

# The Value of Drinking Bosses: Evidence from a Large Manufacturing Company\*

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## Abstract

We estimate employee returns to socializing with drinking bosses on their career. We leverage administrative data consisting of personnel records and annual health checks provided by a large manufacturing company and exploit quasi-random variations in boss switches driven by periodic personnel transfers across divisions. Our findings suggest that when male employees start reporting to a drinking boss, their annual salary increases by 2.7–3.6 percent and promotion likelihood increases by 33–58 percent over the following 8 years. We do not find clear differences in the effects between drinking and non-drinking male employees, suggesting that after-work drinking may be a more inclusive way of socializing than some others, such as shared smoking breaks.

**Keywords:** Drinking, social interactions, promotion, managers, supervisors

**JEL Codes:** J16, J31, L65, M12, M51, M52, Z13

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# 1 Introduction

Socializing is important in organizations. Employees often schmooze during work time, have lunch breaks together, and sometimes hang out with each other outside the workplace. In so doing, they may build a trusting relationship and exchange work-related information. Such relationships and information can be crucial to an employee’s career.

In particular, a good relationship with the direct supervisor can positively influence an employee’s career. By socially engaging with the boss, employees may have more opportunities for learning, self-promotion, or patronage. They can become more productive by learning, ask for a favorable personnel decision by sending a more precise signal of their aptitude, or get an unmerited placement by basking in the boss’s favoritism. These opportunities can be instrumental in climbing the corporate ladder.

We focus on workplace socializing via drinking. Having after-work drinks with coworkers is common across many countries. Some companies officially sponsor happy hours or organize social events where alcohol is served for employees. By consuming alcohol, people temporarily get cheerful and merry due to the release of endorphins (pleasure hormones) in the brain, which may facilitate socializing. In fact, it has been reported that many workers believe that drinking with colleagues improves relationships with them.<sup>1</sup> These observations suggest that drinking has an important social function in workplaces.

In this study, we estimate the effects of drinking with the boss on employees’ careers. We use administrative data consisting of personnel and annual health check records provided by a listed manufacturing company. Our data set spans from April 2006 to March 2019, consisting of 2,022 unique employees, 1,063 unique bosses, and 18,062 employee-year observations. The health check records include self-reported drinking status in frequency and quantity, allowing us to define drinking employees and bosses. We exploit the quasi-random allocation of bosses driven by periodic personnel transfers across divisions to estimate the effects of drinking with the boss on employees’ salary and promotion. In estimation, we divide our sample by gender because female and male employees typically exhibit differing patterns in their career trajectories.

By estimating the event-study model, we find that when male employees report to a drinking boss, their annual salary increases by 2.7–3.6 percent over the following 7 years, and their promotion likelihood increases by 3.8–6.7 percentage points, or equivalently by 33–58 percent, over the following 8 years (15,626 observations of 1,754 unique male employees). Our preferred interpretation is that drinking bosses frequently organize social events or ask subordinates out for after-work drinks, which provides employees with additional opportuni-

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<sup>1</sup>See <https://www.niznikhealth.com/research-articles/drinking-in-the-workplace/>.

ties for learning and mentorship. Interestingly, our results suggest that the drinking status of employees themselves does not matter in the effects of reporting to drinking bosses. This implies that some modes of socializing are more inclusive than other modes of socializing (e.g., shared smoking breaks).

Our estimates for the female sample are statistically insignificant and imprecise probably because they are underpowered (2,436 observations of 268 unique female employees). Although it is difficult to draw any conclusions about the possible contribution of the drinking-boss effects to the gender gap, it is conceivable that female employees may face higher costs in participating in drinking with the boss than males due to family duties. If this is true, our results may imply that drinking bosses are instrumental in the formation of the old boys' club, in which male employees can have an advantage in climbing the corporate ladder by having more opportunities to interact with powerful men than their female counterparts.

