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Michèle Belot
Cornell University, CEPR and IZA

Rustamdjan Hakimov
University of Lausanne

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IZA – Institute of Labor Economics

Schaumburg-Lippe-Straße 5–9
53113 Bonn, Germany

Phone: +49-228-3894-0
Email: publications@iza.org

www.iza.org

ABSTRACT

The Value of Bonding at Work: Evidence from a Field Experiment*

This study examines the effects of structured social activities on workplace collegiality and performance in a large white-collar firm with 100 geographically dispersed offices. In a randomized controlled trial, half of the offices received subsidies to organize biweekly social events over a three-month period—including picnics, movie nights, and team games. We find that the intervention strengthens collegiality, enhances workplace friendships, and improves office-level performance. We do not detect an impact on individual productivity, but turnover appears to have fallen in the short-run, meaning that employees stayed longer in the job. We explore possible mechanisms and identify a sense of gratitude and reciprocity toward the company as the most likely mechanism driving the effects.

JEL Classification: M54, J32, C93
Keywords: workplace collegiality, climate, bonding, field experiment

Corresponding author:
Michèle Belot
Cornell University
133 Statler Dr, Ives Hall Faculty Wing
Ithaca, NY 14853
USA
E-mail: mb2693@cornell.edu

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1 Introduction

Workplaces are not just sites of production but also social environments. Employees consistently rank social environment and collegiality—the sense of connection and camaraderie with coworkers—as a critical factor in their job satisfaction, often placing it alongside monetary compensation in importance (DellaVigna and Pope, 2018; Friebel et al., 2017). Despite its importance, the role of interpersonal relations at work remains relatively understudied in economics (Bandiera et al., 2011). In contrast to compensation, monitoring, or other aspects of management, initiatives targeting interpersonal relationships have received little attention.

While collegiality at work may appear like a positive asset for a company, there may also be downsides to bonding at work. Social interactions between employees and managers can, for example, lead to unfair career advantages (Bandiera et al., 2009; Cullen and Perez-Truglia, 2023), and friendships at work may also be associated with conflicts, gossip, nepotism, inappropriate humor, or even sexual harassment (Berman et al., 2002; D'Cruz and Noronha, 2011; Pillemer and Rothbard, 2018).[1]

In this paper, we design and evaluate an intervention targeting employees of a large firm and aimed at improving collegiality at work. The intervention we propose is simple and low-cost: it consists of organizing social activities that require little planning or infrastructure such as picnics, movie or game nights. These activities contrast with more labor-intensive programs that involve training managers or employees to improve relationships at work (such as in the recent work by Alan et al. (2023), Azulai et al. (2020) or Friebel et al. (2022)) or more complex team-building activities that are logistically more challenging to organize and typically take place once or twice a year.[2] A priori, encouraging simple social activities and interactions between co-workers could be an attractive and low-cost tool to foster a positive workplace climate as they are easy to implement and may not even compete directly with working time.

The design of the intervention we propose builds on the sociological and psychological literature highlighting the role of shared enjoyment in promoting social bonds (Fine and Corte, 2017; Salmela, 2014). The idea is that collective emotions act as 'the glue' of a group. Although it may seem futile, having fun with others, or as sociologists

[1] Recent work by (Batut et al., 2021; Folke and Rickne, 2022; Adams-Prassl et al., 2024) document the prevalence of sexual harassment in workplaces and its negative impact on people's lives and careers

[2] The team-building and corporate entertainment industry is substantial and growing (https://www.globalgrowthinsights.com/market-reports/team-building-service-market-102111 last accessed 19.6.25), with firms widely adopting such activities to enhance employee engagement and workplace culture (Dyer, 2013). Yet, there is little causal evidence on whether these interventions lead to measurable improvements in workplace outcomes. Existing studies rely largely on descriptive evidence or anecdotal accounts, leaving an empirical gap in understanding how team-building activities influence collegiality and performance.

call it 'collective hedonic satisfaction' is believed to foster group attachment. With this in mind, we conducted a field experiment introducing fun group activities in a large firm to test whether fostering collegiality through structured social activities improves collegiality and relevant work outcomes. We partner with a large white-collar organization in Kyrgyzstan, which has around 1,000 employees across 100 offices spread geographically across the country, half of which we assign to a treatment. The firm uses a relatively competitive incentive structure for its employees, making it a particularly interesting setting to study, as such dynamics may challenge the development of a positive corporate spirit. Our intervention consists of six 'shared enjoyment activities' that the treatment offices were asked to organize over a three-month period. The head office financed the activities, which were relatively low-cost. The possible activities included group lunches, movie nights, and team-building games. Over three months, treatment offices participated in six out of ten proposed activities, and the activities were chosen by the employees.

We examine both direct measures of social cohesion and performance-related outcomes. Social cohesion is assessed using survey-based metrics, such as interaction frequency with colleagues, the number of workplace friendships, willingness to help colleagues with personal problems, and ratings of different aspects of team cohesion on a Likert scale. Importantly, in addition to survey outcomes, we have access to micro data on objective outcomes from the firm. The first is team performance in a firm-wide competition ranking offices based on productivity metrics (e.g., portfolio growth, client feedback) and procedural adherence. Additionally, we have data on measures of productivity and retention at the individual level over time. These data help us identify short- and medium-term impacts on relevant economic outcomes. The availability of both individual and group-level performance measures is unique and represents a contribution relative to prior studies.

We find that structured social activities significantly increased collegiality and attachment to colleagues by an order of 0.1 standard deviation. Part of these effects capture the treatment itself, though, as the indices include measures of social interactions. But we also observe a 0.18 standard deviation increase in the reported number of close friends. These effects remain robust after accounting for multiple hypotheses testing using the Holm and Romano-Wolf corrections.

As for performance, we find that the intervention resulted in a significantly better relative performance of the treated offices in the firm-wide offices competition, with the effect being only marginally significant three months after the intervention. On the other hand, we do not observe significant effects on productivity at the individual level.

The last relevant economic outcome we consider is retention. We find large effects on retention, with loan officers in the treatment group being 4 percentage points less likely to leave the company after the three months of the intervention (the effect is significant on the 10% level), compared to a baseline of 10%. This result is important given the high costs of employee turnover, both in terms of hiring and training replacements and the lower repayment rates associated with departing loan officers. The relative size of the turnover effect suggests that fostering collegiality could be a very cost-effective strategy for improving employee retention. The effects on retention dilute over time and are no longer significant 6 months after the end of the treatment, though, which suggests that the intervention may have contributed to delaying departures rather than preventing them.

To understand the mechanisms driving these results, we examine four potential channels: intrinsic motivation, information transmission, advice-seeking and giving, and reciprocity toward the firm. Of these, only reciprocity was significantly influenced by the intervention. Loan officers in treatment offices showed a greater willingness to volunteer for unpaid extra work at the office, a behavior indicative of increased prosocial behavior toward the firm. This aligns with organizational behavior theories suggesting that shared experiences foster gratitude and loyalty, which, in turn, enhance workplace cohesion and performance (Locklear et al., 2023). In that sense, offering social activities with the goal of fostering a positive work atmosphere appears to work as a *non-wage amenity* (Mas and Pallais, 2017; Wiswall and Zafar, 2018; Sockin, 2022; Mas, 2025). The channel of perception of activities as a gift also makes our individual productivity findings consistent with recent evidence from economics that a gift from the employer increases effort but not necessarily productivity (DellaVigna et al., 2022).

The remaining of the paper is structured as follows. We discuss related studies and our contribution to the literature in Section 2. In Section 3, we present the experimental design. In Section 4 we present the main results. In Section 5 we discuss the external validity of our results and we conclude in Section 6.

2 Related literature

This paper contributes to a recent literature that evaluates management practices and organizational culture through randomized controlled trials. The literature in Organization and in Economics has mostly focused on the responsibility of *leaders* for workplace culture and firm performance (Bertrand and Schoar, 2003; Bolton et al., 2013; Bandiera et al., 2020; Hoffman and Tadelis, 2021; Englmaier et al., 2025) and a number of recent studies evaluate experiments targeting leaders (Alan et al., 2023;

Azulai et al., 2020; Friebel et al., 2022). These programs typically involve training interventions targeting leadership styles. By contrast, our intervention requires no training and is designed to be simple and easily scalable. In that spirit, our findings also relate to economic studies examining the interplay between incentives and social relations among workers. Dur and Sol (2010) present a model where social cohesion requires (costly) attention and shows how team and relative incentives interplay with the incentives to engage in activities that promote social cohesion. In our setting, the company applies team incentives already, which could, by itself, trigger team cohesiveness. Dur (2009) presents a theoretical model where managers may trigger positive reciprocity from employees by giving them (costly) attention (as an alternative to higher wages). These studies model social activities in a principal-agent framework, where such activities require costly attention from managers or peers, yet also function as productive non-wage amenities. Delfgaauw et al. (2022) conduct a field experiment in a large Dutch retail company where they test the interplay of team incentives and social cohesion, and show that team incentives are more effective in teams that have stronger social cohesion at baseline. They also show that these incentives do not affect social cohesion within teams. Bandiera et al. (2013) show that team incentives affect performance and team formation, with workers less likely to team up with friends and more likely to team up with others of similar ability. Hossain and List (2012) demonstrate that incentives are sensitive to framing, showing that presenting bonuses as potential losses rather than gains significantly increased productivity in a Chinese manufacturing setting.

