A Survey about Smoking

Question 1 Please report if the following co-workers are smokers. If yes, please indicate if they started smoking before or after joining the bank.

	Was he/she a smoker?			If yes, when did he/she start smoking?		
	Yes	No	I do not know	Before joining the bank	After joining the bank	I do not know
Leslie Knope	○	○	○	○	○	○
Donna Meagle	○	○	○	○	○	○
Andy Dwyer	○	○	○	○	○	○
Jerry Gergich	○	○	○	○	○	○
Ann Perkins	○	○	○	○	○	○

Question 2 Do you smoke now?

○ Yes

○ No

○ I do not want to answer this question

Question 3 How old were you when you started smoking?

I do not want to answer this question
or **[*Numeric Entry*]**

B Survey about Managers

Dear **Leslie Knope,**

  Please help us learn about what determines your performance evaluation and promotion opportunities. All survey responses are completely confidential. Your answers and your participation will not be shared with your co-workers or manager. If you have any issues please contact Jerry Gergich. Thank you in advance for your participation!
 Sincerely,

  XXXXX Chief Economist   *Email: XXXXX Address: XXXXX*

  ○ Please click here to confirm that you are Leslie Knope, click "Next" to proceed with the survey

Please select all the managers that have directly influenced your KPI and PC [Pay Grade] in either your current position or past positions. You are allowed to select up to 6 managers. If you have more than 6 current and recent managers, please prioritize the most important and recent managers from 2015 to present. If your manager is not on the list, please type their name and their position in the box.

- [ ] Chris Trager

- [ ] April Ludgate

- [ ] Ben Wyatt

- [ ] Shauna Malwae-Tweep

- [ ] Craig Middlebrooks

- [ ] Joan Callamezzo

- [ ] Someone is missing from this list. Please specify:

- [ ] Someone is missing from this list. Please specify:

Next, we will ask you 6 questions about your most recent managers. All questions refer to the time when your manager was actively your boss, which could in some cases be in the past.

How often are (or were) you physically working near April Ludgate (i.e. same floor and area)?

- ○ Everyday or most days (4-6 times per week)

- ○ Some days (2-3 times per week)

- ○ Infrequently

Out of 10 work breaks (including lunch or random breaks), how many would you usually spend with April Ludgate?

Slider: select 0 to 10

Of the last 10 emails you sent to April Ludgate, how many included some part that was personal?

Slider: select 0 to 10

Do you and April Ludgate both smoke?

	Yes	No
I smoked during the time we overlapped	○	○
He/she smoked	○	○
We smoked together sometimes	○	○

Appendix – 4

In your opinion, which football team is April Ludgate's favorite?

- ○ Prefers Golf
- ○ Prefers Tennis
- ○ Manchester United
- ○ Barcelona
- ○ Real Madrid
- ○ Bayern Munich
- ○ Manchester City
- ○ Arsenal
- ○ Chelsea
- ○ Liverpool
- ○ Juventus
- ○ Tottenham Hotspur
- ○ Paris Saint-Germain
- ○ A.C. Milan
- ○ Prefers a team which is not listed
- ○ Prefers none. He/She does not watch football

How many years have you smoked? (Enter 0 if never)

Numeric Entry

Which football team is your favorite?

○ Prefers Golf

○ Prefers Tennis

○ Manchester United

○ Barcelona

○ Real Madrid

○ Bayern Munich

○ Manchester City

○ Arsenal

○ Chelsea

○ Liverpool

○ Juventus

○ Tottenham Hotspur

○ Paris Saint-Germain

○ A.C. Milan

○ Prefers a team which is not listed

○ Prefers none. I do not watch football

C Additional Descriptive Statistics

C.1 Pay Grade

In this section, we provide further details descriptive statistics about one of the main outcomes of interest: pay grade.

We do not have full compensation information for our sample for data confidentiality reasons. However, thanks to data from a different research project (Cullen and Perez-Truglia, 2022), we do have the pay grades and full compensation details for the cross-section of employees as of March 2017. We use that data to document the relationship between pay grades and base salaries. The base salary is defined as an employee's compensation before any adjustments, including taxes, allowances, commissions, or bonuses. Anecdotal accounts suggest that for employees base salary the most salient and important feature of compensation. At the firm, base salary constitutes over 90% of the total compensation (Cullen and Perez-Truglia, 2022).

The results for this analysis are presented in panel (a) of Figure C.1. This figure shows a binned scatterplot between the pay grade (x-axis) and the logarithm of base salary (y-axis), along with the corresponding linear fit. There is a clear linear relationship between the pay grade and the logarithm of salary. The slope of the relationship (0.227) indicates that a 1-point increase in pay grade is associated with a 25% increase in salary ($= e^{0.227} - 1$). Moreover, the high goodness-of-fit ($R^2 = 0.83$) indicates that pay grade explains the great majority of variation in salaries.

We are particularly interested in the evolution of pay grade over time. Panel (b) of Figure C.1 provides a glimpse of the typical evolution of this outcome. This figures presents a binned scatterplot between the number of quarters since a manager transition (x-axis) and the corresponding change in pay grade (y-axis), along with a linear fit. This evidence shows that pay grade increases linearly with the time since the last manager transition. This linear growth over time is consistent with the underlying mechanics of the manager transitions and pay grade changes. Intuitively, manager transitions can happen at any time of the year. Some employees may happen to be up for a promotion opportunity right after they transition to a new manager, in which case they may end up being promoted a few months after the transition. As more time goes by, more and more employees will face promotion opportunities.

C.2 Manager Transitions

In this section, we provide further detailed descriptive statistics about the manager transition events.

Figure C.2 provides some details about the distribution of manager transitions, broken down by the four transition types: from a non-smoking manager to a smoking manager, from a non-smoking manager to a different non-smoking manager, and so on. Panel (a) shows how these four types of transition events are distributed over the 4-year period of study. This evidence shows that the transition events are quite evenly distributed throughout the sample period. In turn, panel (b) of Figure C.2 shows the distribution of events across managers. Most notably, managers are unlikely to be involved in more than one transition event. Last, panel (c) shows the distribution of

event sizes, measured as the number of employees affected. The vast majority of manager transition events affect between 1 and 15 employees, which coincides with the typical size of teams. Manager transitions rarely affect more than 15 employees at once.

We can also explore whether the characteristics of employees and managers are similar across the different types of manager transitions. For the identification strategy, the critical condition is that the evolution of the outcomes are parallel across different types of transitions, even if there are differences in characteristics. With that caveat in mind, Table C.1 presents the results. This table is divided in three panels. The first panel corresponds to the average characteristics of the employees. The first two columns break down the average characteristics by employees who experienced a transition event versus employees who did not experience such an event. The average characteristics are largely similar across these two groups. Due to the large sample sizes, the differences in means are often statistically significant. However, the differences are mostly economically small. For example, the average employee who experiences a transition is 31.9 years old, while the average employee who does not experience a transition is 30.3 years old. While the first two columns compare employees who experience a transition versus those who did not, the next four columns compare across employees who experienced different types of transitions: from a non-smoking manager to a non-smoking manager, from a non-smoking manager to a smoking manager, and so on. Again, the differences in average characteristics are mostly statistically significant, but tend to be economically small.

The second panel of Table C.1 is just like the first panel, except that it reports the average characteristics of the incoming manager instead of the average characteristics of the employees. In turn, the third panel of Table C.1 is just like the second panel, except that it reports the average characteristics of the outgoing manager instead of the incoming manager. Again, the characteristics of managers are remarkably similar across the different transition types.

Figure C.3 is a reproduction of Figure C.2, except that focusing on the transitions of manager gender instead of smoking status. The results are broken down by the four transition types: from a female manager to a female manager, from a female manager to a different female manager, and so on. The main patters in Figure C.3 (for the change in manager's gender) are roughly the same as the results from Figure C.2 discussed above (for the change in manager's smoking status). Likewise, Table C.2 is a reproduction of Table C.1, except that focusing on the transitions of manager gender instead of smoking status. The main results from Table C.2 (for the change in manager's gender) are roughly the same as the corresponding results from Table C.1 discussed above (for the change in manager's smoking status).

C.3   Social Interactions with the Manager

This section provides some suggestive evidence to validate the survey data on social interactions with the manager.

First, we provide some evidence that employees who spend more breaks with their managers may get to know them better. In the survey about managers, we added a question to measure if employees knew about their managers' personal lives. More precisely, for each manager listed

by the employee, we asked the employee to guess the sport team that manager supports. We also ask the respondents for the favorite sport team that they support themselves. Among the 3,072 employee-manager pairs for whom both the manager and employee responded to our survey, we can measure the accuracy of the employee's knowledge about the manager: i.e., if they correctly identified the manager's favorite team.[52] The results are presented in panel (a) of Figure C.4. This figure shows a binned scatterplot between the share of breaks that the employee reported to take with the manager (x-axis) and the probability that the employee guessed accurately the manager's favorite football team (y-axis). we find that spending more breaks with the manager is positively associated with guessing the manager's interests. The association is highly statistically significant (p-value < 0.001) and large in magnitude: increasing the share of breaks taken with the manager from 0% to 100% is associated with a 44% increase in the probability of correctly guessing the manager's favorite team (from 25 to 36 pp).

Second, we show that the share of breaks taken with the manager can predict which employees are more likely to get promoted. The results are presented in panel (b) of Figure C.4. This figure shows a binned scatterplot between the share of breaks that the employee reported to take with the manager (x-axis) and the probability that the employee is the change in pay-grade during the period in which the employee was assigned to that manager (y-axis). We find that the correlation between these two variables is positive (0.077), but imprecisely estimated and thus statistically insignificant. This coefficient suggests that increasing the share of breaks with the manager from 0% to 100% is associated with an additional increase of 0.077 pay grades, which is roughly 13% of the average pay grade change in the sample. The magnitude of this correlation is probably an under-estimate: due to its survey nature, the measure of shared breaks is subject to significant measurement error and thus the correlation is subject to attenuation bias.

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[52] One caveat with this measure is that, to the extent that men care more about sports, the question about the favorite sports team may bias results towards men.

Figure C.1: Descriptive Statistics about Pay Grade

(a) Pay Grade vs. Base Salary

(b) Evolution of Pay Grade
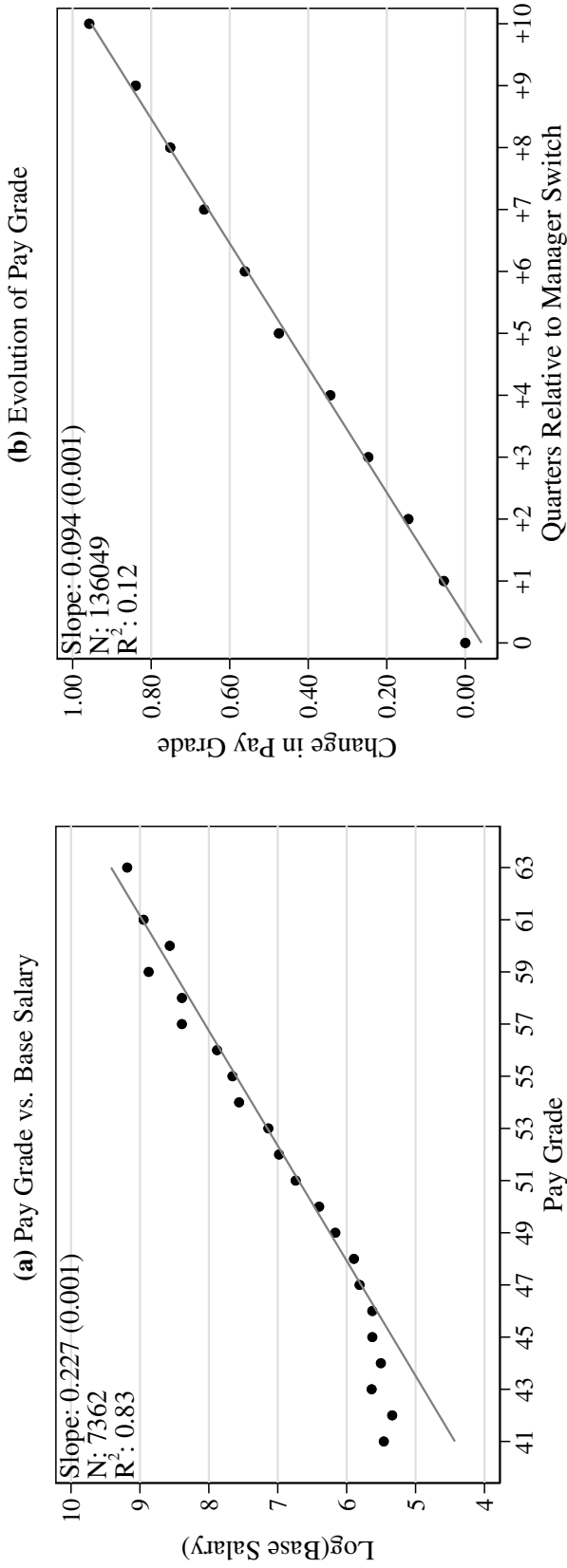
Notes: Panel (a): binned scatter plot of log base salary against pay grade in March of 2017. We use this cross section of the bank's employees as we have access to their base salary from related work (Cullen and Perez-Truglia, 2022). Due to the sensitivity of the data, we refrain from disclosing the unit of measurement of base salary. Panel (b): binned scatter plots with linear fit between the change in pay grade and the time elapsed since a manager transition event. The change in pay grade is simply the pay grade in some quarter minus the pay grade at the time of the event.