Our study contributes to various streams of literature. Most relevant to our study is the literature on the roles of social interactions within organizations. [Cullen and Perez-Truglia \(2023\)](#) provide pioneering evidence on the effects of socializing with the boss on employees' career progression. [Bandiera et al. \(2009\)](#) provide experimental evidence that managers favor workers to whom they have social connections when they are paid fixed wages, which is found detrimental to the firm productivity. [Chan et al. \(2014\)](#) show that salespeople's productivity grows by learning from peers through social interactions. [Frakes and Wasserman \(2021\)](#) also document that interactions with coworkers affect patent examiners' granting styles. More broadly, social interactions and networks are also found to have significant effects on various labor market outcomes outside organizations ([Shue, 2013](#); [Lerner and Malmendier, 2013](#); [Agarwal et al., 2016](#); [Field et al., 2016](#); [Markussen and Røed, 2017](#); [Lleras-Muney et al., 2022](#)).

Our findings contribute to this literature by providing another piece of evidence for career boosts through workplace socializing. We show that socializing with the boss accelerates career progression in a Japanese manufacturing company, which supports the external validity of part of the findings from [Cullen and Perez-Truglia \(2023\)](#), reporting the career advancement effects of socializing via shared smoking breaks with the boss in a private banking corporation in Southeast Asia. We also provide a new piece of evidence that modes of socializing may play an important role in the workings of career advancement effects of socializing in organizations.

We also contribute to the growing body of literature on the roles of middle managers and first-line supervisors ([Roberts and Shaw, 2022](#)). [Lazear et al. \(2015\)](#) find that the quality of bosses in terms of their subordinates' productivity varies significantly even within a single firm. [Frederiksen et al. \(2020\)](#) show that bosses vary widely in how they evaluate

the performance of subordinates of similar quality. It has also been shown that certain skills of middle managers are particularly important. [Artz et al. \(2017\)](#) document that bosses’ technical competence is a significant determinant of employees’ job satisfaction, and [Hoffman and Tadelis \(2021\)](#) find that higher people management skills reduce personnel turnover. [Friebel et al. \(2022\)](#) provide evidence that middle managers are instrumental in front-line operations and that they face a multitasking environment with limited resources.

Our study contributes to this body of literature by providing new evidence on the importance of specific aspects of bosses. Compared to the “value-added” approach as done in [Lazear et al. \(2015\)](#) and [Frederiksen et al. \(2020\)](#) for example, we focus on a specific feature of bosses rather than capturing bosses’ overall quality or tendency, which could lump various components altogether. By decomposing managerial quality into pieces, we can better understand the roles and values of middle and first-line managers in organizations.

Our paper is also closely related to the literature on the link between drinking and labor market outcomes ([Mullahy and Sindelar, 1996](#); [Lee, 2003](#); [MacDonald and Shields, 2004](#); [Auld, 2005](#); [Schilbach, 2019](#)). The literature shows that moderate drinkers earn more than heavy drinkers and abstainers on average. A recent large-scale survey in the East Asian economies reveals that genetically alcohol-tolerant men consume more alcohol, but their earnings and hours worked are at the same level as alcohol-intolerant men ([Kawaguchi et al., 2023](#)).

We contribute to this strand of literature by providing the first evidence of the link between drinking and labor market outcomes within a single company. All previous studies use observations in the external labor market, which means individuals working in different companies. It is difficult to fully control for unobserved heterogeneity that comes from different working conditions in different companies. Our setting provides cleaner evidence in that our sample comes from a single company, and those individuals work in almost the same working conditions.

We also marginally contribute to the large body of literature on the gender gap ([Goldin, 2014](#)). Although our estimates are imprecise for the female sample, we find null effects of drinking bosses on female employees’ careers, whereas we find clear evidence for such effects in the male sample. If social events with alcohol and after-work drinking are less accessible to female employees, our findings imply that drinking bosses form the old boys’ club, adding a new piece of evidence supporting the recent study ([Cullen and Perez-Truglia, 2023](#)).

The remainder of this paper proceeds as follows. Section 2 describes the data and organizational context of the company. Section 3 explains our identification strategy and shows the estimation results. Section 4 concludes.

