	383	383

Reported estimates are obtained from ordinary least squares (OLS) regressions. Panel I provides estimated treatment effects using the full sample, Panel II, subordinate sample, and Panel III leader sample. Regressions control for Raven's score, Eye Test score, gender, age, marital status, number of children, tenure, department size, the share of males in the department, firm size and sector dummies. Standard errors are clustered at the firm level (unit of randomization). Wild bootstrapped p-values, adjusted for small sample, and sharpened q-values are provided.

Table 8: Treatment Effects on Separation and Summary Indices of Outcomes

Panel I: Full sample

	Separation (Implementation)	Prosocial Behavior	Workplace Climate	Leadership Quality
Treatment	-0.022**	0.097***	0.198**	0.202**
	(0.008)	(0.020)	(0.089)	(0.083)
Wild Bootstrap P-value	0.029	0.002	0.098	0.053
Romano-Wolf P-value	0.100	0.100	0.084	0.100
Sharpened q-value	0.046	0.009	0.062	0.057
Control Mean	0.053	0.000	-0.002	0.000
N	3076	2233	2155	2194

Panel II: Subordinates only

	Separation (Implementation)	Prosocial Behavior	Workplace Climate	Leadership Quality
Treatment	-0.017*	0.095***	0.231**	0.216**
	(0.009)	(0.021)	(0.085)	(0.085)
Wild Bootstrap P-value	0.135	0.001	0.055	0.049
Romano-Wolf P-value	0.162	0.070	0.012	0.070
Sharpened q-value	0.080	0.005	0.059	0.059
Control Mean	0.053	-0.011	-0.037	-0.008
N	2547	1839	1772	1804

Panel III: Leaders only

	Separation (Implementation)	Prosocial Behavior	Workplace Climate	Leadership Quality
Treatment	-0.048**	0.086	-0.001	0.157
	(0.019)	(0.051)	(0.113)	(0.151)
Wild Bootstrap P-value	0.027	0.186	0.996	0.420
Romano-Wolf P-value	0.311	0.605	1.000	0.605
Sharpened q-value	0.122	0.388	0.993	0.594
Subordinate = Leader	0.116	0.861	0.000	0.660
Control Mean	0.057	0.053	0.169	0.037
N	529	394	383	390

Reported estimates are obtained from ordinary least squares (OLS) regressions. The outcomes are job separation and summary indices of outcomes in 3 domains. Separation is a binary indicator of job separation within the implementation period (November 1, 2020-June 30, 2021). A summary index is the mean of normalized values of component items in each outcome domain. The prosocial behavior index combines sabotage (reversed), trust, reciprocity, and fairness. The workplace climate index combines workplace satisfaction, meritocratic values, collegial department, and prescriptive and descriptive norms. The leadership quality index combines leader professionalism and leader empathy. Panel I provides estimated treatment effects using the full sample, Panel II, subordinate sample, and Panel III leader sample. Regressions control for Raven's score, Eye Test score, gender, age, marital status, number of children, tenure, department size, the share of males in the department, firm size, and sector fixed effects. Standard errors are clustered at the firm level (unit of randomization), and wild bootstrapped p-values, adjusted for the small sample, Romano-Wolf p-values, and sharpened q-values (computed using wild bootstrapped p-values) are provided.

Table 9: Treatment Effects on Leadership Quality and Own Empathy

Panel I: Full sample

	Leader Professionalism	Leader Empathy	Professional Help from Leader	Personal Help from Leader	Own Empathy
Treatment	0.201**	0.202**	0.029	-0.013	0.028
	(0.085)	(0.082)	(0.024)	(0.038)	(0.055)
Wild Bootstrap P-value	0.064	0.050	0.348	0.812	0.696
Sharpened q-value	0.078	0.078	0.301	0.626	0.626
Control Mean	0.000	0.000	0.632	0.535	0.000
N	2194	2194	1846	1846	2151

Panel II: Subordinates only

	Leader Professionalism	Leader Empathy	Professional Help from Leader	Personal Help from Leader	Own Empathy
Treatment	0.214**	0.217**	0.079***	0.010	0.034
	(0.088)	(0.082)	(0.026)	(0.039)	(0.054)
Wild Bootstrap P-value	0.059	0.043	0.065	0.835	0.616
Sharpened q-value	0.036	0.034	0.034	0.464	0.365
Control Mean	-0.005	-0.010	0.629	0.544	-0.008
N	1804	1804	1512	1512	1768

Panel III: Leaders only

	Leader Professionalism	Leader Empathy	Professional Help from Leader	Personal Help from Leader	Own Empathy
Treatment	0.181	0.132	-0.184***	-0.122**	-0.038
	(0.146)	(0.159)	(0.056)	(0.056)	(0.154)
Wild Bootstrap P-value	0.329	0.526	0.005	0.110	0.862
Sharpened q-value	0.297	0.455	0.019	0.094	0.617
Subordinate = Leader	0.798	0.549	0.000	0.027	0.610
Control Mean	0.025	0.049	0.646	0.494	0.039
N	390	390	334	334	383

Reported estimates are obtained from ordinary least squares (OLS) regressions. Panel I provides estimated treatment effects using the full sample, Panel II, subordinate sample, and Panel III leader sample. Regressions control for Raven's score, Eye Test score, gender, age, marital status, number of children, tenure, department size, the share of males in the department, firm size and sector dummies. Standard errors are clustered at the firm level (unit of randomization). Wild bootstrapped p-values, adjusted for small sample, and sharpened q-values are provided.

8 Figures

Figure 1: Timeline of the Trial

48
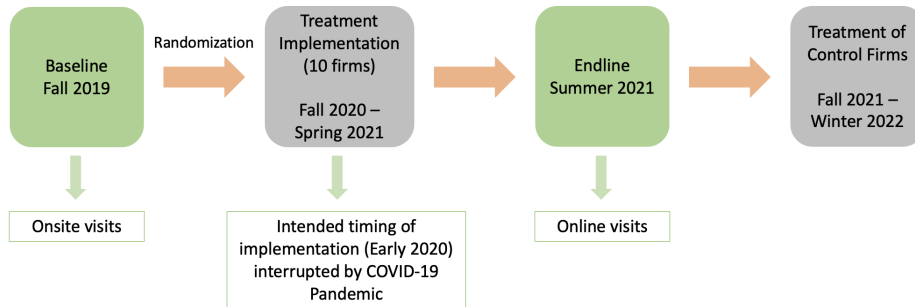
Figure 2: Depicted Theory of Change
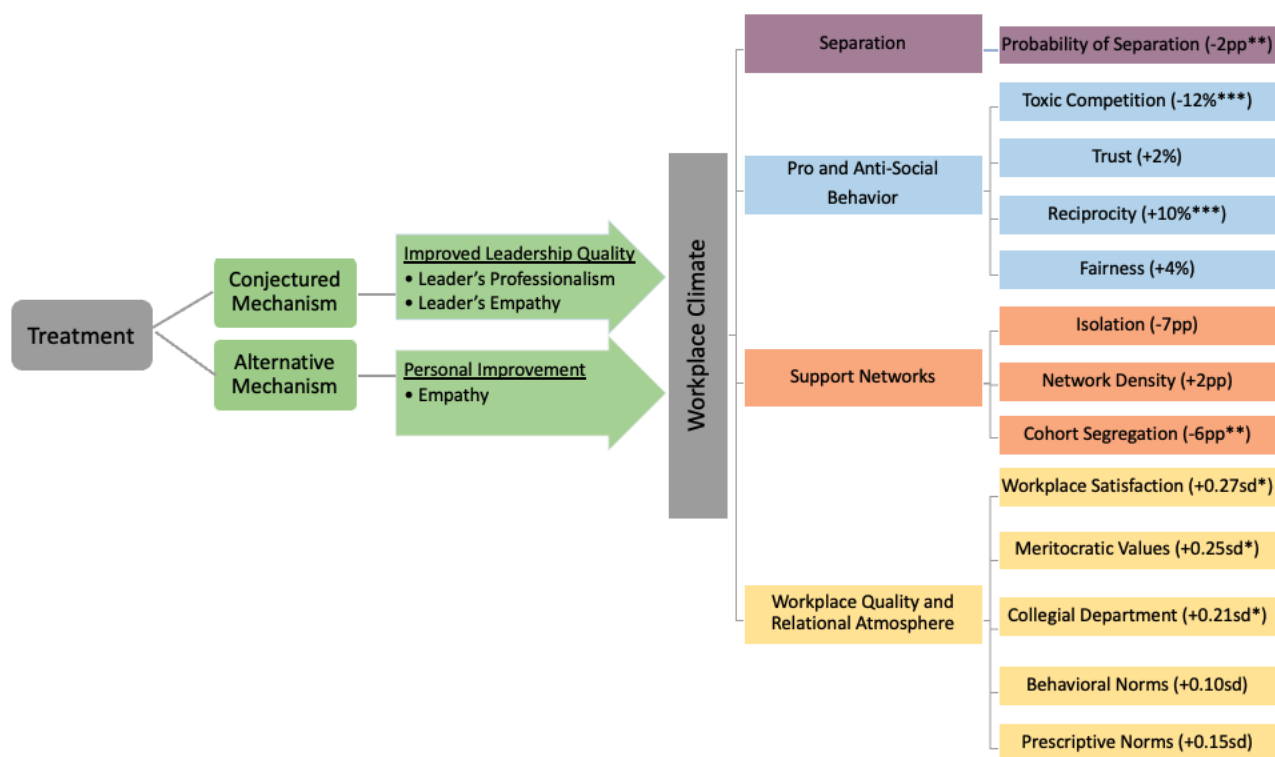
This figure depicts the conjectured theory of change. End outcomes are given along with the estimated treatment effects. Separation is a binary measure of employee separation within the implementation period. The implementation period refers to November 1, 2020-June 30, 2021. Effect sizes are reported as percentage point changes for employee separation and network outcomes, as percent changes for pro and anti-social behavior, and as standard deviation changes for workplace quality and relational atmosphere indicators. Indicated statistical significance levels are based on wild bootstrapped p-values.