We also contribute to research on corporate identity and organizational attachment (Guadalupe et al., 2020; Van den Steen, 2010), and on the role of a 'team spirit' and social skills in firm performance (Weidmann and Deming, 2021). The literature in Economics on social identity applied to organizations (Akerlof and Kranton, 2005; Charness and Chen, 2020) proposes models whereby a sense of common identity leads to higher effort and more contributions to improve group outcomes. Evidence from field experiments confirm team identity as a potential trigger for reciprocity (Ai et al., 2016; Ye et al., 2022; Ai et al., 2023). Hackman and Wageman (2005) and Cohen and Prusak (2001) emphasize that social cohesion enhances team functioning and adaptability. Employees who feel connected to their peers are more likely to perform well and remain in their jobs (Riordan and Griffeth, 1995; Hodson, 1997; Carmeli et al., 2009; Park, 2019). Friendships at work may provide support and help workers navigate challenging situations (Ducharme and Martin, 2000) and may decrease turnover (Morrison, 2004; Mossholder et al., 2005). Recent studies also show that employees' mood matters for their productivity (Bellet et al., 2024).

To our knowledge, this is the first field experiment to target workplace culture through direct engagement with employees, rather than through managerial training or top-down initiatives. The paper fits within the broader literature showing that corporate culture matters for performance (Barney, 1986; Boyce et al., 2015; Guiso et al., 2015; Martinez et al., 2015; Gartenberg et al., 2019; Haylock et al., 2023). The evidence from these studies is nonexperimental, however, and does not evaluate programs aimed at changing the culture.

Finally, our work also draws on insights from social psychology, particularly the literature on belonging (Cohen, 2022) and social exchange theory Cropanzano et al. (2017).

3 Experimental Design

3.1 Context

We partner with one of the leading microfinance institutions in Kyrgyzstan, which provides financial services to underserved populations typically excluded from formal banking systems. The organization primarily issues loans ranging from $100 to $3000 through a decentralized network of over 100 offices distributed across the country. Offices range in size from 4 to 30 employees, with an average of 12. These small offices are likely to be the most socially relevant environment for employees on a daily basis.

The company's operational backbone comprises more than 1,000 loan officers tasked with sourcing clients, assessing creditworthiness, and ensuring loan repayments.

Loan officers play a dual role: promoting loan products to expand outreach, while maintaining strict credit evaluation standards. Their responsibilities include assessing economic conditions, forecasting repayment capacity, and establishing repayment plans for prospective borrowers. Each office is managed by a branch manager who oversees loan approvals, provides training to loan officers, and ensures the implementation of company policies and new directives from headquarters.

The incentive structure of the institution is performance-driven. Loan officers receive a modest base salary supplemented by bonuses contingent upon meeting individual productivity thresholds. Productivity metrics are based on the volume of the portfolio under management and the repayment quality. Managers, on the other hand, receive bonuses linked to the collective performance of their branch, aligning their incentives with office-wide productivity and compliance targets.

A persistent challenge for the organization is employee retention, particularly among newly hired loan officers. More than 50% of new employees leave within their first

year. High attrition is often attributed to the demanding nature of the job, limited initial support, and a competitive workplace environment where colleagues compete for clients. This competitive dynamic, compounded by the largely individualistic incentive structure, may reduce peer collaboration and be detrimental to job satisfaction.

The primary motivation for our intervention stems from these challenges. Structured social activities could potentially mitigate the adverse effects of the competitive incentive. The hypothesis is that these activities could foster a more supportive workplace climate, enhance collaboration and improve overall employee satisfaction and retention.

3.2 Treatment

The treatment we evaluate is an intervention designed to foster fun and interpersonal bonding through structured social activities. Because the company is structured around small offices, the treatment was assigned at the office level. These offices are the most relevant social environment of employees in their daily work lives.

Building on the work of Fine and Corte (2017), we select activities that allow for collaborative commitments, shared narrative, and embodied engagement, all of which are essential for shared enjoyment. We selected activities that require no specific abilities -particularly physical ones- and aimed to appeal to a broad audience. We deliberately avoided activities that were educational, work-related or involved competition on job-related skills.

The 10 proposed activities were chosen in partnership with the firm's management, based on suggestions from both researchers and employees.

The list of 10 activities offered includes:

1. Picnic
2. Lunch at a café with colleagues
3. Potluck breakfast in the office
4. Movie night[3]
5. Singing competition in the office
6. Two lies one truth game in the office

[3]Tickets to a local cinema were paid for offices with cinemas in the proximity. For offices without a cinema in close proximity, a wall projector and dvd player with a movie of their choice among 20 options were delivered.

7. Pantomime game in the office
8. Creating a flash-mob video
9. Compliment-letter game in the office
10. Nostalgic day in the office, when each employee brings a photo from childhood and tells a story about it

The experiment lasted for three months (May to July), and within this period, offices assigned to treatment participated in six out of these 10 activities. The aim was to have one activity every two weeks. The budget for the activities was transferred one week before each event. Importantly, most of the activities were self-organized by the offices, with only monetary subsidies from the headquarters. Treated offices received posters in Kyrgyz and Russian languages, both electronically and physically, detailing the list of activities along with corresponding budgets provided by the headquarters.[4] The head of sales informed treated offices that they were participating in a new headquarters initiative to enhance employee happiness, that is why the posters referred to a "Happy office."[5]

All activities, except for the picnic, lunch at a café, and the flash-mob video, took place in the office during or after work hours. Creating a flash-mob video could last for several days, including preparations, and often took place outside of the office. Offices were required to select preferred activities within the first week of the experiment and report their choices to the headquarters. This allowed for proper budgeting and logistics. The activities were subsidized by the firm and the researchers (50%-50%). The manager of the office sent a report with at least one common photo to a representative in the head office to report on the activity that took place.

3.3 Randomization

Offices were randomized into treatment or control using efficient cluster randomization (Gallis et al., 2018). Half of the offices were assigned to the treatment group and the other half served as controls. The intervention lasted for three months, from May 1 to July 31.

[4]See examples of posters in Russian in the Appendix, paired with the translated English version.

[5]Management expressed concerns about potential spillovers of information between offices, particularly for those located in close proximity. To mitigate this, control offices were informed that some events might occur in other offices as part of a research initiative and that these offices were randomly chosen. As compensation, control offices were provided with similar subsidies for a summer picnic in 2024, one year after the experiment.

3.4 Outcomes measures

We evaluate the intervention with two sources of data: data from surveys conducted among the employees before and after the treatment, and administrative data from the company.

Two firm-wide surveys were administered: one on May 1 (baseline) and another on August 15 (endline, 15 days after the treatment ended). All loan officers were invited to participate and completed the survey simultaneously. Those who were not at work on that day due to illness or vacation are absent from the sample. These surveys included a comprehensive set of questions to assess workplace climate and its components. We mostly rely on the self-reported answers, but the survey also included several incentivized measures. The employees could choose either Russian or Kyrgyz language for the survey.

The surveys included a range of questions -some incentivized- designed to measure primary outcomes and mechanisms (see full survey in the Appendix B). Employees received their payment for the incentivized questions at the end of the month together with their salary.

3.4.1 Outcomes: Primary Outcomes

First-stage outcomes:

First-stage outcomes help us assess whether the treatments affected the frequency of social interactions, as well as assessing the climate, collegiality, and degree of attachment to the office. These outcomes are all measured through responses to the surveys.

1. *Collegial climate in the office based on survey direct reports.* We construct an index of perceived collegial climate, calculated as the average z-score over the 8 questions related to collegiality (Q4-Q11 of the survey).

2. *Collegial climate in the office based on diaries.* This is our most direct measure of collegiality (Q18 of the survey). Participants were asked: *Please reflect on your past month and indicate how often you engaged in the following activities.* We compile a standardized index of frequency of social interactions based on the following activities: helping colleagues, receiving help from colleagues, talking to the manager, teamwork planning, chatting with colleagues, and having breaks or lunch together with colleagues.

3. *Degree of attachment to colleagues.* We construct a standardized measure (z-score) based on two questions in the survey: (1) *Q15: How many close friends would*

you say you have in your office? (2) *Q16: I am happy to devote my personal time to help some of my office colleagues solve their personal problems.*[6]

Second-stage outcomes:

Our main outcomes of interest are related to productivity (at the office and individual level) and turnover. All second-stage outcomes are based on the administrative records of the company.

1. **Relative Performance of the Office in the competition in July 2023**.