## 2 Data and Organizational Context

In order to study the potential returns to socializing with bosses, we use unique personnel records provided by a listed manufacturing company in Japan, which remains unnamed. The company’s latest disclosure shows it comprises approximately 8,000 employees on a consolidated basis. Among them, we focus on domestic employees who engage in the company’s core businesses. We further restrict our sample to those in the lower pay ranks with no managerial duties, which results in 18,062 employee-year observations with 2,022 unique employees and their 1,063 unique bosses from 2006 to 2019. The male sample contains 15,626 observations of 1,754 unique male employees, and the female sample contains 2,436 observations of 268 unique female employees.

Our data set consists of five primary data sources. First, we have monthly attendance records, which include information on how many days each employee worked and how many hours each employee worked overtime for each month. Second, we have annual evaluation records, which information on to whom each employee directly reported, i.e., who their direct boss was and annual performance evaluations given by the boss. Third, we have pay-grade information and annual compensation records. Fourth, we have annual engagement survey results, which include responses from employees to questions about their work engagement. Lastly, we have annual health check results, which provide information on employees’ health status and habits. Since employers are legally required to arrange annual medical examinations for their employees in Japan, the take-up rate is very high. Importantly, employees were asked about their drinking and smoking habits in health checks, and we use this information to measure increased opportunities to socialize with bosses.

We focus on non-managerial permanent employees in the lowest pay-grade range. This range contains five grades. We define promotion as any increase in employees’ pay grade. The annual average promotion rate for employees in this job-grade range is 10.0 percent. Namely, approximately 10 employees are promoted for every 100 employees every year. Male employees are promoted at 10.3 percent, while female employees are promoted at 8.2 percent. The 25.6% difference (2.1 percentage points) is statistically significant ( $p = 0.000$ ), suggesting a gender gap in promotion. Since promotions take place in a certain few months of the year, we collapse the monthly promotion records to the annual level.

Our focus is on frontline supervisors who are in charge of directly supervising the non-managerial workforce.<sup>2</sup> At the study company, frontline supervisors are the ones who submit annual performance evaluations of their direct reports. Employees take their annual evaluations seriously because they are a crucial determinant of their bonuses and promotions.

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<sup>2</sup>Most supervisors in this company have managerial titles.

Table 1: The Definition of Drinking Employees and Bosses

Frequency	Amount			
	(a) 0–19 g	(b) 20–39 g	(c) 40–59 g	(d) 60+ g
(i) Hardly	Not (13%)	Not (1%)	Not (0%)	Drinking (0%)
(ii) Sometimes	Not (18%)	Not (16%)	Drinking (9%)	Drinking (5%)
(iii) Every day	Not (8%)	Drinking (17%)	Drinking (11%)	Drinking (3%)

*Notes:* See Section 2 for details about the definition of drinking workers. This table specifies the definition of drinking workers. Workers are required to answer two questions about their drinking habits as part of the mandatory annual health check. One question asks the frequency of alcohol consumption. The possible answers are (i) hardly (or cannot drink), (ii) sometimes, and (iii) every day. The other question asks the average quantity of alcohol consumption on a day when they drink. The possible answers are (a) less than 20 grams, (b) 20 or more and less than 40 grams, (c) 40 or more and less than 60 grams, and (d) 60 grams or more in pure alcohol. The table defines drinking workers by mapping from two responses to either “Not” (non-drinking employees/bosses) or “Drinking” (drinking employees/bosses). The frequency of employee-year and boss-year observations for each cell are presented in brackets. The frequency is relative to the sum of the numbers of employee-year observations and boss-year observations.

We can identify the supervisor for each employee in December, when annual evaluations are submitted to the company’s human resource management system. We refer to these frontline supervisors as bosses throughout the draft.

The company periodically rotates employees across different divisions, which enables us to observe a sufficient number of boss transitions driven by both boss and employee transfers. Personnel decisions are centralized to a great extent, and employees do not have a voice in where and with whom to work. An average employee in our sample reported to 2.32 different bosses over the observation periods. The average span of control is about 4–5 across years, and the average boss-subordinate tenure is 24.2 months.

