DATING AND BREAKING UP WITH THE BOSS: BENEFITS, COSTS, AND SPILLOVERS

PRELIMINARY DRAFT

David Macdonald,[*] Jerry Montonen,[†] and Emily Nix[‡]

September 2023

Abstract

While many romantic relationships begin at work, relationships between managers and subordinates have increasingly come under scrutiny. Yet we know little about the economic implications of "dating the boss". We use administrative data covering the universe of cohabiting couples in Finland from 1988-2016 to explore the career implications of dating and breaking up with one's manager and spillovers on the wider workforce. Using a difference-in-difference across-couples research design we find that those in relationships with their managers experience a 9% bump in their earnings compared to those in relationships with managers in different firms. Relationships between managers and subordinates last longer and both manager and subordinate are more likely to remain in the same firm. However, when a manager and subordinate break up, the subordinate is 4.2 percentage points more likely to drop out of employment. Last, we examine the spillovers of these relationships on the broader workforce and document a 4 percentage point decrease in retention of other workers from these relationships. This result is consistent with these relationships imposing substantial costs on colleagues, including but not limited to exit from the firm.

---

[*]University of British Columbia Okanagan, david.macdonald@ubc.ca

[†]Aalto University, jerry.montonen@aalto.fi

[‡]University of Southern California, enix@usc.edu

1 Introduction

According to survey evidence, over 25% of workers have engaged in an office romance, with 18% dating a superior in their workplace. Yet there is a lack of consensus on whether dating a superior in the workplace is appropriate, with 40% of the same survey respondents stating that such relationships are unprofessional (SHRM, 2023). Mixing romantic relationships and work is undoubtedly complicated with potentially important economic consequences, especially when managers date their subordinates. Despite this complexity, the workplace was the fourth most common place couples met each other from 2000-2019, surpassed only by meeting online, at a bar or restaurant, or through common friends (Rosenfeld *et al.*, 2019).

The #MeToo movement brought relationships between managers and subordinates under greater scrutiny. This movement focused on clearly inappropriate actions by managers towards their subordinates, such as harassment and assault, which impose immense costs on the victims (Adams-Prassl, Huttunen, Nix and Zhang, 2022; Folke and Rickne, 2022). Beyond this, it also spurred an international debate on how and when consensual romantic relationships between managers and subordinates should be allowed. Even when these relationships are consensual, it is difficult to ascertain when they constitute an abuse of power, and when the subordinate may have received unfair benefits due to the relationship. Indeed, some have questioned whether it is ever acceptable to date a subordinate coworker (Noguchi, 2020).

A number of organizations ban relationships where there is a clear power discrepancy. For example, McDonald's forbids sexual relationships where one person has a direct or indirect reporting relationship with the other, justifying this position by stating "It is not appropriate to show favoritism or make business decisions based on emotions or friendships rather than on the best interests of the company" (Chaffin and Abboud, 2019). This policy resulted in the 2019 firing of McDonald's CEO Stephen Easterbrook for engaging in

a consensual relationship with a subordinate. Had such a policy been in place at Microsoft or Sidley Austin Law Firm, Bill and Melinda Gates and Barack and Michelle Obama would have been barred from dating.

However, rigorous large-scale evidence is absent in the ongoing debate on workplace relationships. In order to have an informed discussion about romantic relationships between managers and subordinates, it would be useful to have evidence on a number of important questions, including: How many serious romantic relationships begin at work, and what share of these are between managers and subordinates? What are the economic costs and benefits of "dating the boss" and how do these effects compare to workplace relationships between equals? Do these relationships last as long as non-workplace relationships and what happens to subordinates when these relationships break up? Last, do these relationships have spillovers that impact colleagues and the broader firm?

In this paper, we leverage administrative data from Finland to provide empirical evidence on these questions. This data allows us to observe all individuals in Finland who began a cohabitation spell between 1995 and 2010. We define "workplace couples" as couples where both partners were employed in the same firm in the 2 years prior to cohabitation. We find that 7-10% of couples who were both employed in the 2 years prior to cohabitation fit our definition of workplace couples. This is comparable to the United States, where Hyatt (2015) finds that 11% of couples share an employer. Out of all workplace relationships a nontrivial share, 9%-17% of workplace couples in our data, are between managers and their subordinates between 1995-2010.

We use this data to estimate the economic impacts of starting a romantic relationship with a coworker using an event study empirical design, focusing specifically on manager/subordinate relationships. Our data allows us to observe when the couples begin cohabiting, but most couples begin dating before cohabitation. It is likely that any benefits from "dating the boss" accrue in this dating period. To account for this, we define the

dating period as the 2 years before cohabitation following survey evidence which indicates that 70% of couples begin cohabiting within 2 years of meeting.