Figure 3: Monthly Separation Rates
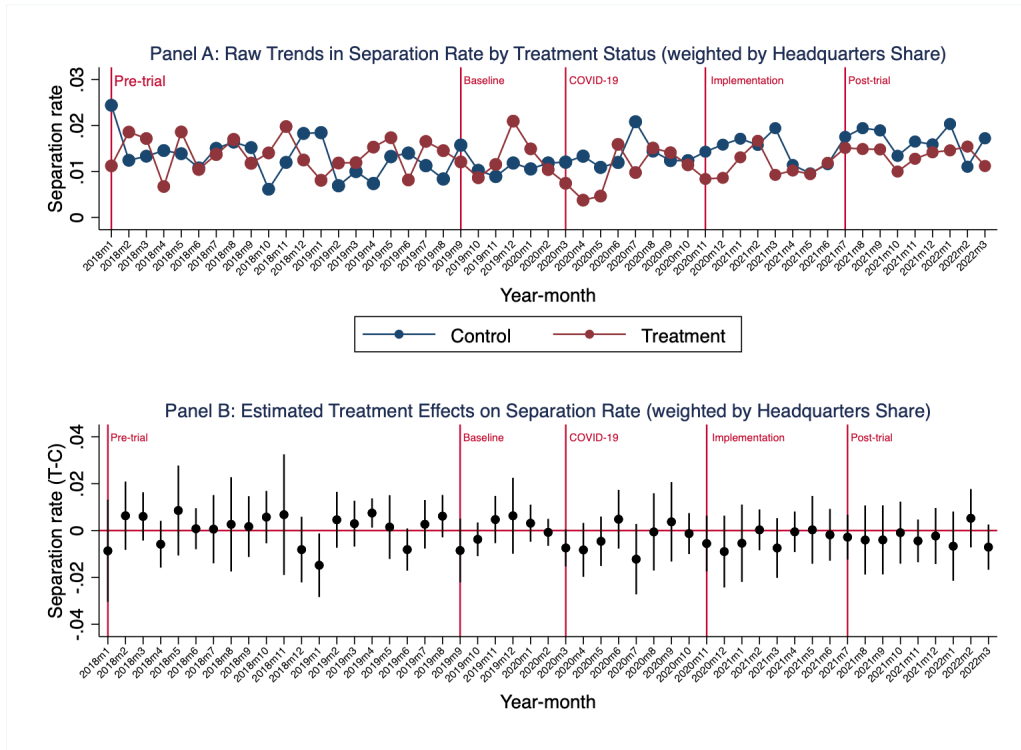
Panel A plots average monthly separation rates by treatment status, using the share of headquarters employees as weights. Panel B plots the estimated treatment effects on separation rates for the indicated months. Firm-level regressions control for sector fixed effects, with the share of headquarters employees used as sampling weights. 95% confidence intervals are based on robust standard errors.

Figure 4: Evaluation Design
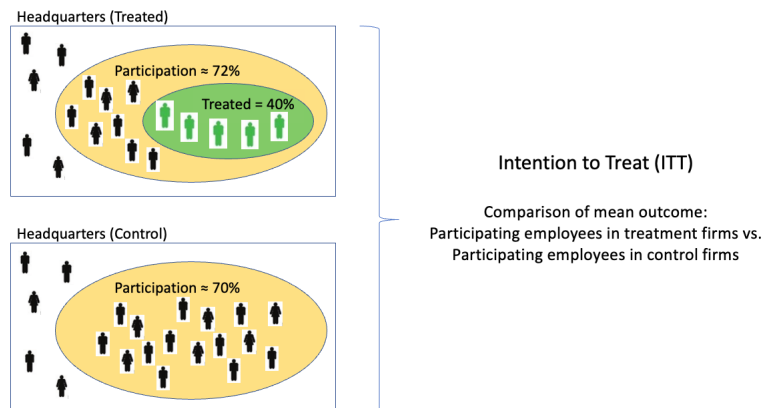
Participation refers to those who stated their willingness to participate in the study and signed the consent form. Percentage treated refers to the percentage who took part in the training program amongst those who participated.

Online Appendix: Not for Publication

A   Additional Tables and Figures

Table A.1: Local Average Treatment Effects

Panel I: ITT				
	Separation (Combined)	Prosocial Behavior	Workplace Climate	Leadership Quality
Treatment	-0.049***	0.097***	0.198**	0.202**
	(0.014)	(0.020)	(0.089)	(0.083)
N	2652	2233	2155	2194
Panel II: LATE				
Training	-0.152***	0.248***	0.483*	0.492**
	(0.053)	(0.083)	(0.270)	(0.238)
N	2652	2233	2155	2194

Reported estimates are obtained from OLS and IV 2SLS estimations. The outcomes are combined separation rates and summary indices of outcomes in 3 domains. Separation is a binary measure of separation in the implementation or post-firing ban period. The implementation period refers to November 1, 2020-June 30, 2021, and the post-decree period refers to July 1, 2021-November 30, 2021. Summary index is the mean of normalized values of component items in each domain. Regressions on combined separation rates (column 1) exclude the finance sector (3 firms). Panel I presents the intent-to-treat effects, and Panel II, local average treatment effects obtained from IV 2SLS estimations where participation in training is instrumented with assignment to treatment. Regressions control for Raven's score, Eye Test score, gender, age, marital status, tenure, number of children, department size, the share of males in the department, firm size and sector fixed effects. Standard errors are clustered at the firm level (unit of randomization).

To obtain promotion information, we asked HR officials to mark any headquarters employee who got a promotion (received a higher title along with more responsibility within the firm) within the period we specified. For the implementation period, we specified between November 1, 2020 and June 30, 2021 (8 months), and we received these data in July 2021. For the post-decree period, we specified between July 1, 2021 and November 30, 2021 (5 months), and we received these data in December 2021.

Table A.2 presents the estimated treatment effects on the likelihood of promotion for implementation and post-decree periods separately. We do not find any treatment effect on employees' promotion probabilities for subordinates or leaders in the implementation period. However, the treatment effect on promotions is negative for both subordinates and leaders but significantly larger and precisely estimated for the leader sample in the post-ban period. We estimate 0.13 percentage points lower promotions for leaders in treated corporations. Our intuition for this negative treatment effect is the following: Observe in column 1 of Table 3 that the treatment significantly lowered quits in the short term for both subordinates and leaders, much more so for the leaders. In the following few months, we should expect

some people to replace separated people via internal promotions, moving subordinates to leadership, and leaders to upper leadership positions. Since the need for replacement was higher for the control firms due to the higher number of separations, it may be natural to see more promotions in the control firms than in treatment firms. Our spillover results corroborate this intuition: Observe that we had found no short-term effect on separations in the nonparticipant sample. Consistent with this, we find no effect on promotions in this sample for the post-ban period. As shown in Panel IV, we estimate precise null effects on separation and promotions for the nonparticipant sample, both in the implementation and post-firing ban period.

Table A.2: Treatment Effect on Promotions

Panel I: Full sample

	Promotion (Implementation)		Promotion (Post-decree)	
Treatment	0.007	0.018	-0.056	-0.055
	(0.022)	(0.020)	(0.034)	(0.035)
Wild Bootstrap P-value	0.808	0.516	0.206	0.247
Control Mean	0.068	0.068	0.089	0.089
N	3076	3076	2537	2537
Covariates	Yes	No	Yes	No

Panel II: Subordinates only

Treatment	0.002	0.012	-0.042	-0.044
	(0.026)	(0.023)	(0.031)	(0.031)
Wild Bootstrap P-value	0.945	0.649	0.298	0.303
Control Mean	0.069	0.069	0.076	0.076
N	2547	2547	2102	2102
Covariates	Yes	No	Yes	No

Panel III: Leaders only

Treatment	0.039	0.047	-0.129**	-0.105*
	(0.029)	(0.028)	(0.053)	(0.056)
Wild Bootstrap P-value	0.395	0.251	0.082	0.159
Subordinate = Leader	0.362	0.295	0.001	0.049
Control Mean	0.060	0.060	0.156	0.156
N	529	529	435	435
Covariates	Yes	No	Yes	No

Panel IV: Non-participant sample

Treatment	0.022	0.022	-0.013	-0.021
	(0.013)	(0.015)	(0.016)	(0.025)
Wild Bootstrap P-value	0.237	0.242	0.549	0.523
Control Mean	0.028	0.028	0.037	0.037
N	1240	1240	1059	1059
Covariates	Yes	No	Yes	No

Reported estimates are obtained from ordinary least squares (OLS) regressions. Regressions covering the post-firing ban period (columns 3 and 4) exclude the finance sector (3 firms). The implementation period refers to November 1, 2020-June 30, 2021, and the post-decree period refers to July 1, 2021-November 30, 2021. Promotion is a binary measure of internal promotion. Panel I provides estimated treatment effects using the full sample, Panel II, subordinate sample, Panel III leader sample, and Panel IV non-participant sample. Regressions control for Raven's score, Eye Test score, gender, age, marital status, number of children, tenure, department size, the share of males in the department, firm size and sector fixed effects. Non-participant sample regressions control for gender, department size, share of males in the department firm size and sector dummies. Standard errors are clustered at the firm level (unit of randomization) and wild bootstrapped p-values, adjusted for small sample, are provided.

Table A.3: Predictive Validity of Sabotage Game

Panel I: Full sample

	Sabotage Behavior (Binary)					
Raven's Score (IQ)	-0.061***					
	(0.006)					
Eyes Score (Emotional Intelligence)		-0.006				
		(0.008)				
Trust: sent amont			-0.001*			
			(0.000)			
Reciprocity				-0.047		
				(0.058)		
Competitiveness (d)					-0.103***	
					(0.030)	
Cooperation						-0.005***
						(0.002)

Panel II: Control firms only

	Sabotage Behavior (Binary)					
Raven's Score (IQ)	-0.049***					
	(0.007)					
Eyes Score (Emotional Intelligence)		-0.004				
		(0.009)				
Trust: sent amont			-0.001***			
			(0.000)			
Reciprocity				-0.065		
				(0.041)		
Competitiveness (d)					-0.058*	
					(0.032)	
Cooperation						-0.004*
						(0.003)

Reported estimates are obtained from logistic regressions where the binary dependent variable takes the value of 1 if the person used non-zero amount of sabotage endowment, and zero otherwise. Panel I presents results for the full sample, and Panel II, only for the Control firms. Standard errors are clustered at the firm level (unit of randomization).