To determine the drinking status of employees and their bosses, we use data from the annual health check. The health check records contain workers’ responses to two questions about their drinking habits. One question asks about the frequency of alcohol consumption. The possible answers for this item are (i) hardly (or cannot drink), (ii) sometimes, and (iii) every day. The other item asks about the average amount of alcohol consumed on a day when they drink. The possible answers are (a) less than 20 grams, (b) 20 or more and less than 40 grams, (c) 40 or more and less than 60 grams, and (d) 60 grams or more in pure alcohol.<sup>3</sup>

<sup>3</sup>The actual wording of the question uses a Japanese unit used to measure sake, *gō*. 1 *gō* amounts to approximately 180 milliliters of sake, which typically contains approximately 20 grams of pure alcohol. For

We define drinking employees and bosses by the combination of their responses to the two drinking-related questions as specified in Table 1. We use the oldest drinking status records we have for each employee and each boss to classify drinking and non-drinking employees and bosses.<sup>4</sup> Since health check results are confidential and only available to a limited number of industrial health staffers, it is unlikely that workers have any incentives to report untruthfully for career concerns.

Our sample includes both white-collar and blue-collar workers. More specifically, it includes those with administrative, sales, R&D, and production roles. Employees with administrative roles are those who work in such as accounting, human resource, and public relations divisions. Those with sales and R&D roles are those who are assigned to sales and R&D divisions, respectively. Those with production roles are those who work in the factories and directly engage in the manufacturing process. We observe this job-functional information for each employee-year observation up to the fiscal year 2018. Unfortunately, this information is not available for the fiscal year 2019. From 2006 to 2018, administrative, sales, R&D, and production roles account for 22.3%, 19.5%, 24.0%, and 34.2% of our employee-year observations, respectively. Approximately 70% of the unique employees in our sample never experienced a change in their job functions, and, in estimation, most variations will be absorbed by the two-way fixed effects. Our results are qualitatively unchanged when we explicitly control for job functions.

## 3 Results

### 3.1 Econometric Model

We estimate the effects of drinking with the boss using the event-study specification. Let  $T_{i,t}$  be the indicator function that takes 1 if employee  $i$  experiences a boss transition in year  $t$ . We define  $D_{i,t}$  to be the treatment variable that takes 1 if employee  $i$  starts reporting to a drinking boss in year  $t$ .

$$y_{i,t} = \sum_{s \in \mathcal{S}} \beta_s^D D_{i,t+s} + \sum_{s \in \mathcal{S}} \beta_s^T T_{i,t+s} + \alpha_i + \delta_{d(i,t)} + \mu_{m(i,t)} + \tau_t + \varepsilon_{i,t}, \quad (1)$$

where employee fixed effects ( $\alpha_i$ ), division fixed effects ( $\delta_{d(i,t)}$ ), boss fixed effects ( $\mu_{m(i,t)}$ ), and year fixed effects ( $\tau_t$ ) are controlled and where  $\mathcal{S} = \{-9, -8, \dots, -2, 0, 1, 2, \dots, 9\}$ . We

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reference, note that a glasses of wine typically contain approximately 10 grams of pure alcohol.

<sup>4</sup>The estimation results are qualitatively unchanged when we use the latest records.



also control for the squares of age and tenure. The parameter  $\beta_s^D$  is interpreted as the effect of reporting to a drinking boss among those who experience boss transitions. In our estimation, we divide the sample into males and females because males and females typically exhibit different patterns in their career trajectories. We cluster our standard errors at the employee and boss levels.

Our identification relies on the parallel trends assumption, which can be indirectly tested by event-study graphs. We have two substantive justifications for our identification strategy. First, personnel transfers are operated in a centralized manner, and each employee and manager has little discretion in whom to work with. Second, drinking status is collected as medical information and therefore classified as confidential, to which only a limited number of authorized personnel, usually industrial health experts, may access, which supports that the centralized personnel transfers are independent of drinking status.