Figure C.2: Distribution of Transition Events between Smoking and Non-Smoking Managers

(a) Distribution Over Time

(b) Events per Manager

(c) Event Size

Non-Smoking Manager to Smoking Manager
Non-Smoking Manager to Non-Smoking Manager
Smoking Manager to Non-Smoking Manager
Smoking Manager to Smoking Manager

Notes: Panel (a) presents counts of the number of observations (i.e. workers) that experience a manager transition event in each quarter. Panel (b) presents counts of the number of times a manager appears as the incoming manager for a transition event; most managers never "cause" an event by transitioning to a new unit. Panel (c) presents the event size (i.e. number of workers in a unit) distribution by event type. That is, it shows the share of a given event type that affects a given number of employees. The number of employees affected is simply the number of employees who are in the unit for the outgoing manager's last month and the incoming manager's first month. Results are based on the subset of male employees and male managers for which smoking status is available.

Figure C.3: Distribution of Transition Events between Male and Female Managers

(a) Distribution Over Time

(b) Events per Manager

(c) Event Size

Female Manager to Male Manager
Female Manager to Female Manager
Male Manager to Female Manager
Male Manager to Male Manager

Notes: Panel (a) presents counts of the number of observations (i.e. workers) that experience a manager transition event in each quarter. Panel (b) presents counts of the number of times a manager appears as the incoming manager for a transition event; most managers never "cause" an event by transitioning to a new unit. Panel (c) presents the event size (i.e. number of workers in a unit) distribution by event type. That is, it shows the share of a given event type that affects a given number of employees. The number of employees affected is simply the number of employees who are in the unit for the outgoing manager's last month and the incoming manager's first month.

Figure C.4: Correlates of Share of Breaks Taken with the Manager

(a) Knowledge of Manager's Favorite Sport's Team

(b) Change in Pay Grade Under Manager
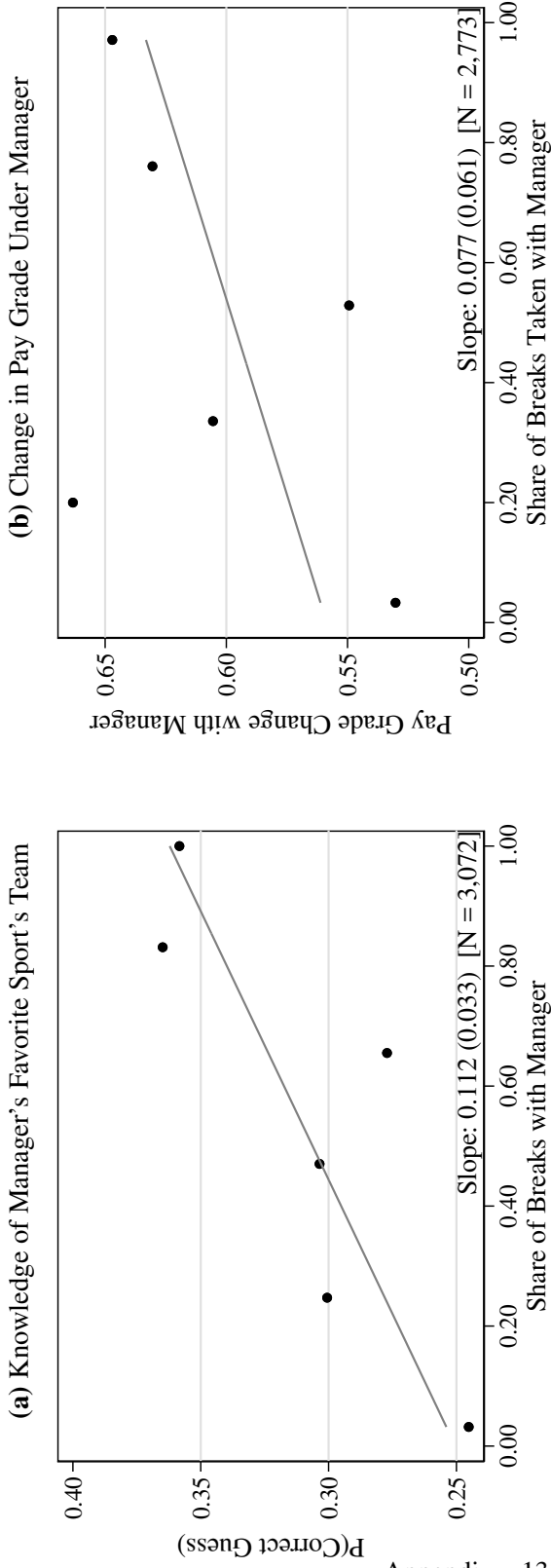
Notes: Binned scatterplots with overlaid linear fits. In both panels, the x-axis corresponds to the share of the last 10 breaks that the employee took with the manager (as reported in the survey data). In panel (a), the dependent variable (y-axis) is a dummy variable for whether the worker correctly guesses the manager's favorite sports team (as reported in the survey data). In panel (b), the dependent variable (y-axis) is the change in pay grade while working for the manager (computed from the administrative records). That is, $\delta_{i,m} = p_{i,m,T_m} - p_{i,m,t_0}$ where p_{i,m,T_m} is the pay grade of worker i in the final month T_m she works for manager m, and p_{i,m,t_0} is the pay grade of worker i in the first month she works for manager m. The standard errors of the slopes are presented in parentheses and are two-way clustered by manager and employee. The number of observations (i.e., employee-manager pairs) is reported in brackets.

Table C.1: Descriptive Statistics by Transition Type: Smoking

EMPLOYEES

	Had Event?		Non-Smoking to …		Smoking to …	
	No	Yes	Non-Smoking	Smoking	Non-Smoking	Smoking
Unique Employees	1248	1226	712	261	268	223
Pay Grade	50.166	49.425	49.383	49.818	49.094	49.527
	(3.41)	(2.51)	(2.47)	(2.84)	(2.31)	(2.45)
Male (%)	1.000	1.000	1.000	1.000	1.000	1.000
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Age	32.058	30.185	29.693	30.697	30.083	31.490
	(5.86)	(5.35)	(5.11)	(5.88)	(4.98)	(5.72)
College (%)	0.895	0.919	0.925	0.937	0.914	0.883
	(0.31)	(0.27)	(0.26)	(0.24)	(0.28)	(0.32)
Bus/Fin Major	0.596	0.772	0.859	0.747	0.719	0.544
	(0.49)	(0.42)	(0.35)	(0.44)	(0.45)	(0.50)
S&D	0.405	0.743	0.850	0.740	0.773	0.326
	(0.49)	(0.44)	(0.36)	(0.44)	(0.42)	(0.47)
IT	0.163	0.088	0.038	0.078	0.133	0.226
	(0.37)	(0.28)	(0.19)	(0.27)	(0.34)	(0.42)
Unit Size	59.415	72.495	86.645	49.558	68.921	51.962
	(81.33)	(69.55)	(80.64)	(44.14)	(57.70)	(45.97)

MANAGERS (INCOMING)

	Had Event?		Non-Smoking to …		Smoking to …	
	No	Yes	Non-Smoking	Smoking	Non-Smoking	Smoking
Unique Incoming Managers	315	273	161	80	79	46
Pay Grade	53.813	53.672	53.541	53.912	53.662	54.242
	(2.28)	(1.82)	(1.69)	(2.22)	(1.71)	(1.95)
Male (%)	1.000	1.000	1.000	1.000	1.000	1.000
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Age	36.929	35.685	35.526	36.563	35.086	35.953
	(4.44)	(4.53)	(4.27)	(5.23)	(4.30)	(4.85)
College (%)	0.982	0.986	1.000	0.985	0.985	0.909
	(0.13)	(0.12)	(0.00)	(0.12)	(0.12)	(0.29)
Bus/Fin Major	0.718	0.826	0.866	0.750	0.838	0.727
	(0.45)	(0.38)	(0.34)	(0.44)	(0.37)	(0.45)
S&D	0.633	0.877	0.933	0.824	0.853	0.697
	(0.48)	(0.33)	(0.25)	(0.38)	(0.36)	(0.47)
IT	0.117	0.053	0.031	0.059	0.074	0.121
	(0.32)	(0.22)	(0.17)	(0.24)	(0.26)	(0.33)
Unit Size	60.007	78.188	80.552	76.838	76.397	71.061
	(36.53)	(33.73)	(31.38)	(35.90)	(35.06)	(38.28)

MANAGERS (OUTGOING)

	Had Event?		Non-Smoking to …		Smoking to …	
	No	Yes	Non-Smoking	Smoking	Non-Smoking	Smoking
Unique Outgoing Managers	363	225	112	51	58	42
Pay Grade	53.392	53.656	53.605	53.477	53.547	54.355
	(2.06)	(1.85)	(1.68)	(1.90)	(1.97)	(2.26)
Male (%)	1.000	1.000	1.000	1.000	1.000	1.000
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Age	36.371	35.978	36.013	36.244	35.844	35.655
	(4.44)	(4.43)	(4.26)	(4.68)	(4.56)	(4.93)
College (%)	0.970	1.000	1.000	1.000	1.000	1.000
	(0.17)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Bus/Fin Major	0.731	0.842	0.898	0.750	0.849	0.677
	(0.44)	(0.37)	(0.30)	(0.44)	(0.36)	(0.48)
S&D	0.683	0.874	0.962	0.773	0.811	0.677
	(0.47)	(0.33)	(0.19)	(0.42)	(0.39)	(0.48)
IT	0.103	0.060	0.019	0.068	0.094	0.194
	(0.30)	(0.24)	(0.14)	(0.25)	(0.30)	(0.40)
Unit Size	62.761	75.930	80.707	70.068	73.830	63.645
	(35.90)	(31.71)	(26.71)	(32.17)	(37.44)	(39.51)

Notes: This table presents summary statistics for employees and managers and demonstrates balance of covariates across event types, and between the groups who do and do not experience events. Standard deviations in parentheses. Since workers and managers can experience multiple events, the sum of unique individuals for all four events can be greater than the total count of unique individuals, and the "Yes" column need not be equal to the mean of the four event columns. Outgoing managers are defined as the manager of unit in the month before a transition event; incoming managers are those who are assigned to a unit in the month of the event. For event columns, we show the average of employees and managers in the month they experience events; for those who never experience an event we show the average of all such individuals across their tenure at the bank. Statistics are based on the subset of male employees and male managers for which smoking status is available.