Our main second-stage outcome of interest is the office-level relative performance in the firm-wide competition between offices. The competition had three stages. Each stage consists of three months, and the points start anew at the beginning of each stage, but they are accumulated within the stage. The conditions, goals, and tasks of the competition can change every month, and each month, the results are announced (both the points and the ranking of each team). We have performance data for all months.

By design, our intervention starts with the beginning of the second stage of the competition. It starts on May 1, 2023, and lasts for three months. The third stage begins on August 1, 2023, and also lasts for three months. We analyze both the ranks and the absolute sum of points that each office achieves. We focus on performance in the last month (July) of the competition, since it corresponds to the last month of the three-month intervention. We will consider the full three-month period of the third stage, covering the post-intervention period, as a longer-term outcome. Finally, we also consider the treatment effect on the competition performance given previous performance for the period starting from the intervention.

2. **Average individual productivity of employees in the office**: This is a measure provided by the company, which is based on porfolio size and quality of the loans. This is measured in KGS.

3. **Employee retention at 6 and 12 months.** This measure is also provided by the company.

3.4.2 Secondary outcomes: Mechanisms

We are also interested in evaluating the mechanisms through which the team activities affect the end outcomes. These activities could potentially affect productivity and

[6]This measure slightly deviates from the pre-registration plan. We initially intended to include a third item in the index (Q17), but we excluded it because it was a mechanism of attachment to the office rather than an outcome. We therefore excluded that third question from the measure of attachment to colleagues.

retention through various channels, and we included a specific set of questions in the surveys to explore these channels.

The channels we examine are the following:

- **Intrinsic motivation:** Social activities could directly affect employees' intrinsic motivation and thereby their productivity. Intrinsic motivation is measured by survey measures of intrinsic motivation (z-score based on Q14 of the survey) and self-reported working hours (Q19).

- **Information transmission** Social activities and stronger social connections in the office may facilitate information transmission, some of which may be relevant for productivity. We measure information transmission through a set of incentivized questions (Q20 and Q21 of the Surveys). For this purpose, a week before each survey wave, the head of sales casually mentions two interesting facts, one non-work-related and one work-related, during the weekly Zoom meeting with all office managers. Examples include the head of sales' naming the office he sees as functioning best. In the survey, we ask questions about these facts, and those who answer correctly receive 100 KGS for each question.

- **Advice seeking/giving:** Social activities and stronger social connections may encourage employees to be less reluctant to seek or give advice to others. This is related to information transmission, but focuses on peer interactions, and is measured in a non-incentivized manner. We construct an index (z-score) aggregating answers to questions Q12 and Q13 of the survey.

- **Reciprocity towards the firm:** These social activities are effectively a form of non-monetary compensation - a gift from the company to their employees. Effects on productivity may therefore also be a form of 'gift-exchange' Akerlof (1982) We measure reciprocity in an incentivized manner (Q22 of the survey). Specifically, we elicit the employees' willingness to volunteer unpaid extra time to improve the office (e.g., small refurbishments and territorial care, such as planting flowers in offices with soil), outside normal working hours. Participants were asked whether they were willing to volunteer for free. The choice was randomly implemented among 40 loan officers.[7]

[7]More precisely, we elicited a price list, asking whether participants were willing to volunteer for free, for 100 KGS, 200 KGS, and so on till 600 KGS. However, the variation was lower than expected, so we used free volunteering as the final measure.

4 Results

4.1 Randomization, Balance, and Compliance

Using data available from the firm as of mid-April 2023, we randomized teams[8] into treatment and control groups using efficient cluster randomization (Gallis et al., 2018). The following variables were used to ensure balance:

- Number of loan officers in the office: Total number of employees responsible for evaluating and approving loans or credit to clients.
- Number of active clients in the office: Total number of clients who have taken out loans or credit from the firm.
- Size of the credit portfolio: Total balance of all outstanding loans and credit extended by the office to its clients.
- Size of the portfolio at risk (PAR) of 7 days: Total balance of loans or credit in the portfolio overdue by 7 days or more.
- Share of the portfolio at risk (PAR) of 30 days: Percentage of the total credit portfolio overdue by 30 days or more.
- Absolute growth of the portfolio in March 2023: Total increase in the value of the credit portfolio from the beginning to the end of March.
- Points in the competition between offices in February and March 2023: Performance metric quantifying office competition based on monthly-varying indicators.
- Regional dummies: Binary variables representing the geographical regions in which the firm operates. A value of "1" indicates the presence of an office in that region, while "0" denotes its absence.

These variables were selected based on their importance as identified by the firm's management.

Based on the randomization, 51 teams were assigned to treatment and 52 to control. Because of logistical constraints, some of the initial teams were excluded from the sample. Specifically, one team initially randomized to treatment lacked a manager and was under investigation for potential fraud; it was manually reassigned to the

[8]Note that we refer to teams, as they are units of the between-office competition. Almost all teams consist of one office, with a few exceptions described below.

control group and excluded from the sample. However, five teams (two in control and three in treatment) included more than one office, located far apart and operating independently. This is because these offices are too small to comprise a team of five people. These were excluded from the analysis, as their activities and performance were less comparable to the other teams.[9] After these adjustments, the final sample consisted of 48 teams in the treatment group and 50 in the control group.

The final sample includes only loan officers who participated in both survey waves, excluding those who left the company or were hired during the experiment.[10] Table 1 presents the balance of observables at the team level (part of block randomization) and additional employee characteristics.

Despite the exclusion of some teams post-randomization, balance is preserved across the team-level observables used in stratification. Regarding other observables, the only significant difference is the higher share of women loan officers in the treatment group. Given the number of covariates, some imbalances are expected by chance. One of our analysis specifications will include fixed effects for loan officers, controlling for all observable characteristics at the individual level.

Table 2 presents the compliance of the offices with event organization and the distribution of chosen events. While all treatment offices organized six events, individual loan officers attended an average of 5.74 events. Regarding the choice of events, the picnic was the most popular, with all treatment offices but one including it in their list. Creating a flash-mob video was the least popular activity. Overall, there is considerable heterogeneity in event selection. Despite observing imperfect compliance, we use intent-to-treat estimates in our main analyses.

4.2 Empirical Specification

There are two types of outcomes of interest.

[9] Additionally, some teams comprised of more than one office, as some main offices have 'mobile sub-offices', that are spread across multiple locations. These mobile offices were managed by the same manager and interacted regularly with the main office, so we retained them.

[10] In total, 1,062 loan officers participated in the baseline survey, and 1,005 took part in the endline survey, with 905 officers participating in both waves. Among the 1,062 loan officers who participated in the baseline, 110 had left the company by the time of the endline survey, and 47 were still employed but absent from the office on the day of the endline survey. The propensity to skip the endline was balanced across treatment and control groups. A regression of the probability of skipping the endline, conditional on being employed, revealed a marginally significant association with one of our three primary outcomes: the collegiality survey index was positively correlated with the likelihood of missing the endline ($p = 0.077$). Of the 99 loan officers who participated in the endline but not in the baseline, 81 were new hires, and 19 were employed at the time of the baseline but absent on the day of that survey. Taken together, these figures indicate that nearly all employees participated in the baseline, with slightly higher absence observed at the endline, likely due to timing: the endline was conducted in August, a period typically associated with employee vacations.

Table 1: Comparison of Control and Treatment Groups

Variable	Control	Treatment	Difference	p-value
Part of block randomization				
Number of employees	13.55	13.24	-0.31	0.82
Number of clients	3,291	2,929	-362	0.36
Portfolio size, KGS	1.435e+08	1.396e+08	-3.914e+06	0.845
Portfolio at risk 7 days, KGS	1.633e+06	1.694e+06	60,509	0.90
Portfolio at risk 30 days, %	1.123	0.897	-0.226	0.46
Portfolio growth March 2023, KGS	263,821	293,134	29,313	0.75
Points in competition March 2023	12.25	17.615	5.36	0.45
Regional dummies (12, min p-value)	.	.		0.125
Not part of block randomization				
Female	0.71	0.79	0.08	0.02**
Age	32.6	32.8	0.25	0.63
Experience of managers, months	120.9	108.3	-12.5	0.25
Number of children	1.91	2.03	0.12	0.24
Productivity March 2023, KGS	29,140	27,927	-1,212	0.63
Kyrgyz language chosen	0.58	0.52	-0.06	0.36
Observations	464	441		

Notes: Balance table for loan officers who participated in both waves of the survey. The p-values are based on office-level clustering.

Survey-Based Outcomes

We estimate average treatment effects using a difference-in-differences specification with loan officer fixed effects, which control for time-invariant individual characteristics:

$$y_{if} = \alpha_1 + \alpha_2 T_f \cdot POST + \delta_i + \epsilon_{if},$$

where y_{if} is the outcome of employee i in office f. T_f is a dummy variable that equals 1 if office f is in the treatment group, and 0 otherwise. $POST$ is a dummy variable that equals 1 if the outcome is measured in the second survey (endline), and 0 otherwise. δ_i represents loan officer fixed effects. Standard errors are clustered at the office level.