A natural question to ask is whether the effects of drinking bosses differ by the drinking status of employees themselves. To answer this question, we also estimate the event-study model with interactions of the event-study variables ( $D_{i,t}$  and  $T_{i,t}$ ) and the drinking status of employees themselves to see if the effects are different for drinking and non-drinking employees. Let  $B_i$  denote the drinking status of employee  $i$ . Then, the estimating equation is

$$\begin{aligned}
y_{i,t} = & \left( \sum_{s \in \mathcal{S}} \beta_s^D D_{i,t+s} + \sum_{s \in \mathcal{S}} \beta_s^T T_{i,t+s} \right) \times (1 - B_i) \\
& + \left( \sum_{s \in \mathcal{S}} \theta_s^D D_{i,t+s} + \sum_{s \in \mathcal{S}} \theta_s^T T_{i,t+s} \right) \times B_i \\
& + \alpha_i + \delta_{d(i,t)} + \mu_{m(i,t)} + \tau_t + \varepsilon_{i,t}.
\end{aligned} \tag{2}$$

The parameters  $\beta_s^D$  and  $\theta_s^D$  are interpreted as the drinking-boss effects on non-drinking and drinking employees, respectively.

### 3.2 Estimation Results

We drop the results for female employees and only present results for male employees because all our estimates for the female sample are statistically insignificant and imprecise.<sup>5</sup>

Figure 1 visualizes the estimates of  $\beta_s^D$  from the event-study regression without any interaction terms (equation (1)). The event dummy of the year just before the boss transition ( $D_{i,-1}$ ) is omitted as the baseline in our estimation, and the vertical value in period  $-1$  is

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<sup>5</sup>The estimates for the female sample are available upon request.