Table C.2: Descriptive Statistics by Transition Type: Gender

EMPLOYEES

	Had Event?		Female to …		Male to …	
	No	Yes	Female	Male	Female	Male
Unique Employees	8715	6021	1627	1320	1521	3005
Pay Grade	49.066	48.849	49.020	48.810	49.059	48.687
	(2.68)	(2.56)	(2.45)	(2.53)	(2.68)	(2.57)
Male (%)	0.352	0.281	0.240	0.293	0.232	0.318
	(0.48)	(0.45)	(0.43)	(0.46)	(0.42)	(0.47)
Age	29.814	30.082	30.073	29.585	30.725	30.002
	(5.25)	(5.21)	(5.39)	(5.00)	(5.38)	(5.10)
College (%)	0.907	0.884	0.893	0.888	0.885	0.878
	(0.29)	(0.32)	(0.31)	(0.32)	(0.32)	(0.33)
Bus/Fin Major	0.777	0.807	0.808	0.810	0.794	0.811
	(0.42)	(0.39)	(0.39)	(0.39)	(0.40)	(0.39)
S&D	0.559	0.680	0.499	0.708	0.623	0.786
	(0.50)	(0.47)	(0.50)	(0.46)	(0.48)	(0.41)
IT	0.187	0.060	0.169	0.009	0.014	0.043
	(0.39)	(0.24)	(0.37)	(0.09)	(0.12)	(0.20)
Unit Size	99.616	83.276	92.523	76.402	64.886	88.941
	(144.36)	(93.89)	(115.51)	(80.16)	(82.54)	(89.57)

MANAGERS (INCOMING)

	Had Event?		Female to …		Male to …	
	No	Yes	Female	Male	Female	Male
Unique Incoming Managers	579	690	205	128	180	255
Pay Grade	53.445	53.604	53.749	54.298	53.124	53.588
	(2.05)	(2.19)	(2.17)	(2.26)	(2.04)	(2.24)
Male (%)	0.476	0.508	0.000	1.000	0.000	1.000
	(0.50)	(0.50)	(0.00)	(0.00)	(0.00)	(0.00)
Age	36.624	35.158	35.425	35.058	35.050	35.112
	(4.81)	(4.23)	(4.27)	(4.57)	(3.72)	(4.35)
College (%)	0.985	0.960	0.946	0.974	0.929	0.985
	(0.12)	(0.20)	(0.23)	(0.16)	(0.26)	(0.12)
Bus/Fin Major	0.792	0.774	0.729	0.737	0.788	0.821
	(0.41)	(0.42)	(0.45)	(0.44)	(0.41)	(0.38)
S&D	0.566	0.634	0.448	0.596	0.624	0.788
	(0.50)	(0.48)	(0.50)	(0.49)	(0.49)	(0.41)
IT	0.090	0.031	0.025	0.018	0.018	0.047
	(0.29)	(0.17)	(0.16)	(0.13)	(0.13)	(0.21)
Unit Size	69.379	71.420	68.685	65.877	69.500	76.474
	(72.60)	(55.47)	(73.52)	(48.30)	(53.93)	(41.34)

MANAGERS (OUTGOING)

	Had Event?		Female to …		Male to …	
	No	Yes	Female	Male	Female	Male
Unique Outgoing Managers	620	649	193	123	155	252
Pay Grade	53.324	53.786	53.678	53.667	54.358	53.608
	(1.93)	(2.24)	(2.09)	(2.28)	(2.40)	(2.21)
Male (%)	0.434	0.576	0.000	0.000	1.000	1.000
	(0.50)	(0.49)	(0.00)	(0.00)	(0.00)	(0.00)
Age	36.483	35.936	36.208	36.347	35.838	35.645
	(4.55)	(4.35)	(4.48)	(5.04)	(3.85)	(4.24)
College (%)	0.976	0.975	0.956	0.958	0.975	0.996
	(0.15)	(0.16)	(0.21)	(0.20)	(0.16)	(0.06)
Bus/Fin Major	0.806	0.786	0.741	0.758	0.809	0.813
	(0.40)	(0.41)	(0.44)	(0.43)	(0.39)	(0.39)
S&D	0.585	0.642	0.459	0.583	0.654	0.799
	(0.49)	(0.48)	(0.50)	(0.50)	(0.48)	(0.40)
IT	0.089	0.029	0.024	0.017	0.012	0.047
	(0.28)	(0.17)	(0.15)	(0.13)	(0.11)	(0.21)
Unit Size	71.118	70.212	64.322	62.750	73.506	76.122
	(72.52)	(51.48)	(69.48)	(45.48)	(48.80)	(36.95)

Notes: This table presents summary statistics for employees and managers and demonstrates balance of covariates across event types, and between the groups who do and do not experience events. Standard deviations in parentheses. Since workers and managers can experience multiple events, the sum of unique individuals for all four events can be greater than the total count of unique individuals, and the "Yes" column need not be equal to the mean of the four event columns. Outgoing managers are defined as the manager of unit in the month before a transition event; incoming managers are those who are assigned to a unit in the month of the event. For event columns, we show the average of employees and managers in the month they experience events; for those who never experience an event we show the average of all such individuals across their tenure at the bank.

D   Placebo Exercise

In this section, we present the results from a placebo exercise. We reproduce the whole analysis, but instead of focusing on smoking status or gender as the relevant characteristic of managers and employees, we focus on a characteristic that we know ex ante should not be relevant: whether someone was born on an even or odd day. Intuitively, because the birthday-evenness is an irrelevant attribute, we would not expect an "odd-to-odd advantage": i.e., that odd-birthday employees get promoted faster under an odd-birthday manager than under an even-birthday manager. This placebo provides a sanity check, to rule out mechanical reasons why our event-study framework could generate spurious effects.

More precisely, we use an econometric specification that is identical to equation (1), except that the smoking status is replaced everywhere by birthday-evenness. Instead of S_i, the alternative specification uses the dummy O_i that takes the value 1 if the employee was born on an odd birthday and 0 if the employee was born on an even birthday. The set of manager transition is $J_E = \{E2O, E2E, O2E, O2O\}$: $E2O$ denotes a transition from a manager with an even birthday to a manager with an odd birthday, and so on. And instead of superscripts S and N, we use superscripts O and E to refer to employees born in odd and even days, respectively. We define analogous single-difference, double-differences, and dual-double-differences estimates for these placebo events. For example, the following single-difference estimate measures how the odd-birthday employee reacts to gaining an odd-birthday manager (i.e., transitioning from an even-birthday manager to an odd-birthday manager, relative to transitioning from an even-birthday manager to another even-birthday manager): $\beta^O_{E2O,e} - \beta^O_{E2E,e}$. And we use the following double-differences estimate to measure the odd-to-odd advantage: $(\beta^O_{E2O,e} - \beta^O_{E2E,e}) - (\beta^E_{E2O,e} - \beta^E_{E2E,e})$.

The single-difference results are presented in Figure D.1. Panel (a) corresponds to the effects of gaining an odd-birthday manager: i.e., comparing a transition from an even-birthday manager to an odd-birthday manager, relative to a transition from an even-birthday manager to a different even-birthday manager. The gray circles show the estimates for the even-birthday employees, while the pink squares correspond to the odd-birthday employees. All the coefficients are close to zero, precisely estimated and almost always statistically insignificant. For example, 10 quarters after the transition, the point estimate for employees with an odd-birthday is small (0.02 pay grades) and statistically insignificant (p-value = 0.877); and the corresponding estimate for employees with an even-birthday is also small (-0.05 pay grades) and statistically insignificant (p-value = 0.608). Panel (b) of Figure D.1 corresponds to the effects of losing an odd-birthday manager: i.e., comparing a transition from an odd-birthday manager to an even-birthday manager, relative to a transition from an odd-birthday manager to a different odd-birthday manager. As expected, all the coefficients are close to zero, precisely estimated and almost always statistically insignificant.

For a more direct measurement of the odd-to-odd advantage, Figure D.2 presents the double-differences and dual-double-differences estimates. Panel (a) of Figure D.2 corresponds to the differences between the coefficients for odd and even employees from panel (a) of Figure D.1. As expected, panel (a) of Figure D.2 shows no significant odd-to-odd advantage. For instance, at 10 quarters after the transition, the odd-to-odd advantage is close to zero (0.06 pay grades), statistically
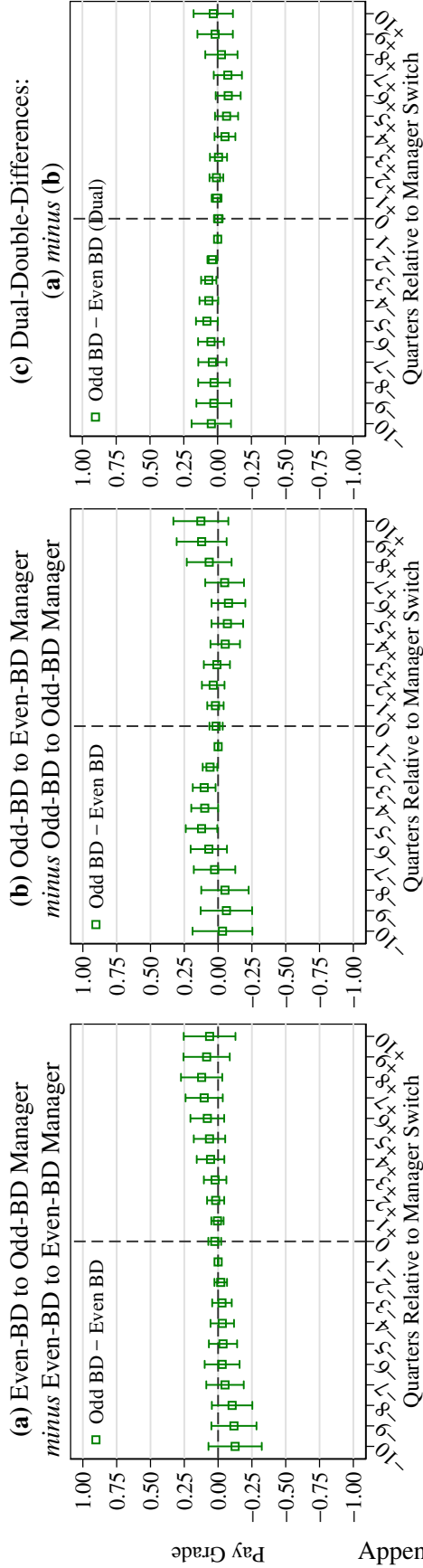
insignificant (p-value=0.518), and precisely estimated. For comparison, panel (a) of Figure D.2 is equivalent to panel (a) of Figure 6, except that it is based on birthday-evenness instead of gender. We can reject the null hypothesis that this coefficient for odd-birthday employees is the same as the corresponding coefficient of 0.65 estimated for male employees in panel (a) of Figure 6 (p-value<0.001). Panel (b) of Figure D.2 shows that the results are virtually the same if we look at transitions in the opposite direction (i.e., losing an odd-birthday manager). Furthermore, panel (c) of Figure D.2 shows that the results are also similar if we use the dual-double-differences estimates that combines transitions in both directions.