Table A.4: Balance at Amended Baseline

	N	Control Mean	Treatment Mean	Difference (T-C)	P-value of Difference
Male	2332	0.734	0.671	-0.087	0.137
Age	2257	36.524	35.519	-0.456	0.468
Married	2235	0.709	0.655	-0.055	0.086*
Tenure (yearly)	2204	7.657	7.023	0.251	0.785
Raven's Score (IQ)	2130	0.024	0.093	0.063	0.410
Eyes Score (Emotional Intelligence)	2119	0.037	0.007	0.027	0.760

Reported statistics use the total baseline sample amended by baseline data collected in Fall 2020. This table presents the balance of individual-level variables. Cognitive tests are standardized. P-values are obtained by controlling for randomization strata (sector). Standard errors are clustered at the firm level (unit of randomization).

Table A.5: Balance at Baseline: Subordinates and Leaders

Panel I: Subordinates only

	N	Control Mean	Treatment Mean	Difference (T-C)	P-value of Difference
Male	1635	0.619	0.543	-0.084	0.117
Age	1636	34.818	34.577	-0.012	0.984
Married	1483	0.645	0.586	-0.063	0.105
Tenure (yearly)	1473	6.672	7.029	0.308	0.669
Leader Age	906	42.102	41.334	-0.592	0.615
Under Male Leader	1140	0.734	0.718	-0.021	0.620
Raven's Score (IQ)	1522	-0.040	0.044	0.027	0.738
Eyes Score (Emotional Intelligence)	1526	-0.012	-0.237	-0.122	0.194
Risk Attitude	1484	-0.024	-0.002	-0.048	0.339
Competitiveness	1478	0.486	0.469	-0.017	0.468
Cooperation	1484	-0.029	0.031	0.031	0.613
Workplace Satisfaction	1085	-0.069	0.035	0.167	0.061*
Collegial Department	1144	-0.045	-0.116	0.008	0.908
Meritocratic Values	1057	-0.097	0.093	0.283	0.004***
Behavioral Norms	1088	-0.029	0.019	0.105	0.278
Prescriptive Norms	970	-0.050	-0.019	0.070	0.488
Leader Quality	1010	-0.020	0.016	0.076	0.282
Nominated Leader as Professional Help	1231	0.582	0.642	0.065	0.134
Nominated Leader as Personal Help	1231	0.455	0.485	0.060	0.151

Panel II: Leaders only

	N	Control Mean	Treatment Mean	Difference (T-C)	P-value of Difference
Male	353	0.711	0.672	-0.029	0.500
Age	353	41.983	41.444	-0.695	0.424
Married	316	0.792	0.803	0.012	0.765
Tenure (yearly)	312	10.559	10.615	-0.200	0.909
Leader Age	154	44.012	46.268	2.803	0.086*
Under Male Leader	257	0.786	0.675	-0.089	0.153
Raven's Score (IQ)	330	0.214	0.232	-0.033	0.814
Eyes Score (Emotional Intelligence)	332	-0.174	-0.304	-0.099	0.596
Risk Attitude	321	0.115	0.051	-0.071	0.441
Competitiveness	319	0.579	0.613	0.006	0.867
Cooperation	321	0.140	0.157	-0.020	0.858
Workplace Satisfaction	246	0.267	0.301	0.025	0.819
Collegial Department	258	0.175	0.030	-0.116	0.129
Meritocratic Values	230	0.412	0.302	-0.094	0.421
Behavioral Norms	245	0.122	0.049	-0.099	0.350
Prescriptive Norms	224	0.187	0.165	-0.029	0.749
Leader Quality	224	0.077	-0.060	-0.091	0.429
Nominated Leader as Professional Help	261	0.439	0.486	0.057	0.418
Nominated Leader as Personal Help	261	0.447	0.377	-0.058	0.490

Reported statistics use the Fall 2019 baseline sample. Panel I presents the balance of individual-level variables for the subordinates, and Panel II for the leaders. Cognitive tests, risk attitude, cooperation and survey measures are standardized. P-values are obtained by controlling for randomization strata (sector). Standard errors are clustered at the firm level (unit of randomization).

Table A.6: Correlates of Separation

	Separation (Implementation and Post-decree)								
Male	-0.025**								
	(0.010)								
Raven's Score (IQ)		0.010**							
		(0.004)							
Eyes Score (Emotional Intelligence)			0.007						
			(0.005)						
Married				-0.048***					
				(0.010)					
Number of children					-0.033***				
					(0.006)				
Tenure (years)						-0.005***			
						(0.001)			
Log Firm size							-0.021		
							(0.025)		
Log Department size								-0.004	
								(0.013)	
Department Male Share									-0.030
									(0.047)
N	4315	4315	4315	4315	4315	4315	4315	4315	4315

Reported estimates are obtained from ordinary least squares (OLS) regressions. The outcome is a binary measure of separation in the implementation or post-firing ban period. The implementation period refers to November 1, 2020-June 30, 2021, and the post-decree period refers to July 1, 2021-November 30, 2021. Regressions control for sector fixed effects. Standard errors are clustered at the firm level (unit of randomization).

Table A.7: Correlates of Prosocial Behavior

	Pro-Social Behavior								
Male	0.066**								
	(0.025)								
Raven's Score (IQ)		0.032***							
		(0.008)							
Eyes Score (Emotional Intelligence)			0.002						
			(0.008)						
Married				0.020					
				(0.019)					
Number of children					0.026*				
					(0.014)				
Tenure (years)						-0.001			
						(0.002)			
Log Firm size							-0.067**		
							(0.027)		
Log Department size								-0.032**	
								(0.013)	
Department Male Share									0.064
									(0.076)
N	2233	2233	2233	2233	2233	2233	2233	2233	2233

Reported estimates are obtained from ordinary least squares (OLS) regressions. The outcome is a summary index of prosocial behavior, computed as the mean of normalized values of experimentally elicited measures of pro and antisocial behavior. Regressions control for sector fixed effects. Standard errors are clustered at the firm level (unit of randomization).

Table A.8: Correlates of Workplace Climate

	Workplace Climate								
Male	0.096*								
	(0.046)								
Raven's Score (IQ)		0.001							
		(0.017)							
Eyes Score (Emotional Intelligence)			0.000						
			(0.014)						
Married				0.045					
				(0.034)					
Number of children					0.057**				
					(0.022)				
Tenure (years)						0.004			
						(0.003)			
Log Firm size							-0.006		
							(0.083)		
Log Department size								-0.106**	
								(0.039)	
Department Male Share									0.043
									(0.167)
N	2155	2155	2155	2155	2155	2155	2155	2155	2155

Reported estimates are obtained from ordinary least squares (OLS) regressions. The outcome is a summary index of workplace climate, computed as the mean of normalized values of survey measures of workplace quality and relational atmosphere. Regressions control for sector fixed effects. Standard errors are clustered at the firm level (unit of randomization).

Table A.9: Treatment Effects on Pro and Antisocial Behavior (without covariates)

Panel I: Full sample

	Sabotage	Trust	Reciprocity	Ultimatum Offer	Min. Accepted
Treatment	-3.259***	0.792	0.029***	3.408	-2.067
	(0.564)	(1.644)	(0.010)	(2.074)	(1.435)
Wild Bootstrap P-value	0.000	0.753	0.013	0.191	0.232
Control Mean	23.128	52.149	0.371	101.145	97.966
N	2233	2233	2233	2233	2233

Panel II: Subordinates only

	Sabotage	Trust	Reciprocity	Ultimatum Offer	Min. Accepted
Treatment	-3.294***	0.163	0.031***	2.979	-2.601
	(0.614)	(1.562)	(0.011)	(2.282)	(1.685)
Wild Bootstrap P-value	0.000	0.949	0.034	0.299	0.210
Control Mean	22.678	51.443	0.362	101.086	98.375
N	1839	1839	1839	1839	1839

Panel III: Leaders only

	Sabotage	Trust	Reciprocity	Ultimatum Offer	Min. Accepted
Treatment	-4.122**	1.639	0.013	3.957	0.188
	(1.476)	(2.022)	(0.026)	(2.855)	(4.560)
Wild Bootstrap P-value	0.025	0.520	0.690	0.254	0.969
Subordinate = Leader	0.626	0.434	0.560	0.779	0.598
Control Mean	25.344	55.628	0.415	101.437	95.949
N	394	394	394	394	394

Reported estimates are obtained from ordinary least squares (OLS) regressions. The dependent variables are: Sabotage: the amount of sabotage endowment used, Trust: the amount of money sent to the anonymous receiver, Reciprocity: average fraction sent back to the sender, Ultimatum offered: the amount offered by the proposer, and Min. Accepted: the minimum acceptable offer reported. Panel I provides estimated treatment effects using the full sample, Panel II, subordinate sample, and Panel III leader sample. Regressions only control for sector dummies. Standard errors are clustered at the firm level (unit of randomization) and wild bootstrapped p-values, adjusted for small sample, are provided.

Table A.10: Treatment Effects on Support Networks (without covariates)

Panel I: Full sample

	Proportion Isolated		Department Density		Cohort Segregation	
	Professional S.	Personal S.	Professional S.	Personal S.	Professional S.	Personal S.
Treatment	-0.055*	-0.086***	0.030	0.024	-0.032	-0.074***
	(0.031)	(0.025)	(0.021)	(0.016)	(0.019)	(0.019)
Wild Bootstrap P-value	0.262	0.018	0.252	0.253	0.152	0.008
Control Mean	0.132	0.237	0.060	0.050	0.026	0.050
N	163	163	162	161	138	137

Panel II: Subordinates only

Treatment	-0.068**	-0.091***	0.024	0.027	-0.013	-0.031
	(0.030)	(0.027)	(0.016)	(0.016)	(0.023)	(0.021)
Wild Bootstrap P-value	0.162	0.022	0.240	0.169	0.634	0.205
Control Mean	0.136	0.178	0.046	0.038	0.043	0.105
N	161	161	160	159	120	119

Reported estimates are obtained from ordinary least squares (OLS) regressions. All dependent variables are constructed at the department level. Panel I provides estimated treatment effects using the full sample, and Panel II, subordinate sample. Regressions only control for sector dummies. Standard errors are clustered at the firm level (unit of randomization) and wild bootstrapped p-values, adjusted for small sample, are provided.