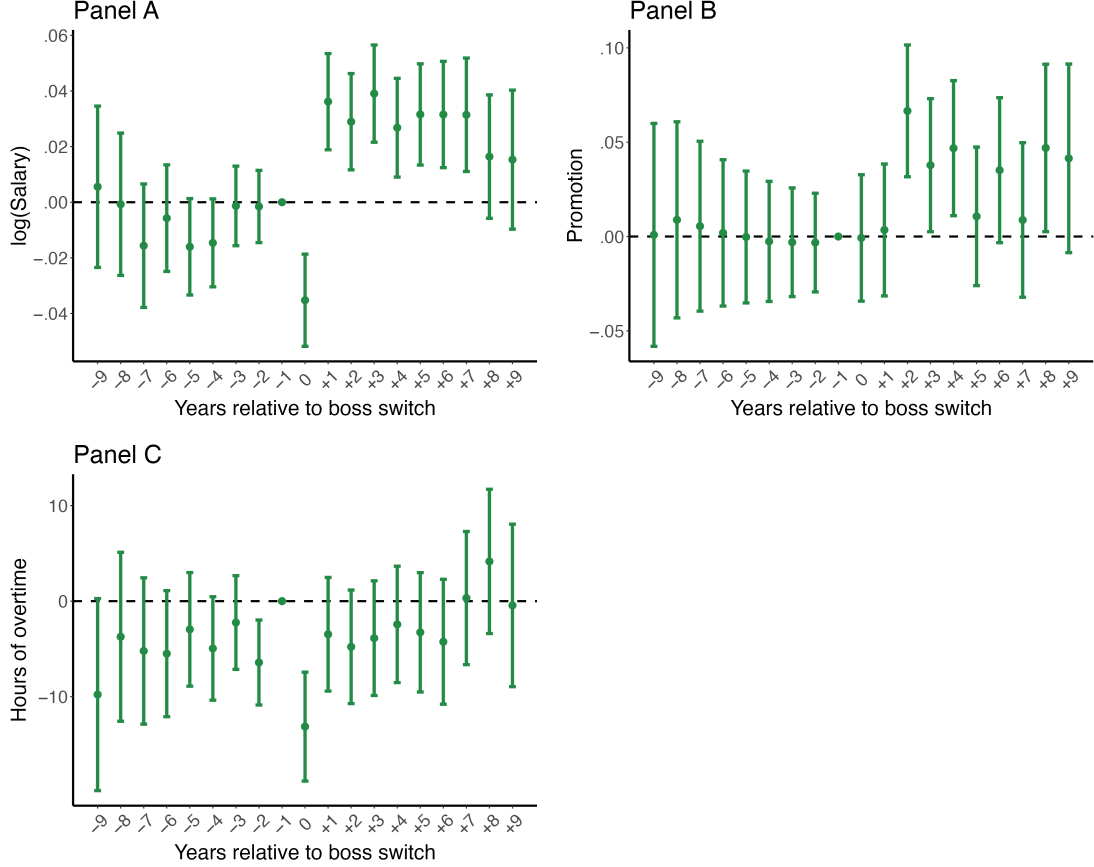


Figure 1: Effects of Reporting to Drinking Bosses

*Notes:* See Section 3.1 for details about the model specification. The regression includes 15,626 employee-year observations of 1,754 unique male employees and 1,034 unique bosses in 2006 to 2019. Each dot represents the estimated effect of reporting to a drinking boss in each event period (estimate of  $\beta_s^D$ ). The vertical segments represent the 95 percent confidence intervals. The standard errors are clustered at the individual and boss levels. Period 0 is the exact year when employees start reporting to new bosses. Period -1 is omitted as the baseline in estimation, so the coefficient for period -1 is zero by construction. The outcome variables are the logarithm of annual salary, promotion dummy, and hours of overtime in panels A B, and C, respectively.

zero in the graphs by construction. The event-study graphs provide supporting evidence for our identification assumption that the trends are parallel. Although the pre-treatment trajectory for overtime is somewhat bumpy, the pre-treatment paths of the the logarithm of salary and promotion stay close to zero. Together with the testimony from the human resource team at the company that the personnel transfers are as good as random, this event-study visualization gives more credibility to our estimates.

Panel A of Figure 1 shows that when male employees start reporting to a drinking boss, their annual compensation significantly increases over the following 7 years. In period 1, 4, and 7, they earn 3.6 , 2.7, and 3.1 percent more ( $p = 0.000$ ;  $p = 0.005$ ;  $p = 0.004$ ),