The parameter of interest capturing the treatment effect is α_2. We also provide all our main results without fixed effects using a difference-in-differences estimation, which is reported in Online Appendix A.

Administrative Outcomes

To test the null hypothesis that the intervention had no impact on y from administrative records of the company, we estimate the average treatment effect while con-

Table 2: Events and Participation

	Control	Treatment	Total
Number of events participated in	0	5.74	2.79
Picnic	0	97.0 %	47.0 %
Lunch together	0	89.0 %	44.0 %
Movie night	0	85.0 %	41.0 %
Potluck breakfast	0	73.0 %	36.0 %
Pantomime game	0	47.0 %	23.0 %
Compliment-letter game	0	44.0 %	22.0 %
Two lies one truth game	0	42.0 %	20.0 %
Singing competition	0	35.0 %	17.0 %
Nostalgic day	0	33.0 %	16.0 %
Creating a flash-mob video	0	30.0 %	14.0 %
N loan officers	464	441	905

Notes: Each treatment office was instructed to organize six out of ten suggested events. Participation refers to the average number of events attended by each loan officer.

ditioning on covariates selected using the "post-double-selection" (PDS) methodology of Belloni et al. (2014):

$$y_{if} = \alpha_1 + \alpha_2 T_f + \mathbf{X}'_{if}\gamma + \epsilon_{if},$$

where y_{if} is the outcome of employee i in office f. T_f is a dummy variable that equals 1 if office f is in the treatment group, and 0 otherwise. $\mathbf{X}'_{if}$ is a vector of observables for employee i in office f that are potentially predictive of the outcome y, selected following the "post-double-selection" (PDS) methodology of Belloni et al. (2014). For the office-level outcomes, the model is transformed straightforwardly but using only office-level variables. The list of covariates includes all variables used in randomization and its squared terms, plus additional variables its squared terms depending on the outcome (office level or individual level), which are discussed in respective sections. Standard errors are clustered at the office level.

The parameter of interest capturing the treatment effect is α_2. For illustrative purposes, we also provide all our main results excluding covariates.

Finally, to account for multiple hypothesis testing, we adjust p-values using the Romano–Wolf stepdown procedure (Romano and Wolf, 2005; Clarke et al., 2020).

4.3 Treatment Effects on First-Stage Outcomes

As described in subsection 3.4.1, we consider three main first-stage outcomes: collegial climate in the office based on survey direct reports, collegial climate in the office based

on diaries, and the degree of attachment to colleagues. Table 3 presents the estimated treatment effects for these outcomes. The analysis uses a linear fixed-effects regression model with standard errors clustered at the office level, with *Treatment*Wave2* capturing the average treatment effect.

Table 3: Treatment Effects On First Stage Outcomes

	Collegial Climate Survey Index (1)	Collegial Climate DiaryIndex (2)	Care Colleagues Index (3)
Wave 2	-0.081*	-0.064**	-0.031
	(0.044)	(0.028)	(0.033)
Treatment*Wave2	0.123**	0.112**	0.129**
	(0.058)	(0.045)	(0.054)
Constant	0.009	0.055***	0.013
	(0.014)	(0.012)	(0.013)
Observations	1810	1760	1806
Adjusted R^2	0.009	0.007	0.008
N clusters	101	101	101
Controls	FE	FE	FE

Notes: Linear fixed-effects regressions. "Wave 2" is a dummy for the endline survey. "Treatment × Wave 2" captures the treatment effect. Standard errors clustered at the office level are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

The results show positive and significant treatment effects of the intervention on all three first-stage outcomes. Model (1) shows that the treatment increased perceived collegial climate by 0.123 standard deviations ($p < 0.05$) relative to the control group. Similarly, as model (2) shows, the diary-based measure of collegial climate reflects a statistically significant improvement of 11.2% of a standard deviation ($p < 0.05$), highlighting that the intervention also influenced employees' day-to-day experiences and interactions. Finally, for the degree of attachment to colleagues, the treatment effect is 12.9% of a standard deviation ($p < 0.05$), suggesting that employees in the treatment group felt more connected to and supportive of their colleagues relative to the control group.

Given imperfect compliance, we also estimate local average treatment effects (LATE), reported in Table A.5 in the Appendix. The estimation results indicate a robust causal effect of event attendance on all three first-stage outcomes at the 1% significance level. Thus, not surprisingly, the LATE estimates are more precisely estimated than the treatment effects, with somewhat larger effect sizes, given that the targeted number of events is six. Estimates range from 0.023 per event for the Collegial Climate Diary Index to 0.027 for the Collegial Climate Survey Index.

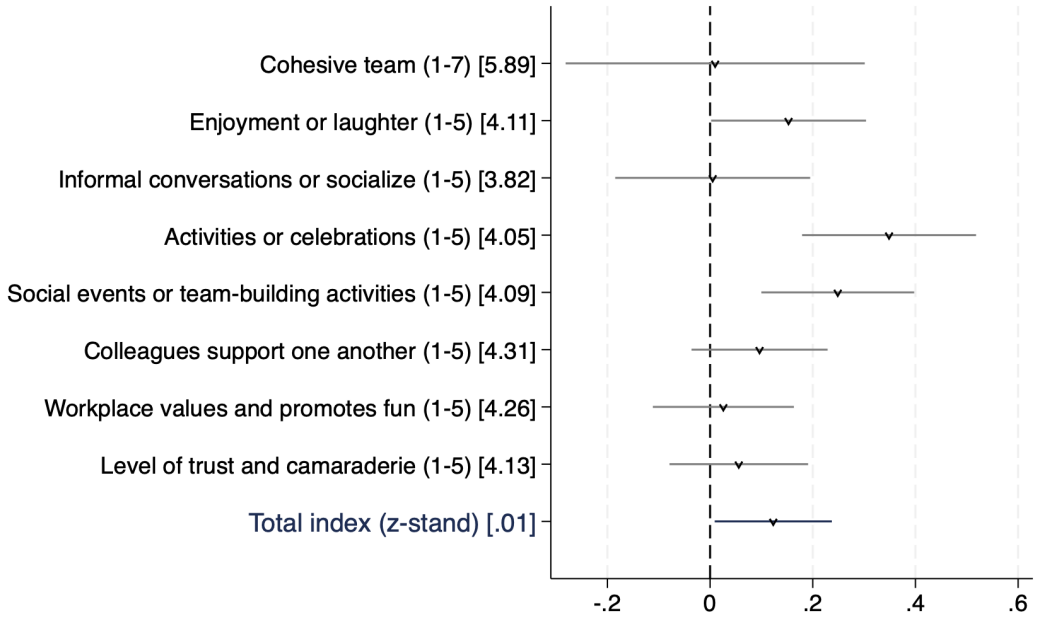

Figure 1: Components of Collegial Cliamte Survey Index

Notes: Each component corresponds to a survey item (see Appendix for details). Values in parentheses indicate the response scale; values in brackets show baseline means.

Using the Romano-Wolf correction for multiple hypotheses testing for the three first-stage outcomes, the significance of each outcome remains at a 5% significance level.

Next, we consider the components of each main outcome to identify which components are most responsive to treatment.

Figure 1 presents the components of the Collegiality Survey Index. Out of eight components, three are significantly affected by the intervention: frequency of enjoyment and laughter, activities and celebrations, and social events. The fact that treatment effects are largest for activities and social events is reassuring, as these measures most directly reflect the intervention. While the degree of team cohesiveness and frequency of informal conversations did not change, all other indicators moved towards better collegiality.

Figure 2 presents the components of the Collegiality Diary Index. Out of six components, two are significantly affected by the intervention: the proportion of time spent talking to managers and the frequency of lunches together. Additionally, all components but help from colleagues show substantial increases, resulting in an overall significant improvement in the index.