Table A.11: Treatment Effects on Perceived Workplace Climate (without covariates)

Panel I: Full sample

	Workplace Quality		Relational Atmosphere		
	Workplace S.	Meritocratic Values	Collegial Dept.	Behavioral Norms	Prescriptive Norms
Treatment	0.224**	0.215*	0.201**	0.117	0.160*
	(0.106)	(0.104)	(0.090)	(0.083)	(0.085)
Wild Bootstrap P-value	0.081	0.110	0.074	0.248	0.123
Control Mean	0.000	-0.000	0.000	0.000	-0.000
N	2155	2155	2194	2183	2174

Panel II: Subordinates only

Treatment	0.272**	0.258**	0.223**	0.126	0.178*
	(0.100)	(0.103)	(0.089)	(0.087)	(0.087)
Wild Bootstrap P-value	0.019	0.070	0.058	0.239	0.099
Control Mean	-0.052	-0.056	-0.033	0.001	-0.034
N	1772	1772	1804	1796	1789

Panel III: Leaders only

Treatment	-0.046	-0.050	0.075	0.063	0.023
	(0.136)	(0.126)	(0.100)	(0.091)	(0.110)
Wild Bootstrap P-value	0.780	0.768	0.504	0.557	0.857
Subordinate = Leader	0.000	0.001	0.013	0.414	0.093
Control Mean	0.255	0.271	0.160	-0.004	0.165
N	383	383	390	387	385

Reported estimates are obtained from ordinary least squares (OLS) regressions. Panel I provides estimated treatment effects using the full sample, Panel II, subordinate sample, and Panel III leader sample. Regressions only control for sector dummies. Standard errors are clustered at the firm level (unit of randomization) and wild bootstrapped p-values, adjusted for small sample, are provided.

Table A.12: Treatment Effects on COVID-19 Related Well-Being (without covariates)

Panel I: Full sample

	Prefer to Work at Home	Feel Lonely	Not Connected to Colleagues	Not Connected to Leader	Increased Vice Consumption
Treatment	-0.039	0.011	0.025	-0.038**	0.007
	(0.030)	(0.021)	(0.020)	(0.017)	(0.008)
Wild Bootstrap P-value	0.270	0.715	0.308	0.068	0.486
Control Mean	0.611	0.448	0.352	0.361	0.027
N	2150	2150	2150	2150	2150

Panel II: Subordinates only

Treatment	-0.035	-0.002	0.006	-0.032*	0.004
	(0.036)	(0.020)	(0.021)	(0.018)	(0.008)
Wild Bootstrap P-value	0.425	0.942	0.802	0.116	0.650
Control Mean	0.631	0.449	0.353	0.362	0.026
N	1767	1767	1767	1767	1767

Panel III: Leaders only

Treatment	-0.046	0.069	0.110**	-0.070	0.015
	(0.043)	(0.071)	(0.045)	(0.051)	(0.018)
Wild Bootstrap P-value	0.392	0.532	0.086	0.258	0.455
Subordinate = Leader	0.859	0.325	0.019	0.483	0.553
Control Mean	0.512	0.440	0.344	0.354	0.033
N	383	383	383	383	383

Reported estimates are obtained from ordinary least squares (OLS) regressions. Panel I provides estimated treatment effects using the full sample, Panel II, subordinate sample, and Panel III leader sample. Regressions only control for sector dummies. Standard errors are clustered at the firm level (unit of randomization) and wild bootstrapped p-values, adjusted for small sample, are provided.

Table A.13: Treatment Effects on Summary Indices (without covariates)

Panel I: Full sample

	Pro-Social Behavior	Workplace Climate	Leadership Quality
Treatment	0.100***	0.184**	0.187**
	(0.021)	(0.080)	(0.089)
Wild Bootstrap P-value	0.005	0.071	0.086
Control Mean	0.000	-0.002	0.000
N	2233	2155	2194

Panel II: Subordinates only

Treatment	0.099***	0.213**	0.199**
	(0.021)	(0.076)	(0.092)
Wild Bootstrap P-value	0.009	0.036	0.086
Control Mean	-0.011	-0.037	-0.008
N	1839	1772	1804

Panel III: Leaders only

Treatment	0.093**	0.012	0.146
	(0.044)	(0.095)	(0.116)
Wild Bootstrap P-value	0.101	0.901	0.284
Control Mean	0.053	0.169	0.037
N	394	383	390

Reported estimates are obtained from ordinary least squares (OLS) regressions. The outcomes are summary indices of outcomes in 3 domains. Summary index is the mean of normalized values of component items in each domain. Panel I provides estimated treatment effects using the full sample, Panel II, subordinate sample, and Panel III leader sample. Regressions control for sector fixed effects. Standard errors are clustered at the firm level (unit of randomization) and wild bootstrapped p-values, adjusted for small sample, are provided.

Table A.14: Treatment Effects on Summary Indices: Firm-level Regressions

	Separation (Implementation)	Prosocial Behavior	Workplace Climate	Leadership Quality
Treatment	-0.029	0.092***	0.170*	0.188*
	(0.018)	(0.028)	(0.091)	(0.093)
Control Mean	0.068	0.002	-0.026	-0.056
N	20	20	20	20

Reported estimates are obtained from firm-level ordinary least squares (OLS) regressions. The outcomes are separation and summary indices of outcomes in 3 domains. Separation is a binary measure of implementation period separation. The implementation period refers to November 1, 2020-June 30, 2021. Summary index is the mean of normalized values of component items in each domain. Regressions control for sector fixed effects. Robust standard errors are provided.

Table A.15: Association between Separation and Workplace Climate

	Separation (Implementation and Post-decree)						
Workplace Satisfaction	-0.044***						
	(0.006)						
Meritocratic Values		-0.033***					
		(0.005)					
Collegial Department			-0.037***				
			(0.008)				
Behavioral Norms				-0.015*			
				(0.008)			
Prescriptive Norms					-0.017**		
					(0.007)		
Leader Professionalism						-0.028***	
						(0.008)	
Leader Empathy							-0.024**
							(0.010)
N	2149	2149	2187	2176	2167	2187	2187

Reported estimates are obtained from ordinary least squares (OLS) regressions. The outcome is a binary measure of separation in the implementation or post-firing ban period. The implementation period refers to November 1, 2020-June 30, 2021, and the post-decree period refers to July 1, 2021-November 30, 2021. Regressions control for sector fixed effects. Standard errors are clustered at the firm level (unit of randomization). All survey measures are standardized.

Table A.16: Treatment Effects on Employee Separation

Panel I: Full sample

	Separation (Implementation)			Separation (Post-decree)		
Treatment	-0.023**	-0.016	-0.016	-0.029***	-0.015	-0.015
	(0.009)	(0.012)	(0.012)	(0.009)	(0.013)	(0.013)
Wild Bootstrap P-value	0.025	0.237	0.237	0.024	0.408	0.408
Control Mean	0.049	0.049	0.049	0.067	0.067	0.067
N	2653	2653	2653	2537	2537	2537
Covariates	Yes	Yes	No	Yes	Yes	No

Panel II: Subordinates only

Treatment	-0.018*	-0.010	-0.010	-0.034***	-0.018	-0.018
	(0.009)	(0.012)	(0.012)	(0.010)	(0.015)	(0.015)
Wild Bootstrap P-value	0.096	0.474	0.474	0.019	0.379	0.379
Control Mean	0.047	0.047	0.047	0.067	0.067	0.067
N	2199	2199	2199	2102	2102	2102
Covariates	Yes	Yes	No	Yes	Yes	No

Panel III: Leaders only

Treatment	-0.043*	-0.042*	-0.042*	-0.011	-0.002	-0.002
	(0.021)	(0.021)	(0.021)	(0.023)	(0.025)	(0.025)
Wild Bootstrap P-value	0.065	0.064	0.064	0.703	0.945	0.945
Subordinate = Leader	0.194	0.153	0.153	0.331	0.580	0.580
Control Mean	0.057	0.057	0.057	0.065	0.065	0.065
N	454	454	454	435	435	435
Covariates	Yes	Yes	No	Yes	Yes	No

Panel IV: Non-participant sample

Treatment	-0.023	-0.022	-0.022	-0.004	-0.002	-0.002
	(0.022)	(0.021)	(0.021)	(0.009)	(0.009)	(0.009)
Wild Bootstrap P-value	0.700	0.585	0.585	0.744	0.855	0.855
Control Mean	0.061	0.061	0.061	0.043	0.043	0.043
N	1115	1115	1115	1059	1059	1059
Covariates	Yes	Yes	No	Yes	Yes	No

Reported estimates are obtained from ordinary least squares (OLS) regressions. The implementation period refers to November 1, 2020-June 30, 2021, and the post-decree period refers to July 1, 2021-November 30, 2021. All regressions exclude the finance sector (3 firms), all of which (control and treated) had received the treatment by the time we collected the post-decree data (December 2021). Panel I provides estimated treatment effects using the full sample, Panel II, subordinate sample, Panel III leader sample, and Panel IV non-participant sample. Regressions in columns 1 and 4 control for Raven's score, Eye Test score, gender, age, marital status, number of children, tenure, department size, the share of males in the department, and log firm size. Regressions in columns 2 and 5 control for department size, the share of males in the department, and log firm size. Non-participant sample regressions in columns 1 and 4 control for gender, department size, share of males in the department, and log firm size. All regressions control for sector fixed effects. Standard errors are clustered at the firm level (unit of randomization) and wild bootstrapped p-values, adjusted for small sample, are provided. The separation status of 13 employees is missing in the data.