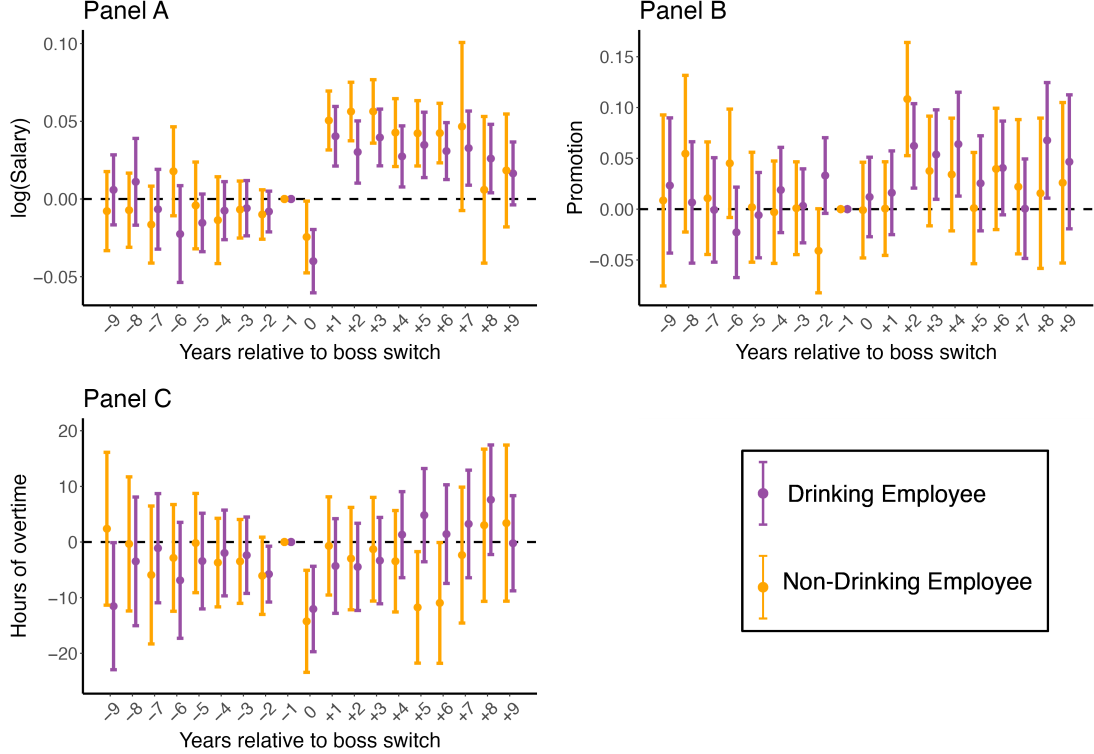


Figure 2: Effects of Reporting to Drinking Bosses by Employees' Drinking Habits

*Notes:* See Section 3.1 for details about the model specification. The regression includes 15,626 employee-year observations of 1,754 unique male employees and unique 1,034 bosses in 2006 to 2019. Each dot represents the estimated effect of reporting to a drinking boss in each event period (estimates of  $\beta_s^D, \theta_s^D$ ). The purple and orange dots represent the effects on drinking and non-drinking employees, respectively. The vertical segments represent the 95 percent confidence intervals. The standard errors are clustered at the individual and boss levels. Period 0 is the exact year when employees start reporting to new bosses. Period -1 is omitted as the baseline in estimation, so the coefficient for period -1 is zero by construction. The outcome variables are the logarithm of annual salary, promotion dummy, and hours of overtime in panels A, B, and C, respectively.

respectively. Their salary drops by 3.5 percent ( $p = 0.000$ ) in period 0, but this can be partly explained by the decrease in overtime hours in period 0 as can be seen in panel C of Figure 1. Panel B of Figure 1 suggests that when male employees start reporting to a drinking boss, their promotion probability increases by 6.7, 3.8, 4.7, and 4.7 percentage points after 2, 3, 4, and 8 years ( $p = 0.000$ ;  $p = 0.044$ ;  $p = 0.015$ ;  $p = 0.046$ ), respectively. The promotion effects are sizable, amounting to a 33–58 percent increase in the promotion likelihood relative to the average post-event promotion rate for males in the control group (11.6 percent).

Figure 2 presents the estimates of  $\theta_s^D$  from the event-study regression with the event-study variables interacted with employees' own drinking status (equation (2)). As can be

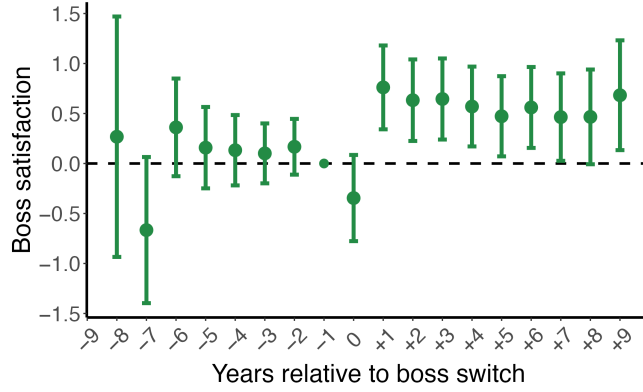


Figure 3: Effects on Employees' Satisfaction with the Boss

*Notes:* See Section 3.1 for details about the model specification. The regression includes 15,626 employee-year observations of 1,754 unique male employees and unique 1,034 bosses in 2006 to 2019. Each dot represents the estimated effect of reporting to a drinking boss in each event period (estimate of  $\beta_s^D$ ). The vertical segments represent the 95 percent confidence intervals. The standard errors are clustered at the individual and boss levels. Period 0 is the exact year when employees start reporting to new bosses. Period -1 is omitted as the baseline in estimation, so the coefficient for period -1 is zero by construction. The outcome variables is the sum of response values from the boss-related question items in the annual work engagement survey. Higher values of boss satisfaction indicate higher satisfaction with the boss, and lower values indicate lower satisfaction with the boss.

seen from the panels, there are no clear differences in the effects of reporting to a drinking boss between drinking and non-drinking employees. This results imply that drinking bosses positively affect both drinking and non-drinking employees.