Figure D.1: Placebo Exercise: Single-Difference Estimates
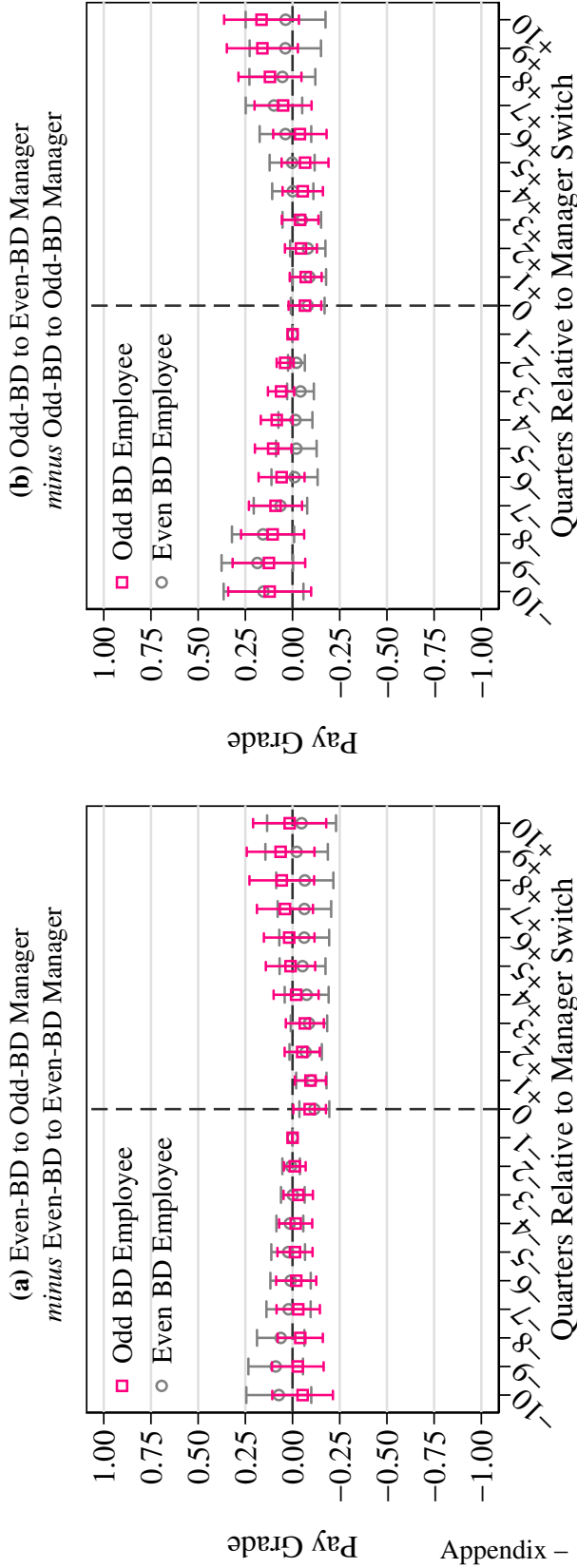
(a) Even-BD to Odd-BD Manager
minus Even-BD to Even-BD Manager

(b) Odd-BD to Even-BD Manager
minus Odd-BD to Odd-BD Manager

Notes: See Section 3.1 for details about the regression specification. All coefficients were estimated from a single regression including 380,964 observations of 14,638 employees (7,533 Even BD & 7,105 Odd BD). The dependent variable is the pay grade of the employee. The estimates shown in the graph are based on the coefficients of the event-study variables. The pink squares correspond to the coefficients for odd-BD employees, while the gray circles correspond to the coefficients for even-BD employees. Panel (a) corresponds to the difference between transitions from an even-BD manager to an odd-BD manager and transitions from an even-BD manager to another even-BD manager. 4,161 employees (2,171 Even BD & 1,990 Odd BD) experience events, comprised of 2,555 transitions from a even-birthday manager to a odd-birthday manager and 2,709 from a even-birthday manager to another even-birthday manager. Panel (b) corresponds to the difference between transitions from an odd-birthday manager to an even-birthday manager versus transitions from an odd-birthday manager to another odd-birthday manager. 3,940 employees (2,011 Even BD & 1,929 Odd BD) experience events, comprised of 2,611 transitions from a odd-birthday manager to a even-birthday manager and 2,188 from a odd-birthday manager to another odd-birthday manager. The 95% confidence intervals are presented in brackets, with two-way clustering by manager and employee. The within-employee standard deviation of pay grade is 0.475. The coefficient for period "0" corresponds to the exact month of the transition.

Figure D.2: Placebo Exercise: Double-Differences Estimates

(a) Even-BD to Odd-BD Manager
minus Even-BD to Even-BD Manager

(b) Odd-BD to Even-BD Manager
minus Odd-BD to Odd-BD Manager

(c) Dual-Double-Differences:
(a) *minus* **(b)**

Notes: All coefficients were estimated from a single regression including 380,964 observations of 14,638 employees (7,533 Even BD & 7,105 Odd BD). Panel (a): 4,536 employees (2,385 Even BD & 2,151 Odd BD) experience events: 3,014 transitions from a even-birthday manager to a odd-birthday manager and 3,131 from a even-birthday manager to another even-birthday manager. Panel (b): 4,244 employees (2,155 Even BD & 2,089 Odd BD) experience events: 2,922 transitions from a odd-birthday manager to a even-birthday manager and 2,453 from a odd-birthday manager to another odd-birthday manager. Panel (c) corresponds to the average between the coefficients from panel (a) and the (negative value of) the coefficients from panel (b). This "symmetric" double-differences estimates is then $\frac{1}{2}\{(\beta^{O}_{\text{E2O},t} - \beta^{O}_{\text{E2E},t}) - (\beta^{E}_{\text{E2O},t} - \beta^{E}_{\text{E2E},t}) - [(\beta^{O}_{\text{O2E},t} - \beta^{O}_{\text{O2O},t}) - (\beta^{E}_{\text{O2E},t} - \beta^{E}_{\text{O2O},t})]\}$. The 95% confidence intervals are presented in brackets, with two-way clustering by manager and employee. The within-employee standard deviation of the dependent variable is 0.475. The coefficient for period "0" corresponds to the exact month of the transition.

E   Additional Results: Smoker-to-Smoker Advantage

E.1   Persistence of the Manager Transitions

In this section, we show that manager transitions are quite persistent and, therefore, probably not a major source of attenuation bias.

Our estimates measure a reduced form effect of an increased but not necessarily permanent exposure to a manager of a given type. For example, months or years after an employee transitioned from a non-smoking manager to a smoking manager, the employee may end up again under a non-smoking manager. This can happen for multiple reasons. The employee may remain in the team and that team may experience another manager transition, this second time from a smoking manager to a non-smoking manager. The employee may also change to a different team, due to a lateral move or a promotion, and as a result end up being assigned to a non-smoking manager. In this sense, our estimates will under-estimate the effect of having a smoking manager. If the employee were to stay with a smoking manager forever, the effects would presumably be even stronger.

We reproduce the same event-study analysis but, instead of using pay grade as dependent variable, we use an indicator variable that takes the value 1 if the employee is currently assigned to a smoking manager, and 0 otherwise. The results are presented in Figure E.1. Panel (a) corresponds to the case of gaining a smoking manager: i.e., transitioning from a non-smoking manager to a smoking manager, relative to transitioning from a non-smoking manager to a different non-smoking manager. The orange diamonds correspond to the coefficient for non-smoking employees, while the purple triangles correspond to the coefficients for smoking employees. Panel (a) shows that, following the transition, there is a large and statistically significant increase in the probability of being assigned to a smoking manager. The effect diminishes slowly over time, which is expected given that, as explained above, employees may eventually switch back to a non-smoking manager.

We can use the coefficients from panel (a) of Figure E.1 to measure the persistence of the effects. For the sake simplicity, we focus on the estimates for smoking employees (purple triangles). In the quarter after the transition, smoking employees are on average 72 pp more likely to be assigned to a smoking manager. Two quarters after the transition, the effect is 68 pp. And while the effects keep declining over time, even 10 quarters after the transition there is still an effect of 58 pp. By aggregating the effects during the 10 quarters following the transition, we estimate that the smoking employees spent, on average, 1.6 additional years under an smoking manager. This strong effect implies that while non-compliance is not zero, it is probably not a significant source for concern.

Last, panel (b) of Figure E.1 reproduces the same exercise as in panel (a), but for the case of losing a smoking manager. The effects are still persistent in panel (b), but not as persistent as in panel (a). These results suggest that we should not expect the effects from losing a smoking manager to be exactly a mirror image as the effects from gaining a smoking manager, but probably more muted.

E.2 Effects of Shared Traits on Social Interactions

We demonstrated that having shared traits with the manager does not have a significant effect on the employee's career progression. To aid in the interpretation of that finding, in this section we show that having shared traits with the manager does not affect the social interactions with the manager either.

We use the same stylized event-study given by equation (2) and discussed in Section 3.3. The key difference is that instead of looking at whether the employee has the same smoking status as the manager, we instead look at whether the employee has one shared trait with the manager. Another difference is that we need to estimate the double-differences estimates directly. The results are presented in Figure E.2. In all panels, the dependent variable is the share of breaks taken with the manager. Panel (a) corresponds to the transitions where the employee gains a shared trait with the manager: i.e., comparing transitions from no shared traits with the manager to a shared trait with the manager, relative to transitions from no shared traits with the manager to a different manager with no shared traits. According to the baseline levels, employees do socialize with their managers even if they do not have a shared trait with them. Most importantly, the coefficient labeled "post-transition" indicates that, after gaining a shared trait with the manager, there is an increase in the share of breaks, but the effect is small in magnitude (4.9 pp) and statistically insignificant (p-value=0.384). Moreover, the coefficient labeled "pre-transition" implies a "falsification" effect of similar magnitude (6.0 pp) and statistically insignificant (p-value=0.300). Last, panel (b) of Figure E.2 corresponds to transitions in the opposite direction, where the employee loses a shared trait with the manager. The results from panel (b) are largely consistent with the results from panel (a).
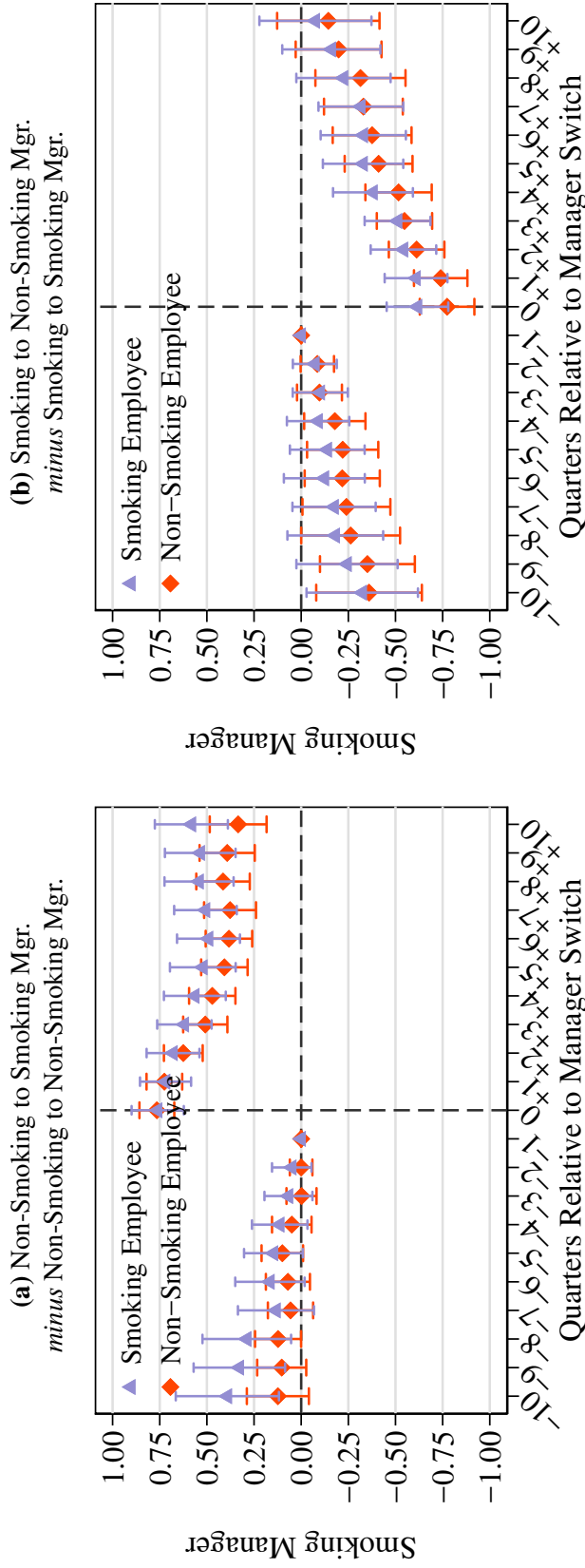
E.3 Reverse Transitions

In the main analysis, we focus on employees who gain a smoking manager, by comparing transitions from a non-smoking manager to a smoking manager versus transitions from a non-smoking manager to a different non-smoking manager. In this section, we present the results for transitions in the opposite direction, in which employees lose a smoking manager.