Table A.17: Treatment Effects on Post-Decree Layoffs and Quits

Panel I: Full sample

	(July 2021-November 2021)	
	Layoffs	Quits
Treatment	-0.007	-0.018
	(0.009)	(0.014)
Wild Bootstrap P-value	0.558	0.264
Control Mean	0.012	0.055
N	2537	2537

Panel II: Subordinates only

	Layoffs	Quits
Treatment	-0.008	-0.023
	(0.009)	(0.016)
Wild Bootstrap P-value	0.527	0.229
Control Mean	0.012	0.056
N	2102	2102

Panel III: Leaders only

	Layoffs	Quits
Treatment	-0.004	-0.001
	(0.011)	(0.019)
Wild Bootstrap P-value	0.805	0.965
Subordinate = Leader	0.694	0.355
Control Mean	0.013	0.052
N	435	435

Reported estimates are obtained from ordinary least squares (OLS) regressions. Regressions cover the post-firing ban period (July 1, 2021-November 30, 2021) and exclude the finance sector (3 firms). Panel I provides estimated treatment effects using the full sample, Panel II, subordinate sample, and Panel III leader sample. Regressions control for Raven's score, Eye Test score, gender, age, marital status, number of children, tenure, department size, the share of males in the department, firm size and sector fixed effects. Standard errors are clustered at the firm level (unit of randomization) and wild bootstrapped p-values, adjusted for small sample, are provided.

Table A.18: Heterogeneous Treatment Effects by Tenure

Panel I: Full sample	Separation (Combined)	Prosocial Behavior	Workplace Climate	Leadership Quality
Treatment	-0.057***	0.092**	0.262***	0.288***
	(0.017)	(0.037)	(0.091)	(0.097)
Tenure	-0.001	-0.003	0.001	0.003
	(0.001)	(0.002)	(0.004)	(0.006)
Treatment × Tenure	0.001	0.001	-0.009	-0.012
	(0.002)	(0.004)	(0.006)	(0.008)
Wild Bootstrap P-value	0.544	0.871	0.131	0.163
Control Mean	0.113	0.000	-0.002	0.000
N	2652	2233	2155	2194
Panel II: Subordinates only				
Treatment	-0.055**	0.091**	0.283***	0.299***
	(0.021)	(0.036)	(0.085)	(0.095)
Tenure	-0.002**	-0.001	-0.001	0.003
	(0.001)	(0.002)	(0.004)	(0.007)
Treatment × Tenure	0.001	0.001	-0.008	-0.013
	(0.002)	(0.004)	(0.005)	(0.008)
Wild Bootstrap P-value	0.624	0.921	0.181	0.124
Control Mean	0.112	-0.011	-0.037	-0.008
N	2198	1839	1772	1804
Panel III: Leaders only				
Treatment	-0.089	0.061	0.104	0.245
	(0.062)	(0.078)	(0.158)	(0.159)
Tenure	0.001	-0.007	0.006	0.000
	(0.004)	(0.006)	(0.007)	(0.008)
Treatment × Tenure	0.004	0.003	-0.011	-0.009
	(0.006)	(0.008)	(0.011)	(0.011)
Wild Bootstrap P-value	0.591	0.751	0.425	0.454
Control Mean	0.118	0.053	0.169	0.037
N	454	394	383	390

Reported estimates are obtained from ordinary least squares (OLS) regressions. The outcomes are separation and summary indices of outcomes in 3 domains. Separation is a binary measure of separation in the implementation or post-firing ban period. The implementation period refers to November 1, 2020-June 30, 2021, and the post-decree period refers to July 1, 2021-November 30, 2021. Summary index is the mean of normalized values of component items in each domain. Regressions on separation exclude the finance sector (3 firms). Panel I provides estimated treatment effects using the full sample, Panel II, subordinate sample, and Panel III leader sample. Regressions control for Raven's score, Eye Test score, gender, age, marital status, number of children, department size, the share of males in the department, firm size and sector fixed effects. Standard errors are clustered at the firm level (unit of randomization) and wild bootstrapped p-values, adjusted for small sample, are provided for the interaction coefficient.

Table A.19: Heterogeneous Treatment Effects by Gender

Panel I: Full sample	Separation (Combined)	Prosocial Behavior	Workplace Climate	Leadership Quality
Treatment	-0.033	0.082*	0.280**	0.287**
	(0.023)	(0.043)	(0.109)	(0.102)
Male	0.006	0.052	0.139**	0.109
	(0.014)	(0.037)	(0.063)	(0.067)
Treatment × Male	-0.024	0.023	-0.120	-0.124
	(0.027)	(0.047)	(0.085)	(0.089)
Wild Bootstrap P-value	0.424	0.653	0.213	0.224
Control Mean	0.113	0.000	-0.002	0.000
N	2652	2233	2155	2194
Panel II: Subordinates only				
Treatment	-0.036	0.100**	0.310***	0.281**
	(0.024)	(0.038)	(0.105)	(0.098)
Male	-0.006	0.065*	0.133*	0.108
	(0.020)	(0.032)	(0.068)	(0.074)
Treatment × Male	-0.018	-0.008	-0.119	-0.098
	(0.027)	(0.042)	(0.092)	(0.106)
Wild Bootstrap P-value	0.501	0.843	0.262	0.422
Control Mean	0.112	-0.011	-0.037	-0.008
N	2198	1839	1772	1804
Panel III: Leaders only				
Treatment	-0.007	-0.057	0.036	0.299
	(0.068)	(0.128)	(0.176)	(0.231)
Male	0.075	-0.032	0.100	0.063
	(0.078)	(0.099)	(0.086)	(0.162)
Treatment × Male	-0.058	0.192	-0.049	-0.192
	(0.103)	(0.135)	(0.155)	(0.204)
Wild Bootstrap P-value	0.593	0.238	0.776	0.391
Control Mean	0.118	0.053	0.169	0.037
N	454	394	383	390

Reported estimates are obtained from ordinary least squares (OLS) regressions. The outcomes are separation and summary indices of outcomes in 3 domains. Separation is a binary measure of separation in the implementation or post-firing ban period. The implementation period refers to November 1, 2020-June 30, 2021, and the post-decree period refers to July 1, 2021-November 30, 2021. Summary index is the mean of normalized values of component items in each domain. Regressions on separation exclude the finance sector (3 firms). Panel I provides estimated treatment effects using the full sample, Panel II, subordinate sample, and Panel III leader sample. Regressions control for Raven's score, Eye Test score, age, marital status, number of children, tenure, department size, the share of males in the department, firm size and sector fixed effects. Standard errors are clustered at the firm level (unit of randomization) and wild bootstrapped p-values, adjusted for small sample, are provided for the interaction coefficient.

Table A.20: Heterogeneous Treatment Effects by Leader Gender

Panel I: Full sample	Separation (Combined)	Prosocial Behavior	Workplace Climate	Leadership Quality
Treatment	-0.021	0.101***	0.352**	0.317*
	(0.037)	(0.027)	(0.148)	(0.175)
Male Leader	-0.026	0.014	0.253**	0.240
	(0.031)	(0.022)	(0.114)	(0.149)
Treatment × Male Leader	-0.037	-0.003	-0.197	-0.132
	(0.039)	(0.031)	(0.156)	(0.176)
Wild Bootstrap P-value	0.358	0.939	0.355	0.565
Control Mean	0.113	0.000	-0.002	0.000
N	1527	1773	1805	1837
Panel II: Subordinates only				
Treatment	-0.025	0.112***	0.435***	0.370*
	(0.046)	(0.034)	(0.145)	(0.189)
Male Leader	-0.048	0.019	0.315**	0.292
	(0.030)	(0.033)	(0.112)	(0.184)
Treatment × Male Leader	-0.046	-0.022	-0.258	-0.192
	(0.048)	(0.040)	(0.160)	(0.216)
Wild Bootstrap P-value	0.400	0.634	0.235	0.510
Control Mean	0.112	-0.011	-0.037	-0.008
N	1249	1451	1479	1505
Panel III: Leaders only				
Treatment	0.020	-0.037	-0.151	0.136
	(0.047)	(0.081)	(0.181)	(0.317)
Male Leader	0.166*	-0.077	-0.179	0.084
	(0.082)	(0.100)	(0.129)	(0.207)
Treatment × Male Leader	-0.015	0.175	0.118	0.039
	(0.077)	(0.114)	(0.188)	(0.315)
Wild Bootstrap P-value	0.875	0.113	0.660	0.926
Control Mean	0.118	0.053	0.169	0.037
N	278	322	326	332

Reported estimates are obtained from ordinary least squares (OLS) regressions. The outcomes are separation and summary indices of outcomes in 3 domains. Separation is a binary measure of separation in the implementation or post-firing ban period. The implementation period refers to November 1, 2020-June 30, 2021, and the post-decree period refers to July 1, 2021-November 30, 2021. Summary index is the mean of normalized values of component items in each domain. Regressions on separation exclude the finance sector (3 firms). Panel I provides estimated treatment effects using the full sample, Panel II, subordinate sample, and Panel III leader sample. Regressions control for Raven's score, Eye Test score, gender, age, marital status, number of children, tenure, department size, the share of males in the department, firm size and sector fixed effects. Standard errors are clustered at the firm level (unit of randomization) and wild bootstrapped p-values, adjusted for small sample, are provided for the interaction coefficient.

Table A.21: Association between Leadership Quality and Workplace Climate, Control Sample

	Leadership Quality				
Workplace Satisfaction	0.546***				
	(0.032)				
Meritocratic Values		0.502***			
		(0.033)			
Collegial Department			0.755***		
			(0.018)		
Behavioral Norms				0.448***	
				(0.025)	
Prescriptive Norms					0.466***
					(0.033)
N	1230	1230	1259	1251	1244

Reported estimates are obtained from ordinary least squares (OLS) regressions. The outcome is a summary index, constructed as the mean of normalized values of component items measuring leadership quality. Regressions control for sector fixed effects. Standard errors are clustered at the firm level (unit of randomization). All survey measures are standardized.