Finally, Figure 3 presents the components of the Care Colleagues Index. This index consists of the self-reported degree of help provided to colleagues with personal

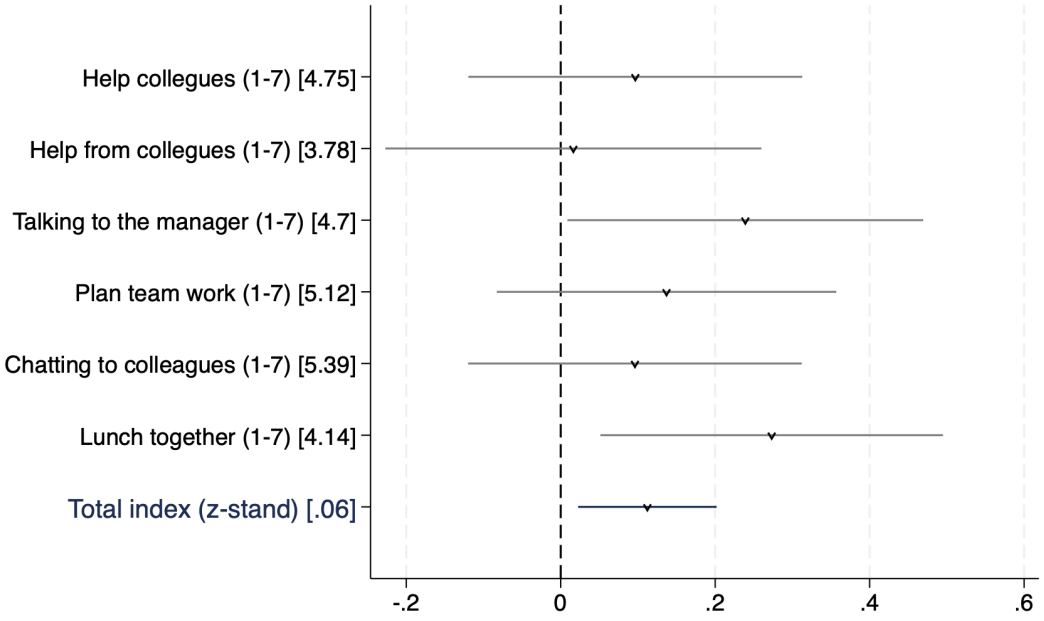

Figure 2: Components of Collegial Climate Diary Index

Notes: Each component corresponds to an activity in the diary module (see Appendix). Parentheses denote the response scale; brackets show baseline means.

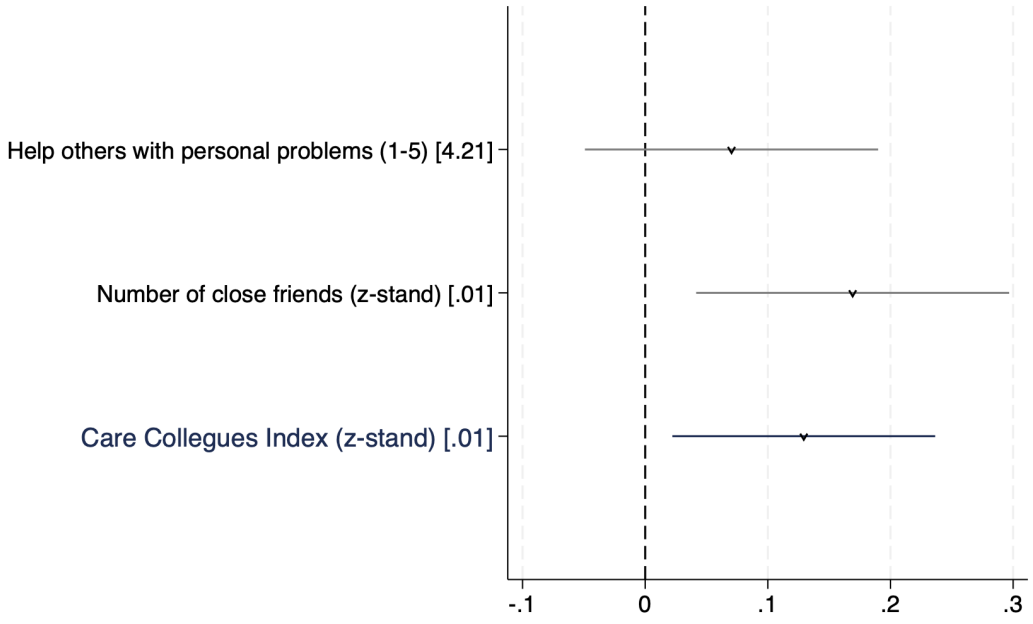

Figure 3: Components of Care Colleagues Index

Notes: Each component reflects a survey question related to collegial attachment (see Appendix). Parentheses indicate the response scale; brackets show baseline means.

problems and the reported number of friends. The number of friends is significantly increased by the intervention, while there is a substantial but not significant increase in helping others.

Overall, the intervention had a meaningful and consistent impact across first-stage outcomes, fostering a more collaborative and supportive work environment.

4.4 Treatment Effect on Second-Stage Outcomes

As mentioned in subsection 3.4.2, we consider three second-stage outcomes derived from the administrative data of the firm.

Performance in the competition

Our first main outcome of interest is performance in the firm-wide competition in July (the last month of the intervention) and subsequent months. An advantage of using competition performance is that, unlike productivity or retention, it is measured at the office level—the same unit as the intervention.

The performance in the competition is objective, with indicators varying each month and announced in advance. These indicators are typically productivity-related, such as portfolio growth, repayment rates, or sales volume, but may also include metrics tied to management goals, for instance, emphasizing sales of a specific product, or include metrics such as adherence to formal procedures or client feedback. Office points and rankings are published monthly. As the main prize, all employees of the winning office for each stage (three months) attend the year-end event abroad, which lasts 3 to 4 days.[11]

Figure 4 illustrates the dynamics of performance for teams in the treatment and control groups by month. Panel A displays the average points, while Panel B shows the average ranks. In the three months before the intervention (February-April), the two groups exhibited similar performance. After the intervention started, teams in the treatment group systematically outperformed those in the control group, with the difference peaking in July, the last month of the intervention. Note, that in July the second stage of competition completed, meaning accumulated winner of May-July received the main prize. In September, when the third stage started from scratch, the groups showed nearly equal performance, but by October, differences favoring the treatment group began to emerge again.

Table 4 provides regression analyses of the treatment effects by month, starting from July. Panel A reports results for points, while Panel B shows results for ranks.

[11] In 2023, this event took place in Antalya, Turkey.

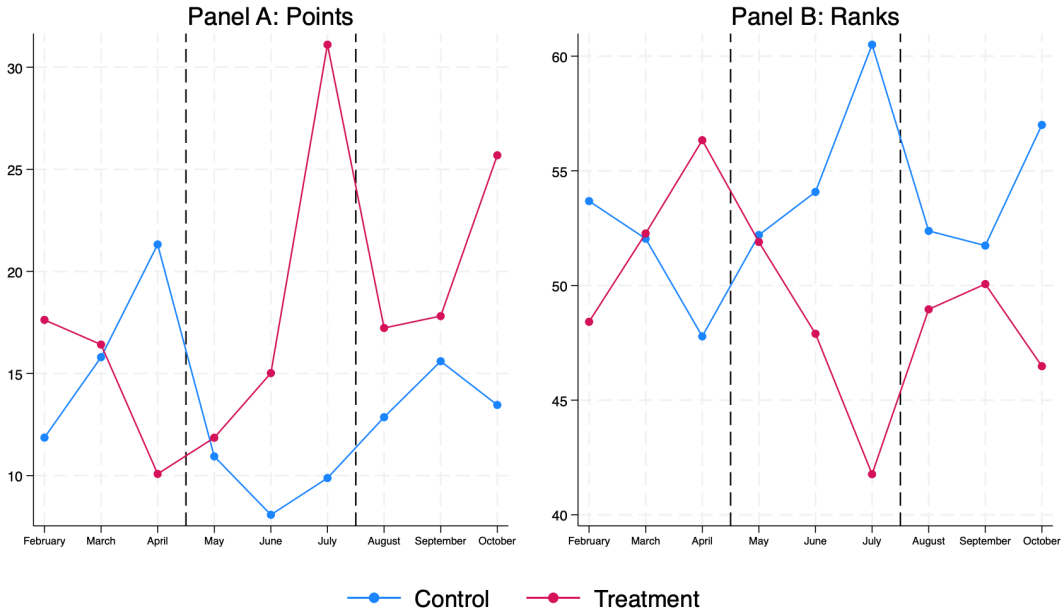

Figure 4: Dynamics of Average Points and Ranks in the Competition

Notes: Panel A shows average monthly points (higher is better); Panel B shows average ranks (1 = best, 102 = worst). Scoring criteria vary monthly based on firm-defined indicators.

Table 4: Treatment Effect on Performance in the Competition

		Panel A		
	Points July	Points August	Points September	Points October
Treatment	19.457***	4.369	0.257	12.227*
	(6.136)	(6.775)	(6.923)	(7.272)
Observations	98	98	98	98
Controls	PDS selected	PDS selected	PDS selected	PDS selected
		Panel B		
	Place July	Place August	Place September	Place October
Treatment	-17.852***	-3.422	0.165	-9.704*
	(4.942)	(5.947)	(5.417)	(5.277)
Observations	98	98	98	98
Controls	PDS selected	PDS selected	PDS selected	PDS selected

Notes: Linear regressions with post-double-selection (PDS) controls drawn from baseline covariates and their squares, including average gender dummy, average age, average number of children, average dummy of Kyrgyz ethnicity, average dummy of chosen Kyrgyz language, tenure of the manager in years. Results without controls are presented in Appendix Table A.1. Standard errors clustered at the office level are reported in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

The treatment effects in July are statistically significant, with treated offices achieving, on average, 19.46 additional points ($p < 0.01$) and improving their rank by 17.85 places ($p < 0.01$). In August, the treatment effects diminish and are no longer significant. However, in October, we observe a resurgence, with treated offices gaining 12.23 points ($p < 0.10$) and improving their rank by 9.70 places ($p < 0.10$). LATE estimates are presented in Table A.2, and provide the same qualitative insight.