However, there are two challenges with the analysis of reverse transitions, which are the reasons why we relegated these results to the Appendix. Most importantly, we are under-powered to study these manager transitions. The reason is mechanical. To identify these estimates, we use transitions from a smoking manager to a non-smoking manager and transitions from a smoking manager to a different smoking manager. Two of the two outgoing managers are smokers, and one of the two incoming managers are smokers. Since smokers are a minority of the sample of managers, these two types of transitions will not be very common in the data. For example, while there are 939 transition events from a non-smoking to another non-smoking manager, there are only 276 transition events from a smoking manager to another smoking manager. The second challenge is that, as reported in Appendix E.1 above, the shock of losing a smoking manager is less persistent than the shock of gaining a smoking manager. As a result, we should not expect the effects from

losing a smoking manager to be exactly a mirror image as the effects from gaining a smoking manager, but probably more muted.
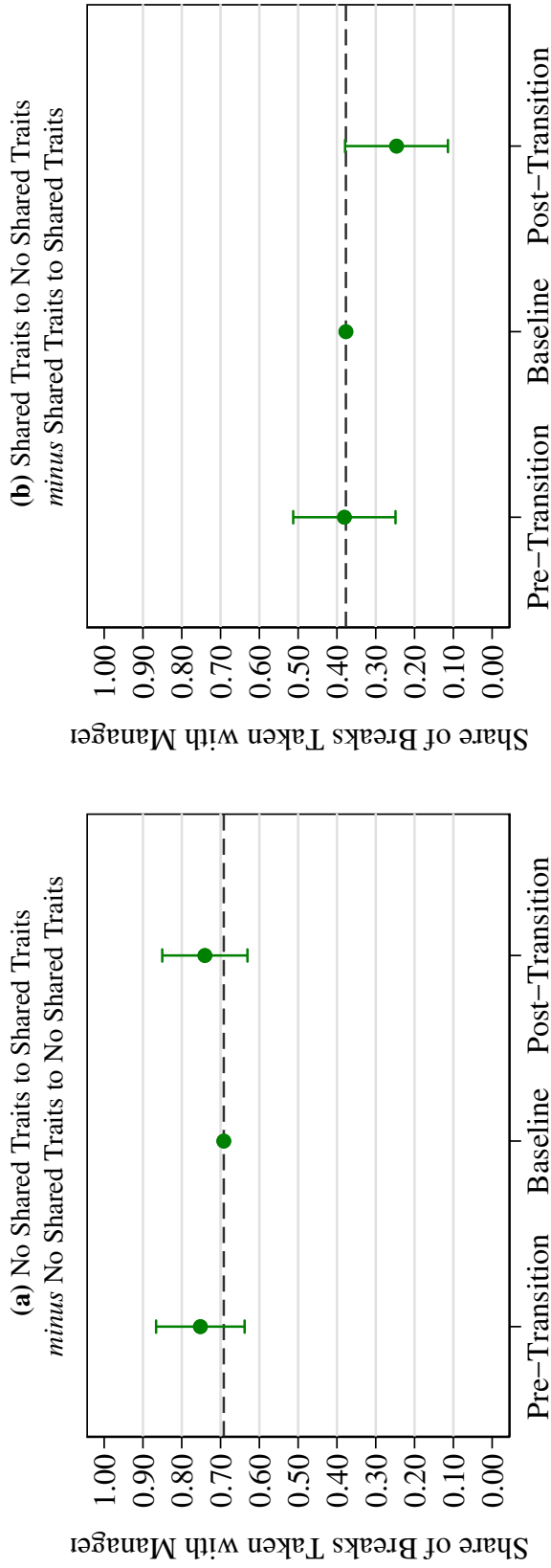
With all of the above caveats in mind, the results are presented in Figure E.3. This figure is otherwise identical to Figure 1, except that it focuses on the effects of losing a smoking manager instead of gaining a smoking manager. Panel (a) of Figure E.3 presents the single-difference estimates. Given what we know about the effects of gaining a smoking manager, we would expect losing a smoking manager to have a negative effect on the evolution of pay grades of smoking employees, and no effect on the evolution of pay grades of non-smoking employees. In the post-transition period, the point estimates have the expected signs; however, they are imprecisely estimated and statistically insignificant. In the pre-transition period, the point estimates are even more volatile and imprecisely estimated. Panel (b) of Figure E.3 presents the double-differences estimates. Again, both the pre-transition and post-transition coefficients are too volatile and imprecisely estimated to draw any strong conclusions.

Figure E.1: Persistence of the Manager Transitions between Smoking and Non-Smoking Managers


(a) Non-Smoking to Smoking Mgr.
minus Non-Smoking to Non-Smoking Mgr.

(b) Smoking to Non-Smoking Mgr.
minus Smoking to Smoking Mgr.

Figure E.2: Shared Traits with the Manager and Social Interactions with the Manager

(a) No Shared Traits to Shared Traits
minus No Shared Traits to No Shared Traits

(b) Shared Traits to No Shared Traits
minus Shared Traits to Shared Traits

Notes: All coefficients estimated from a regression with 1,570 observations of 1,293 employees. Panel (a) 120 employees experience events; 64 transition from a manager with whom they have no traits in common to one with whom they share at least one trait, and 64 transition between two managers with whom they have no traits in common. Panel (b) 118 employees experience events; 27 transition from a manager with whom they share at least one trait one with whom they have no traits in common, and 93 transition between two managers with whom they share at least one trait. The 95% confidence intervals are presented in brackets, with two-way clustering by manager and employee. Results are based on the subset of male employees and male managers for which smoking status is available.

Figure E.3: Smoker-to-Smoker Advantage in Pay Grades: Reverse Manager Transitions
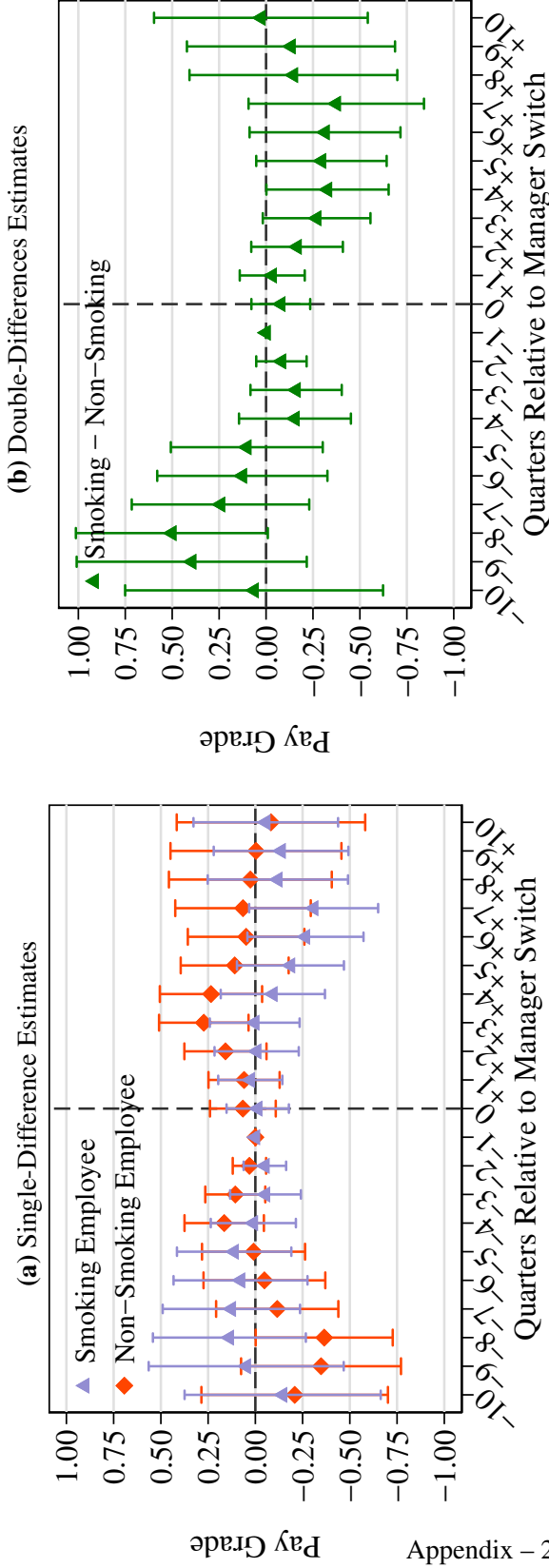
(a) Single-Difference Estimates

(b) Double-Differences Estimates

Notes: See Section 3.1 for details about the regression specification. All coefficients are estimated from the same regression that includes 94,728 observations of 2,907 employees (966 Smoking & 1,941 Non-Smoking). 464 employees (198 Smoking & 266 Non-Smoking) experience events, comprised of 296 transitions from smoking manager to non-smoking manager and 276 from a smoking manager to another smoking manager. The dependent variable is the pay grade of the employee. The estimates shown in the graph are based on the coefficients of the event-study variables. Panel (a) plots single difference estimates for non-smoking and smoking employees separately. The orange diamonds correspond to the coefficient for non-smoking employees, while the purple triangles correspond to the coefficients for smoking employees. The green triangles in panel (b) correspond to the difference between the coefficient for smoking employees and non-smoking employees. The estimates shown in Panel (b) are the double-differences estimates $(\beta_{S2N}^{S} - \beta_{S2S}^{S}) - (\beta_{S2N}^{N} - \beta_{S2S}^{N})$. The 95% confidence intervals are presented in brackets, with two-way clustering by manager and employee. Results are based on the subset of male employees and male managers for which smoking status is available. The coefficient for period "0" corresponds to the exact month of the transition.

F   Additional Results: Male-to-Male Advantage

F.1   Simple Descriptive Evidence of the Male-to-Male Advantage

In this section, to supplement the event-study analysis, we provide some simple descriptive analysis related to the male-to-male advantage.

We explore the association between past exposure to male managers and the employee's subsequent promotions. We measure employee i's past exposure to male managers with the variable $S_{i,t-1}$. This variable can range from 0 to 1, and is equal to the fraction of the past year that employee i was assigned to a male manager. We measure the employee's subsequent career progression with the variable $\Delta P_{i,t}$, which is equal to employee i's change in pay grade between quarter t and 10 quarters later. Consider the following regression:

$$\Delta P_{i,t} = \alpha_0^M \cdot (1 - F_i) + \alpha_1^M \cdot S_{i,t-1} \cdot (1 - F_i) + \alpha_0^F \cdot F_i + \alpha_1^F \cdot S_{i,t-1} \cdot F_i + \beta \cdot T_{i,t} + \rho_{P_{i,t}} + \varepsilon_{i,t} \quad \text{(F.1)}$$

Note that we interact $S_{i,t-1}$ with a gender indicator (F_i) to estimate the relationship separately for male and female employees. The regression includes basic control variables: the employee's tenure ($T_{i,t}$) and, to flexibly compare employees who started at the same level, fixed effects for initial pay grade ($\rho_{P_{i,t}}$).

This simple framework can provide suggestive evidence to disentangle between favorable treatment of male managers versus unfavorable treatment of female managers. If the male-to-male advantage was entirely due to unfavorable treatment by female managers, we would expect male employees to do as well as female employees under male managers, but worse than female employees under female managers. If the the male-to-male advantage was entirely due to favorable treatment by male managers, we would expect male employees to do as well as female employees under female managers, but better than female employees under male managers.

The results are presented in Figure F.1. This figure shows a binned scatterplot between the past exposure to male managers (x-axis) and the subsequent change in pay grade (y-axis). The blue circles correspond to the male employees, while the red squares correspond to the female employees. This figure includes the regression line for each of these two groups. The results from this simple descriptive analysis are broadly consistent with the results from the event-study evidence from Section 4. The slope for male employees is positive ($\alpha_M = 0.381$), statistically significant (p-value<0.001), and large in magnitude, suggesting that male are promoted substantially faster under male managers than they are under female managers. On the other hand, the slope for female employees ($\alpha_F = 0.056$), while statistically significant (p-value<0.001), it is economically small, suggesting that women are promoted at similar rates regardless of whether they were working mostly under male managers or female managers.

Additionally, the results from Figure F.1 constitute suggestive evidence in support of interpretation that male employees fare better due to favorable treatment by male managers. More precisely, Figure F.1 shows that when employees are assigned mostly (i.e., above 75%) to female managers, they tend to be promoted at the same rate regardless of whether they are male or female. While this is by no means definitive proof, one natural interpretation is that female and male employees are

treated equally by female managers. On the contrary, when employees are assigned mostly (i.e., above 75%) to male managers, then the male employees are promoted 0.30 pay grades higher than the female employees (p-value<0.001). Again, this is not definite proof, but one natural interpretation is that male employees receive favorable treatment by their male managers.