Table A.22: Mediating Effects of Leadership Quality

Panel I: Full Sample

	Separation (Implementation)			Prosocial Behavior			Workplace Climate		
	Mean	[95% Conf. Interval]		Mean	[95% Conf. Interval]		Mean	[95% Conf. Interval]	
Mediation Effect	-0.004	-0.008	-0.000	-0.002	-0.009	0.003	0.113	0.021	0.212
Direct Effect	-0.039	-0.063	-0.017	0.102	0.056	0.146	0.088	-0.024	0.196
Total Effect	-0.043	-0.067	-0.020	0.099	0.053	0.143	0.201	0.052	0.351
% Effect Mediated	0.082	0.053	0.179	-0.022	-0.041	-0.015	0.552	0.321	2.024

Panel II: Subordinates only

Mediation Effect	-0.004	-0.009	-0.001	-0.001	-0.007	0.005	0.124	0.028	0.226
Direct Effect	-0.037	-0.060	-0.015	0.099	0.050	0.145	0.110	-0.001	0.217
Total Effect	-0.042	-0.065	-0.019	0.098	0.049	0.143	0.234	0.084	0.386
% Effect Mediated	0.105	0.067	0.228	-0.007	-0.013	-0.005	0.522	0.319	1.463

Panel III: Leaders only

Mediation Effect	-0.001	-0.004	0.002	-0.008	-0.039	0.013	0.076	-0.076	0.236
Direct Effect	-0.037	-0.090	0.014	0.088	-0.006	0.179	-0.074	-0.211	0.059
Total Effect	-0.038	-0.090	0.014	0.080	-0.017	0.174	0.002	-0.200	0.208
% Effect Mediated	0.015	-0.141	0.169	-0.090	-0.943	0.738	0.347	-19.267	11.507

Mediation effects are computed using the parametric algorithm described in Imai, Keele and Tingley (2010). The mediator is a summary index of leadership quality constructed as the mean of normalized values of items measuring leadership quality. Separation is measured in the implementation period (November 1, 2020-June 30, 2021). The predicted values of the mediator are obtained from ordinary least squares (OLS) regressions controlling for Ravens score, Eye Test score, gender, age, marital status, number of children, tenure, department size, the share of males in the department, firm size and sector fixed effects. Estimates in Standard errors are clustered at the firm level (unit of randomization). Panel I provides estimated treatment effects using the full sample, Panel II, subordinate sample, and Panel III, leader sample.

B Qualitative Analysis

After some informal conversations with a number of currently working and retired professionals about the difficulties of corporate life, we decided to run a simple survey using a professional network. We sent out a short survey to 80 professionals. We received responses from 68 of them, 30 of whom no longer work in the corporate sector. The question was worded in the following way:

We would like to know the most important challenges one faces when working in corporate sector as a white-collar professional. Please rank the following options from 1 to 9, with the most commonly observed challenge taking the value 1, and the least taking the value 9.

1. Long working hours, heavy workload

2. Low pay

3. Lack of meritocracy

4. Hypercompetition

5. Gossip, poor quality in human relations

6. Feeling unappreciated

7. Language used by leaders

8. Unappreciative leaders

9. Bullying and mobbing by leaders

We then grouped items 4-6 as "toxic relations", 7-9 as "difficult leaders". We then calculated the proportion of people who stated these as top 3 challenges faced in the corporate life. Figure B.1 presents the results for the full sample (68 professionals), currently working professionals (38) and retired professionals (30).

Figure B.1: Qualitative Evidence

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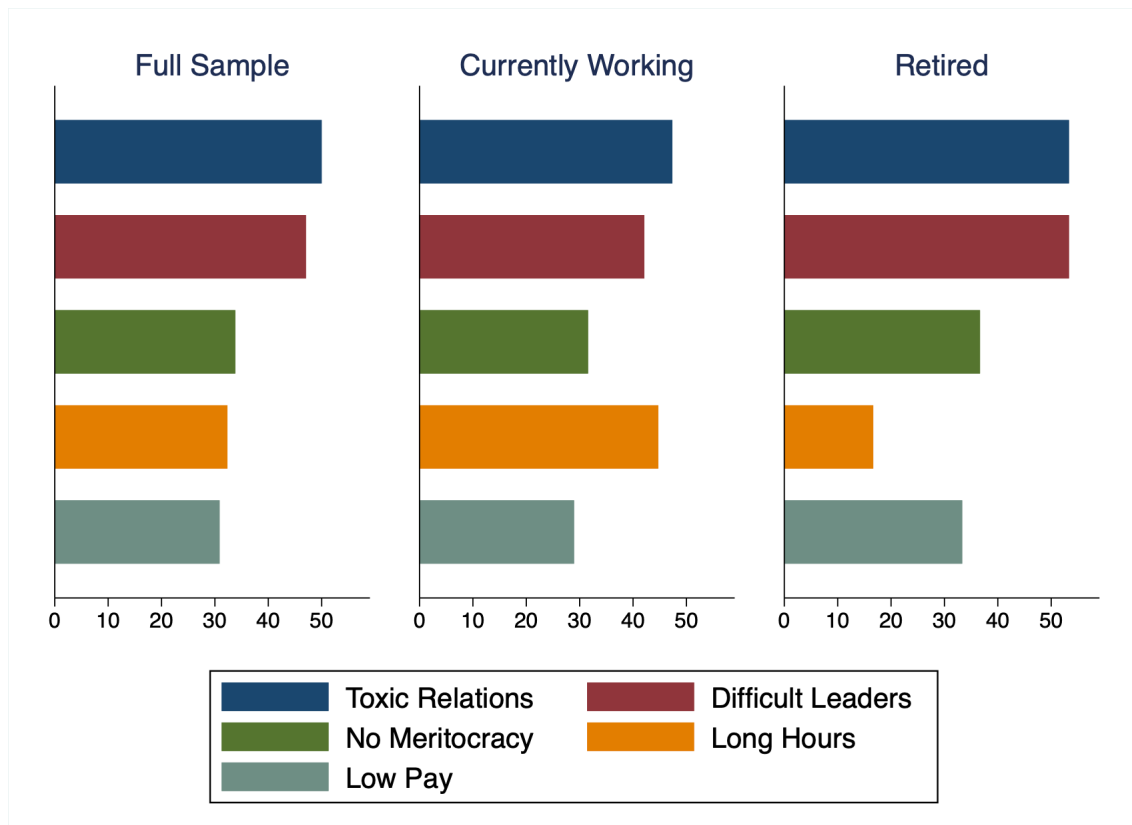
C   Intervention Content and Example Activities

C.1   Module 1: Online Workshops

Below we present an outline of the content covered in the online training sessions.

Session 1: Time-travel to the company's future

- Short presentation by the trainer on the importance of workplace culture, cultural transformation and shifting workplace paradigms.

- Group activity: *Close your eyes and imagine your aspired workplace in 2040. Describe the workplace climate and the relational atmosphere. Then discuss the obstacles in your current working environment to achieving this ideal environment.*

- Sharing and openly debating each group's output.

- Brain storming activity: *What can be done in the current workplace to improve: appreciation, feedback provision, communication, reception of innovative ideas, respectful treatment of one another, and good leadership practices?*

Session 2: Understanding each other

- Short presentation by the trainer on empathy.

- Group activity: *Participants are randomly assigned to groups of leaders and subordinates, where they switch roles. They form gossip circles and openly criticize the other group in this role-playing exercise with respect to complaints, expectations, and vulnerabilities.*

- The critiques are then shared with and discussed among the entire group.

Session 3: Good leadership practices

- Interactive survey: *Rank the most important qualities of a good leader.*

- Short presentation by the trainer on good leadership including anecdotes and case studies.

- Discussion of survey results in the context of the current company.

Session 4: Relying on each other

- Demonstrations of proactive and reactive behavior in the workplace using creative drama.

- Group activity: *Each group performs a sculpture, expressing one of the following themes: cooperation, leadership, employee engagement, effective communication, positive behavior and trust. The other groups try to guess the exhibited concept.*

- Sharing anecdotes from the current workplace related to these themes.

Session 5: Respectful and peaceful communication

- Short presentation by the trainer on respectful and peaceful communication.

- Demonstrations of toxic language in the workplace using creative drama.

- Group activity: *In groups, employees complete the following sentences: "The most influential phrase I have heard on communication is ...", "I would trust my department colleagues more, if ...", "I would trust my leaders more, if ...", "I would trust my subordinates more, if ..."*

C.2 Snapshots of Online Workshops

Figure C.1: Session 1: Time-travel to the company's future

GROUP 1: THE FUTURE
DREAMS
- High interaction between co-workers
- Hard working, dedicated co-workers
OBSTACLES
- Lack of communication/miscommunication
- Lack of vision
- Low sense of belonging to the company
- Low motivation
- Not providing the right type of training to the right people

GROUP 2: TIME TUNNEL
DREAMS
- Employees that are more social and have more time for their families
OBSTACLES
- Workplace environment lacking fairness and trust
- Abstaining from responsibility and risk
- The thought of no matter how hard you work, you will not get what you deserve
- Hierarchic management

GROUP 3: INNOVATION
DREAMS
- More effective communication with co-workers
- Recreation areas for employees
OBSTACLES
- Employees are not encouraged to state their opinion, and are not allowed to take initiative
- Lack of empathy between co-workers
- Lack of meritocracy
- Lack of teamwork

In randomly formed groups, participants described their imagined future workplace and list obstacles in achieving this ideal environment. Exact translations from Turkish.