An alternative way of looking at the effects of the competition is to analyze monthly performance given the performance in the previous months. Table A.3 in the Appendix presents results of regression analyses of panel data of monthly performance in the competition. Models (1), (2), and (5), (6) present treatment effects on points and ranks, respectively, in the pre-intervention period. The treatment group performs worse than the control group, but the difference is not significant.[12] In contrast, when looking at the period from May to October, the treatment group performs significantly better than the control group, conditional on the previous month's performance.

Summing up, the results highlight positive treatment effects on performance in the competition, particularly in the final month of the intervention. While treatment effects fade after the competition resets in September, performance differences reemerge in October, suggesting potential persistence. These findings, together with results from panel analyses, suggest that the intervention had a substantial and lasting impact on office-level performance in the competition.

4.5 Productivity and Retention

Next, we consider the individual productivity of the loan officers and retention. We have three data points for productivity and retention after intervention: end of July 2023 (right after the intervention), October 2023, and February 2024. The latter allows us to observe medium-term effects, particularly important for measuring retention.

The measure of individual productivity is an objective metric based on the size of the portfolio and the quality of repayments. It determines whether an employee receives a bonus and its magnitude.[13]

For retention, we examine whether loan officers who were employed at the start of the experiment (May 1, 2023) are still employed at the firm at the subsequent dates.

Table 5 presents the treatment effects on productivity and retention. For productivity, the coefficients in models for July, October, and February are not statistically

[12] It reaches significance at the 10% level for points with post-double-selected controls.

[13] We do not have access to the exact formula, but the scale can be interpreted in local currency (KGS) and, based on management's description, should be proportional to the profit the loan officer brings to the firm.

Table 5: Treatment Effects on Productivity and Retention

	Productivity July	Productivity October	Productivity February	Retention July	Retention October	Retention February
Treatment	-0.54	861.05	145.35	-0.04*	-0.04	-0.02
	(1009.55)	(1155.58)	(1528.94)	(0.02)	(0.03)	(0.03)
Observations	951	917	792	1058	1058	1058
Mean Outcome	31000	35000	39000	0.10	0.13	0.25
Controls	PDS Selected	PDS Selected	PDS Selected	PDS Selected	PDS Selected	PDS Selected

Note: Results are based on linear regression with post-double-selection of controls from variables used in randomization and their squared terms, plus average gender dummy, average age, average number of children, average dummy for Kyrgyz ethnicity, average dummy for chosen Kyrgyz language, and tenure of the manager in years. All models control for April 2023 productivity. Results without controls are presented in Appendix A.4. Standard errors are in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

significant. However, the retention results in models (4) and (5) for July and October are notable. While the coefficients for retention in July (-0.04) and October (-0.04) are large relative to the mean values (0.10 and 0.13, respectively), the large standard errors result in marginal statistical significance (p=0.06 and 0.135). The medium-term retention results in February (model 6) show a smaller coefficient (-0.02), which is insignificant at conventional levels. These findings suggest the intervention may have delayed, rather than prevented, attrition.

To better understand the treatment effects, we examine the determinants of productivity and retention prior to the intervention and in particular how these correlate with measures of collegiality. For productivity, we use data from April; for retention, we correlate pre-treatment observables and measures of collegiality with retention status in July. Table 6 reports OLS regressions for productivity and marginal effects from Probit regressions for retention. Experience is a strong predictor of productivity with diminishing returns (models (1) and (2)). Retention, in contrast, is negatively associated with April productivity, suggesting that higher-performing loan officers are more likely to leave the firm (models (3) and (4)).

We examine three measures of collegial climate: a survey-based collegial climate index, a diary-based climate index, and a care-for-colleagues index. We find that the collegial climate measures based on diary and survey indices are *negatively* associated with individual productivity, while the care index is positively and significantly related to individual performance. These opposing signs suggest potential trade-offs between engagement in social activities and work-related tasks. For retention, the Collegial Climate Diary Index is positively and significantly associated with staying in the firm, even after controlling for productivity, while the survey-based and care for colleagues indices are positively correlated but the estimates are rather small and not significant. These results are just correlational, of course, but they are in line with the hypothesis that a more collegial work environment helps retain staff.

Table 6: Determinants of Productivity and Retention

	Productivity April	Productivity April	Retention July	Retention July
Age	1277.73*	1139.47	-0.08	-0.08
	(714.60)	(703.92)	(0.05)	(0.05)
Age squared	-15.48	-13.71	0.00	0.00
	(10.97)	(10.72)	(0.00)	(0.00)
Female	1362.92	1387.02	-0.24**	-0.24**
	(1757.49)	(1745.79)	(0.11)	(0.11)
Experience, months	881.58***	871.13***	-0.00	-0.00
	(71.13)	(70.86)	(0.01)	(0.01)
Experience squared	-2.83***	-2.81***	-0.00	-0.00
	(0.62)	(0.62)	(0.00)	(0.00)
Collegial Climate Survey index		-3800.00*		0.01
		(1972.25)		(0.10)
Collegial Climate Diary Index		-1100.00		-0.19**
		(985.59)		(0.09)
Care Colleague Index		2226.75**		0.06
		(895.69)		(0.07)
Productivity April			-1.20e-06***	-1.24e-06***
			(0.00)	(0.00)
Productivity April squared			-1.62e-11***	-1.61e-11**
			(0.00)	(0.00)
Constant	-23000.00**	-20000.00*	0.66	0.65
	(11000.00)	(11000.00)	(0.84)	(0.83)
Observations	1057	1057	1057	1057

Notes: Columns 1–2 show coefficients from OLS regressions for productivity (in KGS). Columns 3–4 report marginal effects from Probit regressions for retention (indicator for remaining employed in July). Only baseline survey responses are used. Standard errors clustered at the office level are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Notes: Coefficients of OLS regression for productivity models, and marginal effects of Probit regression for retention models. Only answers from the Baseline survey are used. Standard errors are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Summing up, we observe statistically significant effects on competition performance and on retention in the short-run, although the latter effect is less precisely estimated. Individual productivity, on the other hand, appears to be unaffected by the intervention. Using the Romano-Wolf correction for multiple hypothesis testing for the second-stage outcomes, the significance of the treatment in boosting competition results in July 2023 remains significant for both places and points at the 5% significance level.

4.6 Channels

In this subsection, we study the mechanisms behind our main treatment effects of increased collegiality and performance in the between-office competition.

In our survey, we measured four potential mechanisms: intrinsic motivation, information transmission, advice seeking and giving, and reciprocity towards the firm.

To measure intrinsic motivation, we construct an index based on the self-reported working hours per week and degree of agreement with four statements from the survey (see Survey Appendix, Section 3): "I am passionate about my work," "I am willing to go the extra mile to make sure I do a great job," "I feel that my work has a positive impact on others or contributes to a greater purpose," and "My work activities genuinely interest me." The index is the average of Z-standardized responses.

The measure of Advice Seeking and Giving is based on an index aggregating responses (from 1 to 5) to four statements from the survey (see Survey Appendix, Section 2): "How willing are you to devote your personal time to help your office colleagues solve their work problems?" and "How comfortable are you asking for advice from your colleagues on job-related issues?" The index is the average of Z-standardized responses.

To measure the degree of information transmission, we rely on incentivized measures. One week before each survey wave, during a weekly Zoom meeting of office managers with the head of sales, the head of sales casually mentioned two facts. One fact was unrelated to work (e.g., the "office with the best atmosphere in Russia") and another related to general company statistics (e.g., differences in credit risk among client groups). Employees received a 100 KGS bonus for each correct answer. The index is based on the number of correct responses (0, 1, or 2).

Finally, for Reciprocity Towards the Firm, we elicited the incentivized willingness of employees to volunteer unpaid extra time to improve the office (e.g., small refurbishments or territorial care like planting flowers). Reciprocity Towards the Firm is a dummy variable equal to 1 if the loan officer agreed to volunteer and 0 otherwise.