F.2   Raw Event-Study Estimates

In the event-study analysis, we focus on the single-difference and double-differences estimates, which compare between employees going through different types of transitions. In this section, we present the underlying raw coefficients used for those calculations.

For the sake of brevity, we focus on the single-difference estimates reported in Figure 6 and discussed in Section 4 above. Panel (a) of Figure 6 corresponds to the effects of gaining a male manager, by comparing employees who transitioned from a female to a male manager versus employees who transitioned from a female to another female manager. Panels (a) and (b) of Figure F.2 present the raw coefficients used to compute the single-difference reported in panel (a) of Figure 6. More precisely, panel (a) of Figure F.2 corresponds to the effects of transitioning from a female to a male manager (relative to no transition at all), while panel (b) of Figure F.2 corresponds to the effects of transitioning from a female to another female manager (again, relative to no transition at all). In turn, panel (b) of Figure 6 corresponds to the effects of losing a male manager. Panels (c) and (d) of Figure F.2 show the underlying raw coefficients: panel (c) corresponds to the effects of transitioning from a male to a female manager (relative to no transition at all), while panel (d) corresponds to the effects of transitioning from a male to another male manager (again, relative to no transition at all).

One has to be careful when interpreting the raw coefficients reported in Figure F.2. There could be a "pure" effect of transitioning to a new manager, regardless of the genders of the incoming and outcoming managers. That pure effect would be picked up by the raw coefficients reported in Figure F.2, because it is based on comparisons between employees who went through a transitions and employees who did not go through a transition at all. The reason why we focus on single-difference estimates in the main analysis is precisely because, by construction, any pure effects from the transition should be differenced out. In any case, one re-assuring finding from Figure F.2 is that the main patterns (e.g., that male employees do better under male managers than under female managers) are already quite obvious in the raw coefficients, even before we calculate the proper single-difference estimates.

F.3   Effects on Effort, Performance and Retention

It is possible that the male-to-male advantage in promotions is due to underlying differences in productivity. Contrary to this interpretation, in this section we show that the male-to-male advantage in promotions is not accompanied by any differences in effort, performance, or retention.

Figure F.3 presents the results under the dual-double-differences specification, which combines all transition types and thus maximizes statistical power. Each panel of Figure F.3 is equivalent to

panel (c) of Figure 7, except that using a different dependent variable.

In panel (a) of Figure F.3, the dependent variable is (the logarithm of) the monthly number of days worked. Consistent with the assumption of balanced pre-trends, the pre-transition coefficients are close to zero, precisely estimated, and statistically insignificant. The post-transition coefficients are also close to zero, statistically insignificant, and precisely estimated. For example, the male-to-male advantage at 10 quarters after the transition is close to zero (0.012 log points), statistically insignificant (p-value=0.313), and precisely estimated. We can interpret the magnitude as a percentage increase of roughly 1.2% in the days worked. This effect is negligible in comparison to the magnitude of the male-to-male advantage in pay grades reported in panel (c) of Figure 7, which is roughly equivalent to a 13% salary difference.[53]

In panel (b) of Figure F.3, the dependent variable is (the logarithm of) the average number of hours spent in the office, according to the card swipe data. Since these results are based on the subsample of employees in the headquarters, they are less precisely estimated than the results from panel (a), but still quite precisely estimated. And just like panel (a), the evidence from panel (b) suggests that there is no male-to-male advantage in effort. Both the pre-transition and post-transition coefficients are close to zero and statistically insignificant. For example, at 10 quarters after the transition, the male-to-male advantage is close to zero (0.023) and statistically insignificant (p-value = 0.822). This coefficient is also economically insignificant, corresponding to an effect of just 2.3%.

In panel (c) of Figure F.3, the dependent variable is the sales revenue index. Since these results are based on the subsample of employees with a sales role, they are less precisely estimated than the results from panel (a), but still quite precisely estimated. And just like panel (a) and (b), the evidence from panel (c) suggests that there is no male-to-male advantage in sales performance. The point estimates are again close to zero, statistically insignificant, and precisely estimated. For instance, at 10 quarters after the transition, the male-to-male advantage is small (7.9) and statistically insignificant (p-value = 0.787). This effect is also economically insignificant. In comparison, the within-employee standard deviation of this sales outcome is 95.1.

In panel (d) of Figure F.3, the dependent variable is a dummy for whether the employee has left the firm. The evidence also indicates a lack of male-to-male advantage on attrition: the post-transition coefficients are also close to zero, precisely estimated, and statistically insignificant. For example, at 10 quarters after the event, the male-to-male coefficient for attrition is close to zero (-0.3 pp), statistically insignificant (p-value = 0.667), and precisely estimated. On average, the probability of leaving the firm at 10 quarters after an event is 35 pp. Thus, the estimated effect of less than one pp is quite small relative to that baseline.

F.4   Persistence of the Manager Transitions

In Appendix E.1 above we measure how persistent the manager transitions are for smoking status. In this section, we reproduce the analysis but for gender instead of smoking status.

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[53] A single pay-grade increase is associated with a log increase of 0.227 (Appendix C.1), and thus a 0.54 pay-grade increase should be equivalent to a salary that is 13% ($= e^{0.54 \cdot 0.227} - 1$) higher.

Figure F.4 reproduces the same event-study analysis but using an indicator variable that takes the value 1 if the employee is currently assigned to a male manager, and 0 otherwise instead of pay grade as dependent variable. Panel (a) corresponds to the case of gaining a male manager: i.e., transitioning from a female manager to a male manager, relative to transitioning from a female manager to a different female manager. The blue circles correspond to the coefficient for male employees, while the red squares correspond to the coefficients for female employees. Panel (a) shows that, following the transition, there is a large and statistically significant increase in the probability of being assigned to a male manager. In the first quarter after the transition, male employees are on average 86 pp more likely to be assigned to a male manager. The effect diminishes slowly over time, which is expected given that, as explained above, employees may eventually switch back to a female manager.[54] A quarter later, the effect is 73 pp. And while the effects keep declining each quarter, even 10 quarters after the transition, there is still a sizeable effect of 30 pp.

The coefficients from panel (a) of Figure F.4 can help us measure the persistence of the effects. To simplify the discussion, we focus on the estimates for male employees. If we aggregate over the 10 quarters following the event, we estimate that the male employees spent, on average, 1.5 additional years under a male manager. This strong effect implies that, while non-compliance is not zero, it is probably not a significant source for concern.

Panel (b) of Figure F.4 reproduces panel (a), but for the case of losing a male manager instead of gaining a male manager. The results from panel (b) are nearly a mirror image of the results from panel (a). This similarity suggests that, to the extent that the shocks are equally persistent, the effects from losing a male manager could be close to a mirror image as the effects from gaining a male manager.

F.5   Alternative Definitions of Transition Events

The main analysis is based on a baseline definition of manager transition events. In this section, we show that the results are similar under alternative definitions.

The results are presented in Figure F.5. Again we focus on the dual-double-differences specification because it combines all transition types and thus maximizes statistical power. Panel (a) corresponds to the baseline definition of events, and is a reproduction of panel (c) from Figure 7. Panel (b) of Figure F.5 is identical to panel (a) of Figure F.5, except that it restricts to the first transition event experienced by each employee. This restriction amounts to excluding roughly 8.5% of the transition events. Despite the exclusion of these events, the results are nearly identical to the baseline. For example, 10 quarters after the event, the baseline specification from panel (a) suggests a male-to-male advantage of 0.54 pay grades (p-value<0.001), while the alternative specification from panel (b) suggests a male-to-male advantage of 0.52 pay grades (p-value = 0.001).

Panel (c) of Figure F.5 is identical to panel (a), except that it excludes the top-10% largest events according to the number of affected employees. The results are a bit more muted than in the baseline, but still largely consistent. For instance, at 10 quarters after the event, the baseline

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[54] The high persistence may be, in part, due the new manager influencing the types of the future managers. For example, male managers may promote male employees to male-managed teams.

specification from panel (a) suggests a male-to-male advantage of 0.54 pay grades (p-value<0.001), while the alternative specification from panel (c) suggests a male-to-male advantage of 0.40 pay grades (p-value<0.001).

Panel (d) of Figure F.5 is identical to panel (a), except that instead of requiring that at least 50% of employees in the team stay through the month of the event, it makes a stronger requirement: at least 80% of the employees must stay through the first three months following an event. This restriction amounts to excluding roughly 22% of the transition events. The results are again very similar to the baseline. For instance, at 10 quarters after the event, the baseline specification from panel (a) suggests a male-to-male advantage of 0.54 pay grades (p-value<0.001), while the alternative specification from panel (d) suggests a male-to-male advantage of 0.56 pay grades (p-value<0.001).

F.6 Separating the Smoker-to-Smoker Advantage from the Male-to-Male Advantage

In our context, men are more likely to be smokers than women: 33% of men smoke vs. 5% of women. As a result, the male-to-male advantage can be partially attributed to the smoker-to-smoker advantage. In this section, we show that only a small fraction of the male-to-male advantage can be attributed to the smoker-to-smoker advantage.

The approach is very straightforward. We estimate the male-to-male advantage just like in Section 4.1, except that we include the smoking transition events as control variables. That is, in addition to the set of interacted event-study indicator variables that separately identify manager gender transition events for male and female employees, we include in the regression the full set of interacted event-study indicator variables that separately identify manager smoke status transition events for smoking and non-smoking employees.

The results are presented in Figure F.6. We focus again on the dual-double-differences specification because it combines all transition types and thus maximizes statistical power. Panel (a) of Figure F.6 corresponds to the baseline results and is a reproduction of panel (c) from Figure 7. Recall that we can infer smoking status for a subset of employees and managers. Panel (b) of Figure F.6 is identical to panel (a), except that it restricts the sample to employees and managers with known smoking status. The results are nearly identical between panels (a) and (b), indicating that restricting the sample to employees with known smoking status does make a significant difference for the estimated male-to-male advantage. For instance, the male-to-male advantage 10 quarters after the event is estimated at 0.54 pay grades (p-value<0.001) in panel (a) versus 0.58 pay grades (p-value<0.001) in panel (b).