Figure C.2: Session 2: Role-playing exercises

EMPLOYEES
- Our work is neither appreciated nor rewarded.
- Performance criteria are not transparent.
- My team leader does not know me well enough, and does not consider my opinion.
- My team leader does not communicate my problems to senior management.
- My team leader is imprudent and constantly changes his/her mind.
- My team leader attributes mistakes arising from his/her own wrong decisions to his/her team, but takes credit for success.
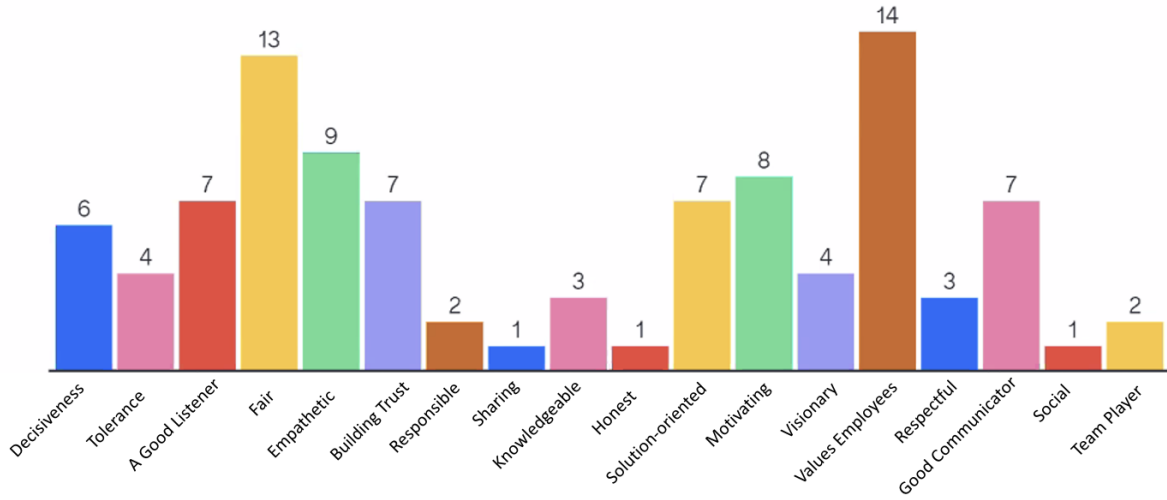
LEADERS
- Lack of meritocracy.
- Employees are constantly spending time on their personal mobile phones (chatting, messaging, whatsapp'ing).
- Employees are constantly whining and are never satisfied.
- Employees are looking for sympathy rather than empathy.
- Employees are very opinionated.
- Employees demand very high pay.

In groups, participants assumed different roles as leaders and subordinates, and stated their complaints and expectations. Exact translations from Turkish.

Figure C.3: Session 3: Good leadership practices

In an interactive survey, participants ranked qualities that a good leader must possess. The bars represent the number of participants that voted for a given option. Exact translations from Turkish.

Figure C.4: Session 4: Relying on each other

C.3 Module 2: Follow-up Projects

Below we list a selection of the projects developed and proposed during the follow-up phase.

1. One-on-one meetings with leader: Receiving regular feedback from team leaders.

2. Supporting areas of development: A platform in which employees can demand training in areas of development leading to their professional goals.

3. Mentoring program: A program in which subordinates choose a leader-manager mentor whose expertise they trust and whom they feel comfortable working with. Subordinates will develop and lead their projects to success with their mentors.

4. Project evaluation committee: Setting up a project evaluation committee to which the employees can propose feasible projects they have developed to improve workplace climate.

5. Monthly inter-departmental visits: Each month, one employee from each department will visit another department for a full day. Visits will be exchanged between co-working departments with different functions. This project is aimed to improve inter-departmental communication and empathy through first-hand experience of each other's work processes.

Figure C.5: Presentations of follow-up projects by team representatives

D Experimental Instructions and Implementation of Games

D.1 Endline Games

You are going to play three games today. You will be able to earn a monetary reward in each game, which will be determined by your decision, luck, and, in some cases the decisions of your department colleagues. One of the games will be selected randomly at the end of the session, and you will be paid the monetary reward in that selected game. Therefore, it is important that you pay equal attention to each game. We will send your monetary rewards in a week in the form of grocery cards.

During the event, please make your own decisions without communicating with your colleagues. Your personal information and decisions in these games will be anonymous. You will log in with your unique ID number that was sent to you personally.

If your screen freezes or crashes, please refresh the page. If you cannot refresh the page, please log in again from the main website. You will continue where you left off. If you are ready, please press the Proceed button.

D.1.1 Ultimatum Game

Game 1

At the beginning of this game, groups of two will be randomly formed within your department, and you will not know who your partner is. One of you will randomly become the *Sender*; the other, the *Receiver*. You will not know what role you have been assigned to.

The *Sender* will have 200 Turkish Liras (TL), and he/she will choose how much of the 200 TL he/she wants to offer to his/her match, i.e., the *Receiver*. The *Receiver*, on the other hand, will evaluate the offer he received from the *Sender*, and decide whether to accept or reject the offer. If the *Receiver* accepts the offer, he/she will receive the offered amount. The *Sender* will receive the rest of 200 TL. If the *Receiver* does not accept the offer, both of you will receive 0 TL.

At the beginning of the game, everyone will decide how much of the 200 TL they want to offer if they are the *Sender*, and which offers they would accept if they are the *Receiver*. Then, the computer will randomly assign one person as the *Sender* and the other as the *Receiver*. The amount of the offer will be determined according to the decision of the *Sender*. We

will consider the *Receiver*'s decision to see if they would be willing to accept this offer. The payoffs will be determined by the decisions of the two matched persons in the same group.

Please indicate the amounts you would offer and accept for both the *Sender* and *Receiver* roles. Remember that, in this game, it is possible for you to be selected as a *Sender* or a *Receiver*. In addition, the amounts mentioned are actual monetary rewards. At the end of the games, if this game is selected, you will receive your payoff from this game. Please note that the amount you win from these games will be paid to you. Now, if you have understood clearly, please press the Proceed button and indicate your decisions.

D.1.2 Sabotage game

Game 2

In this game, we will first ask you to carry out a task that lasts two minutes, for which you will have a chance to earn money. You will be shown letter-number combinations of four characters. Please try to type the same combination in the space provided below, paying attention to capitalization. The more correct answers you give in two minutes, the higher your chances are of winning money.

At the end of two minutes, you will be randomly matched with a co-worker from within your department. You will not know who your match is, but you will see a representative picture. *(They were shown a representative avatar, indicating the gender of the randomly matched partner.)* If you can give more correct answers than your matched colleague, you will earn 150 TL; and 0 TL otherwise. At the end of the games, if this game is drawn, you will get your payoff from this particular game.

Now, we will ask you an additional question. At this stage, either you or your matched colleague will have the right to reduce the performance of the other person. This person will be determined randomly. You need to pay 10 TL in order to reduce the performance of your match by 1 correct answer. You will have 50 TL, which we will endow you with additionally, to be used only for this decision. We will then ask you how much of the 50 TL you would like to use to reduce your partner's performance. We will translate this amount to correct answers and deduct it from your partner's total correct answers. The amount you do not use for this decision (rest of the 50 TL) will remain in your pocket and will be paid to you at the end of the game. Your decision can change your performance ranking and therefore your earnings from the first stage. Please enter a number between 0 and 50 in the text box

provided.

Finally, you will try to guess how much your partner spent to reduce your correct answers. If your guess is within 10 TL of your partner's true decision, you will earn an extra 10 TL for your correct guess. Please enter a number between 0 and 50 in the text box provided.

D.1.3 Trust game

Game 3

In this game, groups of two within departments will be randomly formed, but you will be re-matched. As before, you will not know who your partner is.

One of you will be the *Sender* and one of you the *Receiver*. The roles will be randomly determined by the computer. Each of you is initially endowed with 100 TL. The *Sender* will decide how much of his 100 TL he/she wants to send to the *Receiver*. He/she may choose to send nothing at all, all of his/her endowment, or some portion of it. The amount determined by the *Sender* will be tripled and sent to the *Receiver*. The *Receiver* will decide how much of this amount he/she wants to send back to the *Sender*. He/she may choose not to return at all, return all of the amount, or a portion of it. The exact amount returned by the *Receiver* will be forwarded to the *Sender*.

Payoffs will be computed in the following fashion. When computing the *Sender*'s payoff, we will deduct the amount he/she sent from the initial endowment 100 TL, and add the amount the *Receiver* sent back. The *Receiver*, on the other hand, will receive three times the amount sent by the *Sender*, in addition to the initial endowment of 100 TL, minus the amount he/she sends back to the *Sender*. In this game, you might be assigned to the role of the *Sender* or the *Receiver*, but you will not know your role.

First, we would like you to make the following decision: If you become the *Sender* in this game, how much of your 100 TL would you send to the *Receiver*? If you are randomly assigned to the role of *Sender* by the computer, this decision will be valid and your earnings will be determined with respect to this decision. Remember that, in this game, you might be selected as the *Sender* or the *Receiver*.

We now ask you to indicate your decision if you are chosen as a *Receiver*. For each possible indicated amount the *Sender* may send you, you will choose how much you want to send back to him/her. If you are randomly selected to be a *Receiver*, your decisions will

apply, and your earnings will be determined based on your decisions. Remember that, in this game, you might be selected as the *Sender* or the *Receiver*.

D.2   Baseline Games

You are going to play three games today. You will able to earn a monetary reward in each game, which will be determined by your decision, luck, and, in some cases, the decisions of your department colleagues. One of the games will be selected randomly at the end of the session, and you will be paid the monetary reward in that selected game. Therefore, it is important that you pay equal attention to each game. We will send your monetary rewards in a week in the form of grocery cards.

During the event, please make your own decisions without communicating with your colleagues. Your personal information and decisions in these games will be anonymous. You will log in with your unique ID number that was sent to you personally.

D.2.1   Competition Game

Game 1

This game consists of three periods. You will earn different amounts of monetary rewards in each period. If this game is randomly selected for payment at the end, one of the three periods will be selected randomly and you will receive your earnings from the selected period. Each period will last 2 minutes.

Period 1

In this period, you will be asked to calculate the sum of three two-digit numbers in 2 minutes. You will earn 3 TL for every correct answer you give. The more correct answers you give, the more you earn. You are not allowed to use pen and paper, nor a calculator. A new question will appear after you have submitted your answer. You will see the number of correct answers you have given on the screen. Please hit the Start button when ready.

$$26 + \quad 36 + \quad 53 \quad = \boxed{}$$

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Period 2

In this period, you will again be asked to sum 3 two-digit numbers. Groups of three will

be randomly formed within your department. You will not know who your opponents are. Your payoffs in this period will be determined as follows:

- If you give more correct answers than your two department colleagues you are matched with, you will earn 9 TL for every correct answer.