Drinking bosses may organize social events for their subordinates or ask them out for after-work drinks more frequently than non-drinking bosses, and the participation cost may be the same for drinking and non-drinking employees. Compared to some other modes of socializing such as smoking breaks, participating in social events with alcohol served and going to a bar is supposed to be more accessible even if one does not drink much or any alcohol because one has an option of non-alcoholic beverages or can drink at own pace. If this is true, employees who report to drinking bosses may have more opportunities to socialize with the boss regardless of their own drinking habits.

To provide an additional insight into the mechanism, we use employees' responses in the annual work engagement survey, which includes four questions specifically asking about their bosses. These question items ask about employees' evaluation of how appropriate instructions the boss gives, how many opportunities for career growth the boss provides, how satisfied they are with the one-on-one meeting with the boss at the end of last fiscal year and the beginning of the current fiscal year. The responses are collected on a four-point

Likert scale. We take the sum of these response values and define this quantity as employees' boss satisfaction.

Figure 3 presents the estimates from event-study regression of boss satisfaction. The pre-event trend is somewhat bumpy and imprecise, but the estimates suggest that employees evaluate drinking bosses more favorably than non-drinking bosses. This result may imply that employees have more opportunities to socialize and communicate with drinking bosses than non-drinking bosses, weakly supporting the increased social interactions mechanism.

## 4 Concluding Remarks

We have studied the effects of socializing with the boss on employees' career. Our findings are threefold. First, male employees earn a higher salary and get promoted at a higher rate when they start reporting to a drinking boss. These results suggest that employees may have more social interactions with drinking bosses presumably because they organize social events or ask them out for after-work drinks more frequently than non-drinking bosses.

Second, we have found that the effects of reporting to a drinking boss are fairly homogeneous among drinking and non-drinking employees. Borrowing the phraseology from [Cullen and Perez-Truglia \(2023\)](#), we did not find any significant *drinker-to-drinker advantages*. This result may imply that some modes of socializing are more inclusive than others. For example, it is conceivable that smoking breaks are less inclusive than after-work drinks and social events with alcohol served. Of course, drinking may also be an exclusive instrument of socializing, especially for those with family duties. A new perspective this study provides is that modes of socializing may play an important role in the workings of career advancement effects of socializing in organizations. In addition, finding no clear heterogeneity in the drinking-boss effects on drinking and non-drinking employees is consistent with [Kawaguchi et al. \(2023\)](#), who found no significant returns to alcohol tolerance on earnings.

Finally, although our estimation is underpowered and imprecise, we find no clear evidence for any career advancement effects of reporting to a drinking boss in the female sample. We cannot draw any conclusion from imprecise null results in general, but it is fairly conceivable that female employees may face higher costs in drinking with the boss than male employees because they are more likely to be constrained by family duties or shy away fearing potential sexual harassment. If this is the case, socializing via drinking forms an old boys' club, contributing to the gender gap in the company as [Cullen and Perez-Truglia \(2023\)](#) more clearly showed that it was the case with smoking breaks in their study company.

One of the major limitations of this study is that our analysis does not delve into the mechanism behind the effects we estimated. We gave weak evidence that employees have

more social interactions with drinking bosses using the data from the annual engagement survey, but this exercise is far from complete. We need more clear-cut evidence to infer the primary mechanism of the career advancement effects of drinking bosses to provide clear implications. Addressing this limitation is a potential direction for future research.

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