Panel (c) of Figure F.6 is identical to panel (b), except that we include the full set of smoking transition events as control variables. As a result, panel (c) shows the magnitude of the male-to-male advantage after netting out the smoker-to-smoker advantage. The male-to-male advantage is smaller in magnitude in panel (c) than in panel (b), which is consistent with the expectation that some of the male-to-male advantage arises mechanically from the smoker-to-smoker advantage. However, the difference is subtle, implying that only a small share of the male-to-male advantage
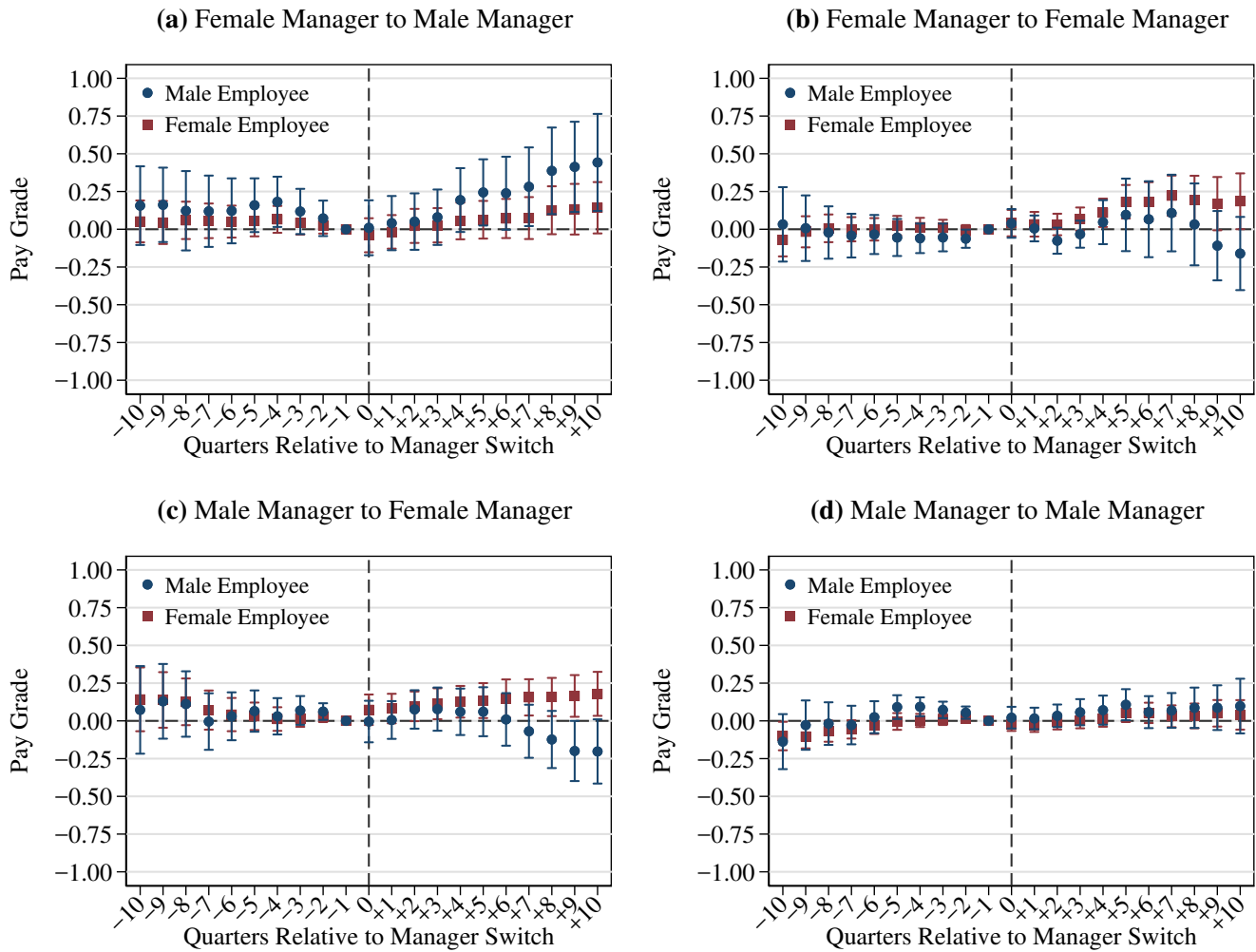
can be explained by the smoker-to-smoker advantage. For instance, at 10 quarters after the event, the male-to-male advantage is estimated at 0.51 pay grades (p-value<0.001) in panel (c) versus 0.58 pay grades (p-value<0.001) in panel (b). The comparison between these two estimates suggests that only 14% of the male-to-male advantage can be attributed to the smoker-to-smoker advantage.

Figure F.1: Association between Past Exposure to Male Managers and Future Pay Grade Changes
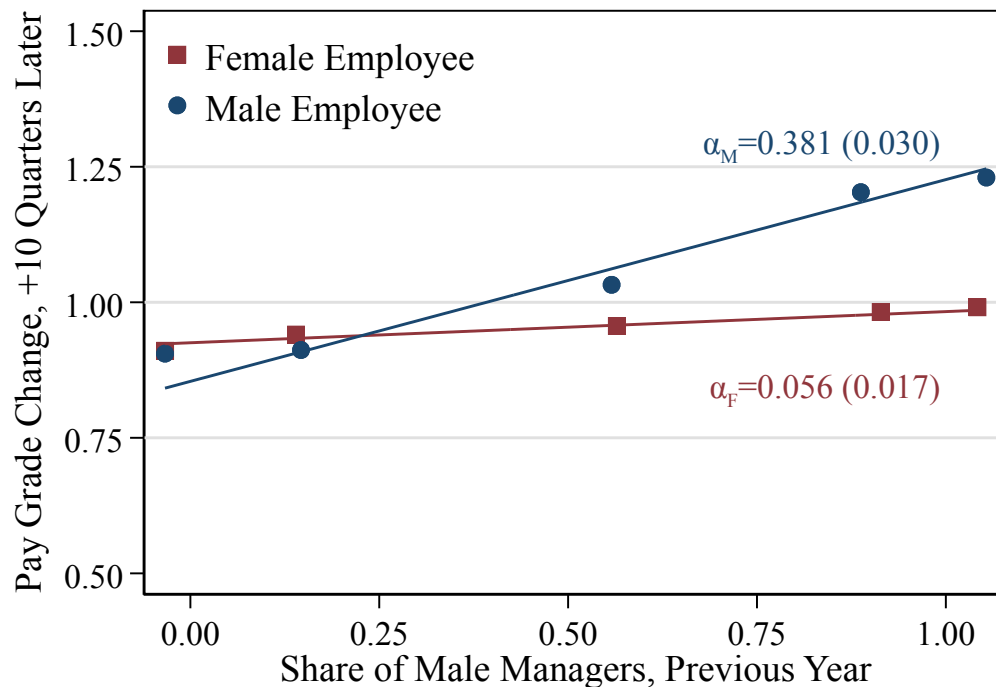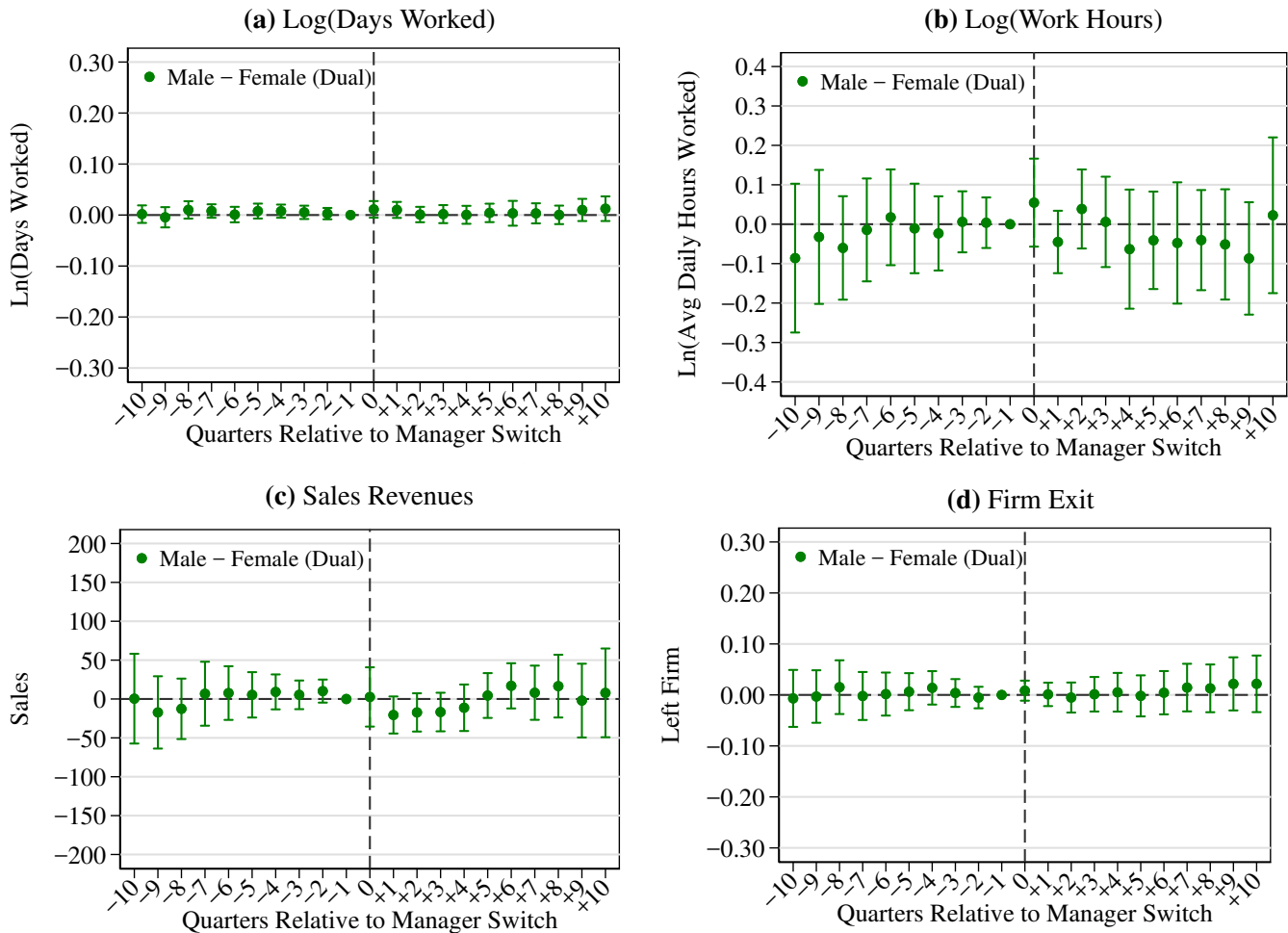

Notes: See Section F.1 for details about the regression specification. This binned scatterplot shows the relationship between the share of male managers in the previous year and the change in pay grade at 10 quarters later. Results based on employees who are in the panel for at least 14 quarters (so that we can compute the left-hand-side and right-hand-side variables without truncation). The red squares and red line correspond to the female employees while the blue circles and blue line correspond to the male employees. The analysis uses the following control variables: the employee's seniority, an indicator variable for the employee's gender and initial pay grade fixed effects.

Figure F.2: Male-to-Male Advantage in Pay Grades: Raw Event-Study Coefficients

(a) Female Manager to Male Manager

(b) Female Manager to Female Manager

(c) Male Manager to Female Manager
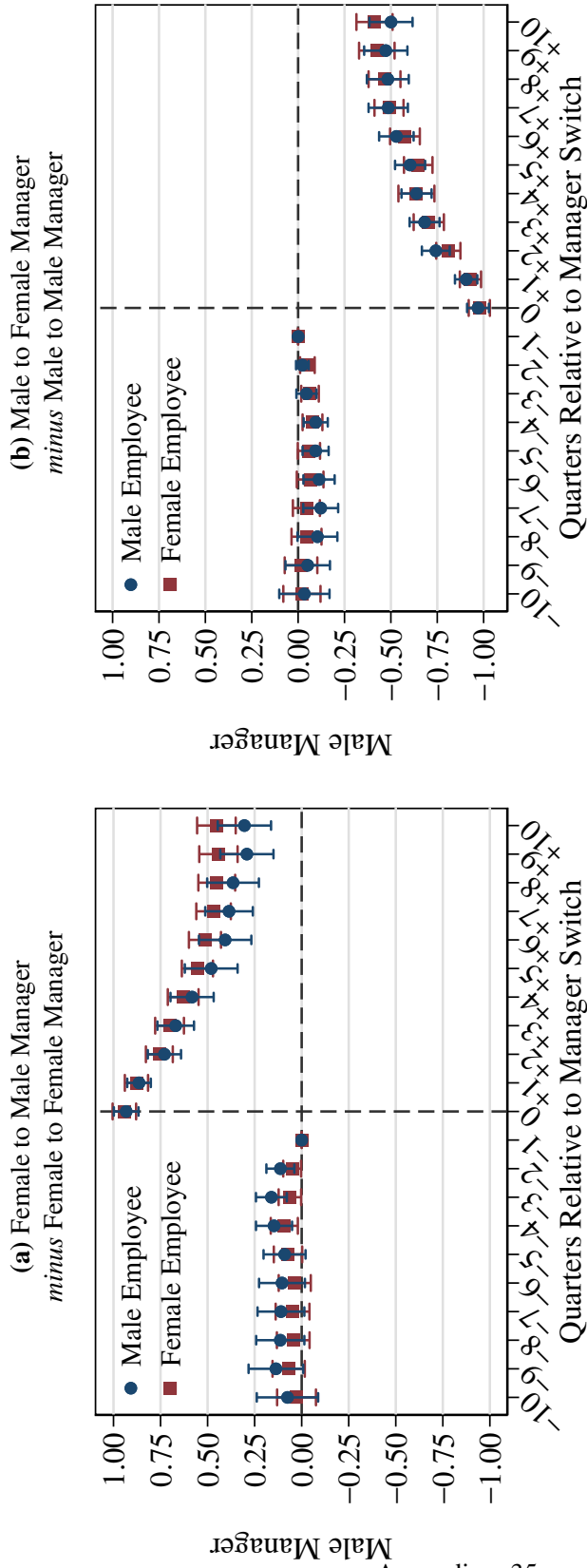
(d) Male Manager to Male Manager

Notes: See Section 3.1 for details about the regression specification. Each panel plots underlying event-study estimates $\beta^F_{J_G,,t}$ (red squares) and $\beta^M_{J_G,,t}$ (blue circles) where $J_G \in \{F2M, F2F, M2F, M2M\}$ indexes the transition event type. All coefficients are estimated from the same regression including 380,959 observations of 14,638 workers (5,193 Male & 9,445 Female). The dependent variable is the pay grade of the employee with a within-employee standard deviation of 0.475. Panel (a) includes data for 1,417 transitions from a female manager to a male manager, panel (b) includes data for 1,916 transitions from a female manager to a female manager, panel (c) includes data for 1,571 transitions from a male manager to a female manager, and panel (d) includes data for 3,766 transitions from a male manager to a male manager. The 95% confidence intervals are presented in brackets, with two-way clustering by manager and employee. The coefficient for period "0" corresponds to the exact month of the transition.