- Otherwise (if you cannot give more correct answers than your opponents), you will earn 0 TL.

At the end of this period, you will be asked to guess your rank in your group. If your guess is correct, you will earn an extra 3 TL. Please hit the Start button when ready.

Period 3

You will perform the same summation task once again for two minutes. In this period, you will decide how your payoff is calculated: piece-rate (as in period 1) or tournament (as in period 2). If you pick tournament, your performance will be compared to your opponents' second-period performance. Please indicate your choice when ready.

D.2.2 Public Goods Game

Game 2

In this game, new groups of three will be randomly formed within your department. As before, you will not know who else is in your group. Each participant will be endowed with 30 TL. Using this endowment, you will have the chance to enter a project as a group. Each participant in the group will decide for himself/herself how much to contribute to the common pool (project), and each participant's decision will be confidential. Decisions will be made simultaneously.

You can contribute any amount between 0 and 30 to the common pool. Payoffs will be computed as follows:

- We will add up the total amount contributed by the three group members and double it. This will be your group's total income from the project.

- This amount will be shared equally between the three group members.

- Your payoff will equal to sum of the amount you get from the project and the remaining

from your initial endowment 30 TL that you did not invest into the project. *(Display an example on the screen.)*

Please indicate how much of your 30 TL you would like to contribute to the project.

Finally, we will ask you to make a guess on the average contribution of the two other group members. If your guess is within 5 TL of the true average, you will earn an extra 10 TL. Please write down your guess.

D.2.3   Investment Game

Game 3

In this game, you will be asked to make an investment decision. You will be endowed with 30 TL from the start. You will decide how to allocate this 30 TL between a risky and a risk-free option. The money invested in the risky option has a 50% probability of either increasing by a multiple of 2.5, or being lost. The money invested in the risk-free option is always retained. Please indicate how much of the 30 TL you would invest in the risky option.

E Construction of Cohort Segregation Index

Consider two groups in a department. We first calculated the expected proportion of inter-group links based on the theoretical probability of randomly formed inter-group ties. Then we took the difference between these and the observed proportion of inter-group links. If all links were formed randomly, the number of links between group 1 and group 2 members would follow a hypergeometric distribution. Specifically, for a group 1 member who nominated $x \in \{1, 2, 3\}$ colleagues, the probability of forming $y \leq x$ links with group 2 members equals:

$$p_{g1}(x, y) = \frac{\binom{n_{g2}}{y}\binom{n_{g1}-1}{x-y}}{\binom{n_{g1}+n_{g2}-1}{x}},$$

where n_{g1} is the number of group 1 colleagues, and n_{g2} is the number of group 2 colleagues in a given department. The expression for $p_{g2}(x, y)$ is analogous to $p_{g1}(x, y)$.

Then, the probability of forming inter-group ties for department d under the assumption that links were formed at random can be expressed as:

$$\rho_d = \frac{\sum_{x=1}^{3} \sum_{y=1}^{x} \left[n_{g1}(x) p_{g1}(x, y) y + n_{g2}(x) p_{g2}(x, y) y \right]}{\sum_{x=1}^{3} x \left[n_{g1}(x) + n_{g2}(x) \right]},$$

where $n_{g1}(x)$ and $n_{g2}(x)$ denote, respectively, the number of group 1 and group 2 colleagues who nominated x colleagues. Then, the observed frequency of inter-group ties based on the actual nominations in department d is:

$$\tilde{\rho}_d = \frac{e_{g1g2} + e_{g2g1}}{e_{g2g1} + e_{g1g2} + e_{g2g2} + e_{g1g1}},$$

where e_{ij} denotes the number of edges from group members i to j. Our measure of group segregation GS_d in department d is:

$$GS_d = \rho_d - \tilde{\rho}_d.$$

Therefore, the definition of our segregation measure GS_d is such that higher numbers indicate higher segregation.

F   Survey Items

Instrument	Items
Workplace Satisfaction	*To what extent do the following statements describe your thoughts about your company?* *(Definitely not True-Not True-Somewhat True-True-Definitely True)*
	I am not able to practice my own profession at this workplace. I am very pleased to have chosen to work at this company. Working in this company inspires me. I think my ideas are valued and my achievements are acknowledged here. Employees get unhappy here due to competition and individualization. I think I am not given enough initiative and decision-making authority here.
Meritocratic Values	*To what extent do the following statements describe your thoughts about your company?* *(Definitely not True-Not True-Somewhat True-True-Definitely True)*
	My chances of advancing in my profession and career are very high here. I believe if I work hard and perform well here, I will be promoted very quickly. I don't believe I'll be promoted unless I've enough connections with executives. Objective and transparent performance criteria are applied in this workplace.
Collegial Department	*The following statements are related to your department colleagues. Please use the following scale to state your opinion.* *(Never-Rarely-Sometimes-Often-Always)*
	My department colleagues protect each other against an outside criticism. Those working in this department only think of and work for themselves. Different ideas are discussed extensively within the department. Everyone's ideas are listened to and taken into consideration in our department. People attack others verbally and with disrespect during departmental meetings. Disputes within the department are resolved in a way that protects the interests of the company.
Behavioral Norms	*How often do you observe your department colleagues in the following situations?* *(Never-Rarely-Sometimes-Often-Always)*
	Gossiping Criticizing someone Helping someone Protecting someone else's rights Violating someone's rights Spending time on social media (during working hours on matters unrelated to work) Staying silent in situations of injustice
Prescriptive Norms	*In your opinion, what fraction of your department colleagues think in the following way?* *(Almost nobody-Around 25% -Around 50%-Around 75% -Almost everybody)*
	It is important to be friendly and treat others nicely. It is crucial to stay out of disputes and quarrels. It is normal to comment on others' appearance and clothing. It is normal to take credit for a department members success as a group. It is important to speak for our departments demands when needed. Gossiping is bad. We should claim collective responsibility for a group member's mistakes. It is crucial to trust and to be honest with each other within the department. It is normal and expected to compete with our department colleagues. It is quite normal to help each other with work.
Leader Professionalism	*The following statements are related to your your team leader. Please use the following scale to state your opinion.* *(Never-Rarely-Sometimes-Often-Always)*
	Our department leaders are good listeners. Our department leaders have favorites and they are given favorable treatment. Our department leader is modest and accepts her mistakes. I completely trust our department leader's professionalism. I receive regular and motivating feedback from my department leader. Our department leader claims achievements, but blames mistakes on others. Our department leaders serve the interests of department rather than their own. When we have a new idea, our department leader suggests leaving it to senior colleagues.
Leader Empathy	*The following statements are related to your your team leader. Please use the following scale to state your opinion.* *(Never-Rarely-Sometimes-Often-Always)*
	Our department leader tries to put himself in our place during disagreements. Our department leader intervenes when there is injustice. Our department leader listens my problems and approaches them understandingly. Our department leader takes sudden emotional decisions. Our department leader listens disagreements carefully and considers all angles.

Own Empathy	*To what extent do the following expressions describe you?*
	(Never-Rarely-Sometimes-Often-Always)
	Before criticizing someone, I try to think about how I would feel if I were them.
	If I am sure that I am right about something, I wouldn't waste too much time listening to other people's arguments.
	Sometimes I try to understand my friends better by imagining how things look from their perspective.
	I believe there are two sides to every problem and I try to see it from both perspectives.
	Sometimes I have a hard time seeing things from the other point of view.
	I try to see everybody's perspective, before I take a decision in a disagreement.
	When I get angry with someone, I usually try to put myself in their shoes for a while.
	When I see people being abused, I feel protective of them.
COVID-19 Related Social Isolation	*The following questions have been prepared to determine the effects of the current pandemic on us. Please pick the answer that suits you best.*
	(Strongly Disagree-Disagree-Somewhat Agree-Agree-Strongly Agree)
	I think working from home is more productive.
	Lately I feel lonelier than usual.
	I think I haven't been communicating well enough with my colleagues lately.
	I think I haven't been communicating well enough with my team leader lately.
	(Yes-No-Do not Drink/Smoke)
	Do you feel like you have increased your cigarette consumption lately?
	Do you feel like you have increased your alcohol consumption lately?

G   Post-Trial testimonials: HR Survey

Instrument	Items
Socialization during COVID-19/Implementation	Indicate the working mode of white-collars during March-July 2021.
	(Fully remote - Fully office - Hybrid, mostly remote - Hybrid, mostly office)
	Indicate the frequency of get-togethers of white-collars with department colleagues during March 2020-July 2021.
	(Every day - Several times a week - Once a week - Less than once a week)
	Indicate the format of these get-togethers.
	(Remote - Office - Hybrid, mostly remote - Hybrid, mostly office)
	Indicate the purpose of these get-togethers.
	(Mainly work related - Both work and social reasons)
Feedback on Training	How different was the training program compared to other training programs your company has previously organized?
	(Completely different - Very different - Has some points in common - Very similar)
	Has your company previously organized a training program targeting employee relations between white-collars?
	(Yes - No)
	(If the answer is No:) Why hasn't your company organized a training program on employee relations before?
	(Not prioritized by executives - Lack of funding - No toxic relations amongst our white-collars - Other(please state)
	Compared to previous training programs organized by your company, how intensive was our training program in terms of nature, content and duration of the activities?
	(Much more intensive - Similarly intensive - Less intensive)
	What is the most significant impact of the content of the training on your corporation's relational culture? (Please state)
	Did the trained white-collars socialize relatively more with their colleagues after the training?
	(Yes - No - No visible difference)
	Did you note a visible shift in the trained leaders' relations with their colleagues after the training?
	(Positive - Negative - No visible difference)
	Did you note a visible shift in the trained leaders' relations with their subordinates after the training?
	(Positive - Negative - No visible difference)
	Did you note a visible shift in leader-subordinate relations within your corporation after the training?
	(Positive - Negative - No visible difference)
	Did you note any undesired effects of the training program?
	(Yes (please state) - No)
	Did you note any effects of the training program on the productivity of white-collars?
	(Positive - Negative - No visible difference)
	Would your firm be willing to pay for such a training program in the future?
	(Yes - No)