Table 7: Channels correlation to outcomes and treatment effects

Panel A. Intrinsic Motivation Index

	Collegiality Survey (1))	Collegiality Diary (2)	Care Colleagues (3)	Points April (4)	Productivity April (5)	Retention July (6)	Intrinsic Motivation (7)
Intr Motiv Index	0.416***	0.190***	0.452***	0.319	5630.790***	-0.028	
	(0.043)	(0.034)	(0.046)	(2.105)	(1583)	(0.017)	
Wave2							-0.053
							(0.033)
Treatment*Wave2							-0.009
							(0.045)
Observations	1025	974	1002	1026	1018	1026	1770
Clusters	101	101	101	101	101	101	101

Panel B. Advice seeking/giving Index

	Collegiality Survey (1))	Collegiality Diary (2)	Care Colleagues (3)	Points April (4)	Productivity April (5)	Retention July (6)	Advice Index (7)
Advice Index	0.320***	0.134***	0.297***	0.629	-523.349	0.007	
	(0.032)	(0.022)	(0.030)	(1.524)	(1590)	(0.009)	
Wave2							-0.067
							(0.059)
Treatment*Wave2							-0.011
							(0.078)
Observations	1075	1016	1047	1076	1067	1076	1810
Clusters	101	101	101	101	101	101	101

Panel C. Information Transmission Index

	Collegiality Survey (1))	Collegiality Diary (2)	Care Colleagues (3)	Points April (4)	Productivity April (5)	Retention July (6)	Information Index (7)
Information Index	-0.028	0.057	0.058	-5.601**	3668**	-0.008	
	(0.045)	(0.037)	(0.042)	(2.438)	(1791)	(0.018)	
Wave2							0.224***
							(0.058)
Treatment*Wave2							0.082
							(0.095)
Observations	1075	1016	1047	1076	1067	1076	1810
Clusters	101	101	101	101	101	101	101

Panel D. Reciprocity towards firm

	Collegiality Survey (1))	Collegiality Diary (2)	Care Colleagues (3)	Points April (4)	Productivity April (5)	Retention July (6)	Reciprocity (7)
Reciprocity	0.150***	0.159***	0.287***	0.183	5041***	-0.034	
	(0.057)	(0.054)	(0.062)	(3.627)	(1731)	(0.029)	
Wave2							-0.015
							(0.017)
Treatment*Wave2							0.079***
							(0.024)
Observations	1075	1016	1047	1076	1067	1076	1810
Clusters	101	101	101	101	101	101	101

Notes: Models (1)–(6) are OLS regressions of the dependent variable on each channel, without controls. Model (7) reports estimates from a linear fixed-effects regression. Wave 2 is an indicator for the endline survey. Standard errors clustered at the office level are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 7 presents the results of regression analyses of each channel. Models (1) to (6) report the correlations between each channel and the main outcomes of interest at baseline, while model (7) reports estimates of the treatment effect on the measure of the channel considered.

All channels show significant correlations with at least one of the main outcomes at baseline in a predicted direction,[14] demonstrating their potential relevance as mechanisms.

Among the four hypothesized channels, only reciprocity toward the firm is significantly affected by the treatment. The *Treatment*Wave2* coefficient for reciprocity is 0.08 (Model 7, $p < 0.01$), indicating a meaningful increase in employees' willingness to volunteer for unpaid office improvements. This finding highlights reciprocity as the most likely mechanism behind the observed effects on collegiality and performance. The intervention appears to have fostered a stronger connection between employees and the firm, which, in turn, may have contributed to improved outcomes in collegiality and competition performance.

5 External Validity

As with any field experiment, external validity is an important consideration. We follow the transparency checklist proposed by List (2020) to assess the generalizability of our findings.

Selection. How representative is the setting we are studying? The experiment was conducted in a large white-collar firm in Kyrgyzstan. Kyrgyzstan is one of the least developed republics of the former Soviet Union, located in the Central Asian region with a GDP of $2,424 per capita (source: World Bank, 2024). The country was among the first in the post-Soviet territory to move to the market economy. Labor force participation in 2023/24 was around 71% (source: IMF) and female labor force participation is around 53-55% (source: World Bank), which is a bit lower than in developed countries but substantially higher than other low-middle-income countries like India. The share of women working in our partner firm is quite high (75%), although female representation tends to be relatively high in the sector of microfinance in developing countries.[15] According to Mia et al. (2022), the microfinance sector across

[14] One exception is the significant negative correlation between performance in competition in April and information transmission index.

[15] The relatively high share of female workers in the company can be attributed to two main factors. First, at the time of its founding, the company deliberately adopted a strategy of targeting female workers, consistent with the traditional mission of microfinance institutions. This focus not only aligned with the firm's social objectives but also facilitated access to external funding, as it appealed to international lenders such as the European Bank for Reconstruction and Development

Eastern Europe and Central Asia shows strong female representation at board (31%), managerial (44%), and loan-officer (38%) levels, comparable to countries like India and Pakistan, and even the US. Importantly, we find no evidence that the treatment effects on our primary outcomes are driven by female employees. Specifically, there is no significant difference in treatment effects by gender for the Collegial Climate Diary Index and the Care for Colleagues Index. However, we do observe a significantly larger treatment effect for men in the change in the Collegial Climate Survey Index. This pattern provides reassurance that the effects of the intervention are likely to be portable to more gender-balanced white-collar firms.

The firm's incentive structure resembles that of many Western white-collar firms, making the setting potentially comparable despite differences in geography and income levels. Overall and in our view, the results are likely portable to other large white-collar firms in low, middle, and higher income countries, specifically those employing a significant fraction of women.

Naturalness of the environment The intervention was implemented in a naturalistic setting and was integrated into normal workplace routines. The treatment was not 'artificial' in any way.

Attrition There is very little attrition in our data, and we show that attrition is not selective, which means that our sample remains internally valid over time.

Scalability The intervention was deliberately designed to be low-cost and scalable. The cost per participant for the activities was around $24. By comparison, commercial team-building activities in Kyrgyzstan typically cost $200–500 per person per day—an order of magnitude more expensive.[16]

6 Conclusion

This study presents evidence from a randomized controlled trial evaluating the effects of structured social activities on collegiality and workplace outcomes.

We partner with a large private white-collar company in Kyrgyzstan, which has close to 1,000 employees spread across 100 small offices across the country. Half of the offices were randomly assigned to receive subsidies to organize biweekly social activities.

(EBRD). Second, the company has a strong presence in rural areas, where male labor supply is shaped by seasonal migration patterns. Many men work as migrant laborers in Russia, employed as couriers, taxi drivers, or in construction. This out-migration reduces the pool of men competing for local employment opportunities, thereby increasing the relative share of women in the company's workforce.

[16] see for example Team-building tours offered by the firm Advantour

Using survey data and administrative records from the company, we evaluate how the intervention impacted collegiality in the office and productivity and turnover. We find that the intervention strengthens collegiality, enhances workplace friendships, and improves office-level performance. We find no significant effects on individual productivity, but observe a 40% reduction in short-run turnover, albeit with relatively imprecise estimates. There is no significant difference in retention rates 6 months after the intervention, which suggests that the intervention may have helped delaying departures.

We examine four possible channels for how the intervention may have affected office performance and turnover, including intrinsic motivation, information transmission, advice seeking and giving, and reciprocity. We find that the most plausible mechanism driving these effects is a sense of gratitude and reciprocity toward the company.

This study focuses on a set of social activities that are meant to be 'fun,' inspired by the literature in sociology that suggests that shared enjoyment is a fundamental driver of social bonding. These activities were deliberately chosen to be broadly accessible, requiring no specific skills and appealing to a wide range of employees. They contrast with other examples of team-building activities that are proposed on the market, which may appeal to certain sub-groups of employees more than others.

Our experiment is conducted in a specific environment: it is a white-collar company, and its incentive structure is highly competitive. We chose this setting as it is a setting where one may worry about the possible adverse effects of competition. In principle, it would be interesting to study how monetary incentives and non-monetary compensation interplay, and examine the impact of such activities in a setting that has different incentive structures. Similarly, since these activities appear to work as a form of non-monetary compensation and thereby trigger reciprocity, future research could compare the effectiveness of these activities to monetary compensation in fostering productivity and decreasing turnover.

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Appendix

A Additional Tables and Figures

Table A.1: Treatment effect on performance in the competition with no controls

	Panel A			
	Points July	Points August	Points September	Points October
Treatment	21.224***	4.369	2.212	12.227*
	(7.035)	(6.845)	(7.785)	(7.348)
Observations	98	98	98	98
Controls	PDS selected	PDS selected	PDS selected	PDS selected
	Panel B			
	Place July	Place August	Place September	Place October
Treatment	-18.729***	-3.422	-1.677	-10.521*
	(5.701)	(6.008)	(5.976)	(5.915)
Observations	98	98	98	98
Controls	No	No	No	No

Notes: OLS regression. Standard errors are in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A.2: Treatment effect on performance in the competition (LATE Estimates)

	Panel A			
	Points July	Points August	Points September	Points October
Number of events attended	3.439***	0.770	0.045	2.156*
	(1.081)	(1.193)	(1.223)	(1.281)
Observations	98	98	98	98
F-statistic first stage	4910.02	4879.10	5239.05	4879.10
Controls	PDS selected	PDS selected	PDS selected	PDS selected
	Panel B			
	Place July	Place August	Place September	Place October
Number of events attended	-3.149***	-0.603	0.029	-1.712*
	(0.869)	(1.047)	(0.954)	(0.932)
F-statistic first stage	7468.23	7215.87	7376.75	
Observations	98	98	98	98
F-statistic first stage	4905.99	4879.10	5274.12	4905.99
Controls	PDS selected	PDS selected	PDS selected	PDS selected