Figure F.3: Male-to-Male Advantage in Effort, Performance and Retention

(a) Log(Days Worked)

(b) Log(Work Hours)

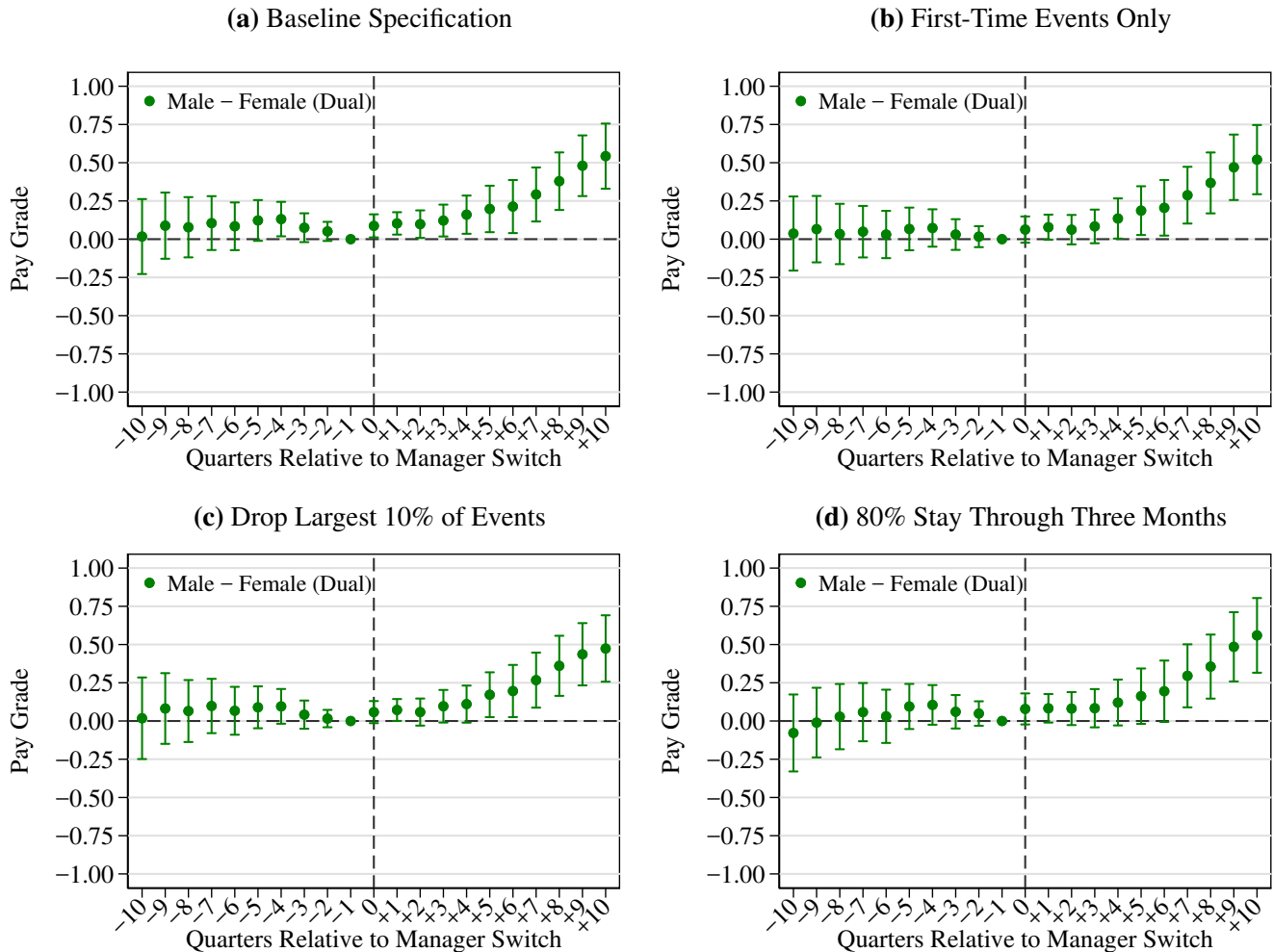**(c)** Sales Revenues

(d) Firm Exit

Notes: See Section 3.1 for details about the regression specification. This figure replicates Figure 3 but for gender transition events. These results are based on the symmetric specification reported in panel (c) of Figure 7, which combines data on the four types of gender transitions. The only difference is that in this figure, instead of pay grade, we use different dependent variables: in panel (a) the dependent variable is the logarithm of the total number of days worked in the month (inferred from data on approved leaves of absence). The within-employee standard deviation of the dependent variable is 0.138. All coefficients were estimated from a single regression including 352,282 observations of 14,154 employees. In panel (b) the dependent variable is the logarithm of the average number of hours worked in a given month (inferred from data on swipes in and out of the building, and available for headquarter employees only). The within-employee standard deviation of the dependent variable is 0.208. All coefficients were estimated from a single regression including 104,215 observations of 4,875 employees. In panel (c) the dependent variable is the sales revenue (available for employees with sales roles only) normalized to have mean 100. The within-employee standard deviation of the dependent variable is 95.1. All coefficients were estimated from a single regression including 136,341 observations of 6,244 employees. In panel (d) the dependent variable is an indicator that takes the value 1 in every month after the employee left the firm (these results include additional events after the employees left the firm). The within-employee standard deviation of the dependent variable is 0.177. All coefficients were estimated from a single regression including 359,225 observations of 14,601 employees. The 95% confidence intervals are presented in brackets, with two-way clustering by manager and employee. The coefficient for period "0" corresponds to the exact month of the transition.

Figure F.4: Persistence of the Manager Transitions between Male and Female Managers

(a) Female to Male Manager
minus Female to Female Manager

(b) Male to Female Manager
*minus* Male to Male Manager

Notes: All coefficients were estimated from a single regression including 366,882 observations of 14,439 employees (5,083 Male & 9,356 Female). Panel (a): 3,156 employees (818 Male & 2,338 Female) experience events: 1,845 transitions from a female manager to a male manager and 2,117 from a female manager to another female manager. Panel (b): 4,396 employees (1,395 Male & 3,001 Female) experience events: 1,670 transitions from a male manager to a female manager and 4,164 from a male manager to another male manager. The within-employee standard deviation of the dependent variable is 0.189. The 95% confidence intervals are presented in brackets, with two-way clustering by manager and employee. The coefficient for period "0" corresponds to the exact month of the transition.

Figure F.5: Male-to-Male Advantage in Pay Grades: Alternative Definitions of Transition Events

(a) Baseline Specification

(b) First-Time Events Only

(c) Drop Largest 10% of Events

(d) 80% Stay Through Three Months

Notes: In each panel, the coefficients were estimated from a single regression including 380,959 observations of 14,638 employees (5,193 Male & 9,445 Female). Panel (a) corresponds to the baseline definition of events, and is a reproduction of panel (c) from Figure 7. This analysis involves 1,417 F2M events, 1,916 F2F, 1,571 M2F, and 3,766 M2M. Panel (b) is identical to panel (a), except that it restricts to the first transition event experienced by an employee. This analysis involves 1,320 F2M events, 1,824 F2F, 1,364 M2F, and 3,422 M2M. Panel (c) is identical to panel (a), except that it excludes the top-10% largest events according to the number of affected employees. This analysis involves 1,200 F2M events, 1,739 F2F, 1,448 M2F, and 3,462 M2M. Panel (d) is identical to panel (a), except that instead of requiring that at least 50% of employees in the team stay through the month of the event, it makes a stronger requirement: at least 80% of the employees must stay through the first three months following an event. This analysis involves 1,084 F2M events, 1,513 F2F, 1,257 M2F, and 2,937 M2M. The within-employee standard deviation of the dependent variable is 0.475. The 95% confidence intervals are presented in brackets, with two-way clustering by manager and employee. The coefficient for period "0" corresponds to the exact month of the transition.

Figure F.6: Male-to-Male Advantage in Pay Grades: Controlling for Transition Events between Smoking and Non-Smoking Managers

(a) Baseline Specification

(b) Smoking Status Sample

(c) Controlling for Smoking Status Events
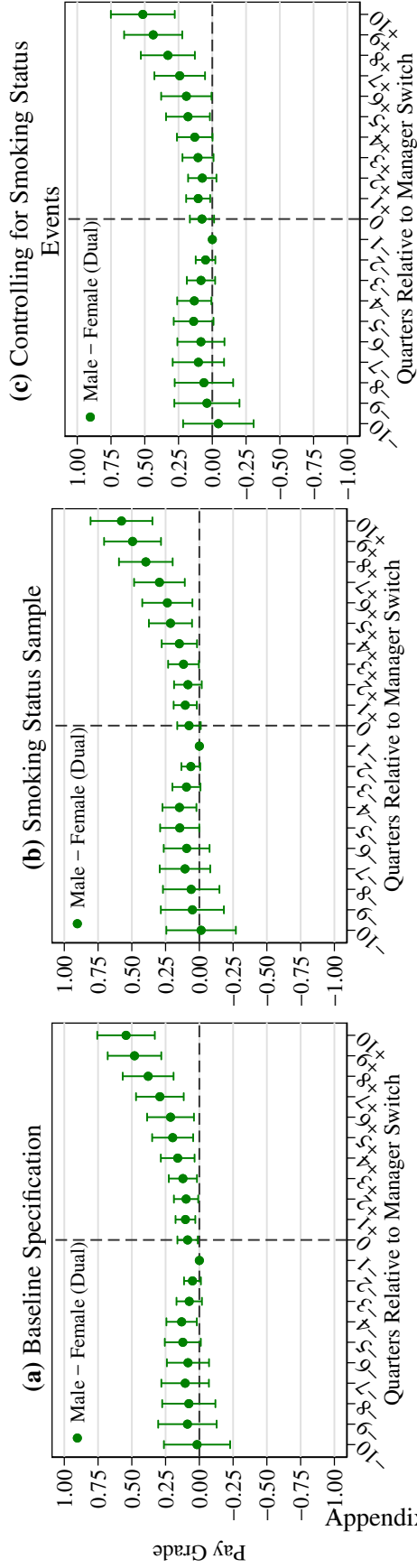
Notes: Panel (a): all coefficients were estimated from a single regression including 380,964 observations of 14,638 employees (5,193 Male & 9,445 Female). 6,536 employees (2,012 Male & 4,524 Female) experience events: 1,846 transitions from a female manager to a male manager (F2M): 2,120 F2F, 1,745 M2F, 4,291 M2M. Panel (b): all coefficients were estimated from a single regression including 296,330 observations of 8,373 employees (2,907 Male & 5,466 Female). 5,208 employees (1,620 Male & 3,588 Female) experience events: 1,421 transitions from a female manager to a male manager (F2M): 1,764 F2F, 1,438 M2F, 3,355 M2M. Panel (c): all coefficients were estimated from a single regression including 296,330 observations of 8,373 employees (2,907 Male & 5,466 Female). 5,208 employees (1,620 Male & 3,588 Female) experience events: 1,421 transitions from a female manager to a male manager (F2M): 1,764 F2F, 1,438 M2F, 3,355 M2M. The within-employee standard deviation of the dependent variable is 0.475. The 95% confidence intervals are presented in brackets, with two-way clustering by manager and employee. The coefficient for period "0" corresponds to the exact month of the transition.