Notes: IV (2SLS) regression. Controls are the same as selected for each model with post-double-selection of controls from variables used in randomization and its squared terms, plus average gender dummy, average age, average number of children, average dummy of Kyrgyz ethnicity, average dummy of chosen Kyrgyz language, tenure of the manager in years. Standard errors are in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A.3: Treatment effect on performance in the competition conditional on previous performance

	Points	Points	Points	Points	Ranks	Ranks	Ranks	Ranks
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treatment	-6.784	-7.661*	6.499**	6.123**	5.423	5.360	-5.541**	-5.256**
	(4.658)	(4.541)	(3.125)	(2.822)	(3.899)	(3.710)	(2.565)	(2.303)
L.Point	0.462***	0.390***	0.364***	0.266***				
	(0.079)	(0.075)	(0.041)	(0.044)				
L.Ranl					0.410***	0.318***	0.349***	0.250***
					(0.072)	(0.068)	(0.041)	(0.042)
Observations	196	196	588	588	196	196	588	588
Sample	March-April	March-April	May-October	May-October	March-April	March-April	May-October	May-October
R^2	0.186		0.145		0.169		0.137	
Controls	No	PDS selected	No	PDS selected	No	PDS selected	No	PDS selected

Notes: OLS regression or Linear with post-double-selection of controls from variables used in randomization and its squared terms, plus average gender dummy, average age, average number of children, average dummy of Kyrgyz ethnicity, average dummy of chosen Kyrgyz language, tenure of the manager in years. Standard errors are in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A.4: Treatment Effects on Productivity and Retention

	Productivity July	Productivity October	Productivity February	Retention July	Retention October	Retention February
Treatment	-1.5e+03	-1.2e+03	-1.5e+03	-0.036*	-0.038	-0.021
	(2287.538)	(2560.299)	(3086.635)	(0.021)	(0.026)	(0.029)
Observations	951	917	792	1058	1058	1058
Mean Outcome	31000	35000	39000	0.10	0.13	0.25
Controls	PDS Selected	PDS Selected	PDS Selected	PDS Selected	PDS Selected	PDS Selected

Notes: OLS regression or Linear with post-double-selection of controls from variables used in randomization and its squared terms, plus average gender dummy, average age, average number of children, average dummy of Kyrgyz ethnicity, average dummy of chosen Kyrgyz language, tenure of the manager in years. Standard errors are in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A.5: LATE. IV estimation of LATE of number of events participate, with treatment as an instrument

	Collegial Climate Survey Index	Collegial Climate Diary Index	Care Colleagues Index
	(1)	(2)	(3)
Number of events attended	0.027**	0.023***	0.026***
	(0.011)	(0.008)	(0.010)
Constant	-0.092**	-0.050*	-0.033
	(0.043)	(0.030)	(0.034)
Observations	905	855	901
R^2	0.364	0.299	0.238
N clusters	101	101	101
F-statistic first stage	7468.23	7215.87	7376.75
Controls	Lagged outcome	Lagged outcome	Lagged outcome

Notes: IV (2SLS) regression. Standard errors clustered on the office levels are in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

B Appendix Survey

Introduction

Introduction Welcome! This survey is part of a research study. By answering attentively and honestly, you will help top management understand you better. None of your colleagues or managers will see your answers.

Q1. Please enter your first name, last name, and office code.

- First Name: _____
- Last Name: _____
- Office Code: _____

Q2. Please enter your position.

Position: _____

Q3. Please select your preferred language.

- Russian
- Kyrgyz

Section 1 - Collegiality, Enjoyment and Social Interactions

Q4. On a scale from 1 (not cohesive at all) to 7 (extremely cohesive), how cohesive would you say your office team is?

- 1, 2, 3, 4, 5, 6, 7

Q5. How often do you experience enjoyment or laughter during your workday?

- 1 - Never
- 2 - Rarely
- 3 - Sometimes
- 4 - Often
- 5 - Always

Q6. How often do you engage in informal conversations or socialize with colleagues during breaks or after work?

- 1 - Never
- 2 - Rarely
- 3 - Sometimes

- 4 - Often
- 5 - Always

Q7. How often does your office organize events or celebrations to foster team cohesion?

- 1 - Never
- 2 - Rarely
- 3 - Sometimes
- 4 - Often
- 5 - Always

Q8. How often do you participate in workplace-organized team-building or community events?

- 1 - Never
- 2 - Rarely
- 3 - Sometimes
- 4 - Often
- 5 - Always

Q9. How well do you think your colleagues support each other and contribute to a positive work environment?

- 1 - Not at all
- 2 - A little
- 3 - Moderately
- 4 - Well
- 5 - Very well

Q10. To what extent do you feel that a fun and friendly atmosphere is valued and encouraged in your workplace?

- 1 - Not at all
- 2 - A little
- 3 - Moderately
- 4 - Well

- 5 - Very well

Q11. How would you rate the level of trust and camaraderie among your colleagues?

- 1 - Not at all
- 2 - A little
- 3 - Moderately
- 4 - Well
- 5 - Very well

Section 2 - Willingness to Seek Advice and Help

Q12. How willing are you to dedicate your personal time to help colleagues with work-related issues?

- 1 - Not willing at all
- 2 - Rarely willing
- 3 - Sometimes willing
- 4 - Mostly willing
- 5 - Always willing

Q13. How comfortable do you feel asking colleagues for advice on work-related matters?

- 1 - Very uncomfortable
- 2 - Somewhat uncomfortable
- 3 - Neutral
- 4 - Comfortable
- 5 - Very comfortable

Section 3 - Intrinsic motivation

Q14. Please indicate how much you agree or disagree with the following statements: Responses:

- Strongly disagree, Disagree, Neutral, Agree, Strongly agree
- I am passionate about my work.

- I give my all to ensure I perform well at work.
- I feel my work has a positive impact on others or contributes to a meaningful goal.
- My work is genuinely interesting to me.

Section 4 - Personal friendships and attachment to the office

Q15. How many close friends do you have among office employees?

Please indicate how much you agree or disagree with the following statements: Responses:

- Strongly disagree, Disagree, Neutral, Agree, Strongly agree

Q16. I am happy to devote my personal time to help some of my office colleagues solve their personal problems.

Q17. The overall performance of the office is more important for me than my individual performance

Section 5 - Diary of daily activities

Q18. Please reflect on your past month and indicate how often you engaged in the following activities: Responses:

- A lot of time (more than 3 hours per day on average)
- Substantial time (1-2 hours per day on average)
- Rarely (15-30 minutes per day on average)
- Almost never

- Interacting with existing clients
- Seeking new clients
- Learning new rules and procedures
- Helping colleagues
- Receiving help from colleagues
- Talking to the manager
- Think of my marketing strategies
- Teamwork planning

- Chatting with colleagues
- Having breaks or lunch alone
- Having breaks or lunch together with colleagues
- Helping the manager approve loans
- Explaining the products to clients
- Handling customer complaints
- Training by manager
- Training provided by senior staff
- Work with clients with delayed payments

Section 6 - Hours worked

Q19. How many hours per week do you spend on your work responsibilities? _____

Section 7 - Incentivized task to measure information transmission

If you answer the following two questions correctly, you will receive a 100 som reward for each correct answer. Time is limited to 1 minute to answer both questions.

Baseline questions:
Q20. Which office in Russia is considered the favorite due to its fantastic, friendly, and motivating atmosphere?

- Moscow Bolshaya Ordynka
- Vladivostok
- Saint Petersburg Honest
- Yesenina Novosibirsk
- Moscow Kursky
- Saint Petersburg Red Textile Worker

Q21. Based on 2022 loan statistics, how does the PAR30 of clients borrowing amounts over 80,000 som differ from those borrowing less?

- PAR30 is 0.1pp higher
- PAR30 is 1.5 times higher
- PAR30 is 0.2pp higher

- PAR30 is 0.3pp higher
- PAR30 is twice as high
- PAR30 is 2.5 times higher

Endline questions:
Q20. Which office impressed Bakhtiyar Latikhanovich by inviting him to a café on a weekend, where everyone dressed the same and created an amazing atmosphere of unity and team spirit?

- Talas
- Osh market
- Jalal-Abad
- Cholpon-Ata
- Uzgen
- Naryn

Q21. By statistics, if a client has a score of 7-10 points, their PAR30 is on average lower than that of clients with a score of 0-3. By how much lower?

- by 30%
- by 70%
- 1.5 times lower
- 2 times lower
- 2.5 times lower
- 3 times lower

Section 8 - Incentivized task to measure reciprocity

Q22. Imagine the following choice. For 20 randomly selected participants, one of the options below will be selected, and we will implement your choice. If you are chosen, you will either receive money and participate in office volunteer work for 3 hours during a weekend in June or opt out of this opportunity. Participation is entirely voluntary. What would you choose?

For each condition choose Participate or Not participate.

- Volunteer work without pay
- Receive 100 som for participation

- Receive 200 som for participation
- Receive 300 som for participation
- Receive 400 som for participation
- Receive 500 som for participation
- Receive 600 som for participation