When we simply compare the raw average earnings of female subordinates who date their male managers to female subordinates who also date a male manager in a different firm we observe parallel pre-trends and then see that earnings increase by approximately €3000, corresponding to a 6% increase in earnings for women who date their managers. Men who date their female managers experience similarly large positive impacts on their incomes, but the gains seem to be more focused around the time of cohabitation.

The main threat to these results is potential omitted variable bias. There may be some other factor that causes both dating the boss and larger earnings gains. To address this concern, we employ two complementary identification strategies. First, we estimate a matched difference-in-difference design. This approach compares couples who begin a workplace relationship to couples who begin a non-workplace relationship at the same time but are otherwise observationally identical in the years prior to the relationship. Using this approach we estimate a 9% increase in earnings for women who date managers in their workplace.

Second, we leverage the fact that some individuals in our data who have engaged in workplace relationships also engaged in non-workplace relationships. This allows us to employ a triple-difference research design comparing an individual's workplace relationship to their non-workplace relationship, relative to their matched control. This approach addresses concerns that individuals who sort into workplace relationships always experience income gains after entering a relationship.[1] Using this approach, we find that [in progress].

It is possible that our estimated effects are simply a "workplace romance" effect, and are not due to the power differential between the two partners. To explore this possibility, we compare the impact of a workplace relationship between a subordinate and a

---

[1] See also Adams-Prassl, Huttunen, Nix and Zhang (2023) which originated this empirical strategy.

manager on income to couples who also meet at work but are relative equals within the firm. Using the same difference-in-difference design, we show that women in workplace couples with relative equals experience a €1500 increase in their earnings. This is half the size of the income increase women subordinates who date their managers receive. Male partners who date colleagues who are relative equals experience an increase in earnings one-fourth the size of men who date their managers. Together, these results suggest that while serious workplace relationships always lead to some income gains, the effects are more than double the size for subordinates who date their managers.

In our second set of results, we document that women subordinates who engage in workplace relationships with a manager are 10 percentage points more likely to remain in the same firm after five years while their male manager partners are 4 percentage points more likely to remain in the same firm. The results for male subordinates who date their female managers are reversed, with the female manager 14 percentage points more likely to remain in the same firm and her male subordinate partner 7 percentage points more likely to remain in the firm. Employing a first-differences strategy, we show that this effect is not simply an artifact of women in general being less likely to leave the firm. Moreover, we show that these couples are just over 6 percentage points more likely to remain together five years after cohabitation compared with couples between managers and subordinates who do not work together.

In our third set of results, we examine the impact of breaking up with one's manager. In order to observe a sufficient post-period in our data, we focus on couples who break up within 6 years of cohabitation. We estimate the impacts of the dissolution of these relationships on the subordinate's income and whether they remain employed.

When we first plot mean outcomes around breakup in the raw data, a clear pattern emerges. We observe that income falls by over €6000 and employment falls by 9 percentage points in the year after women breakup from workplace relationships with a manager

in their firm, which in both cases is much larger than the observed decline in wages and employment of €2000 and 5 percentage points respectively for women who end a non-workplace relationship with a partner in manager position. This provides suggestive evidence of a nontrivial cost borne by subordinates from engaging in workplace romances with managers that result in a breakup.

To verify these descriptive facts, we estimate an event study design. Event study estimates also indicate that both employment and earnings decline. Given the smaller sample size of couples that break up, we struggle with power in the event studies and estimates are not statistically significant. When we pool the post years in a collapsed difference-in-differences estimate we find a significant drop in employment of 4.2 percentage points for women who break up from workplace relationships with their male managers. This is a surprising result for individuals who had previously been consistently employed.

We further estimate a fully interacted difference-in-difference model to explore the impact of break up from a workplace relationship with a manager on outcomes for subordinate women. We unsurprisingly find that dropping into unemployment has a negative and significant impact on earnings. Beyond this, we find that the interaction of breaking up with one's manager and becoming unemployed also has a large negative and significant impact on earnings. Specifically, we find an €8205 larger negative impact on earnings from the interaction of breaking up with one's boss and becoming unemployed. Together, these estimates indicate that it is especially problematic to break up with a manager in the workplace, both because it causes the subordinate to enter unemployment, and also because these unemployment spells are even more costly.

Fourth and last, we explore the spillover effects of these relationships on the broader firm. Workplace relationships between managers and their subordinates may be harmful to the firm at large if they cause discomfort or disgruntlement among other coworkers. For example, other workers may observe the income gains we find accrue to the subordinates

who date managers and assume these gains are due to preferential treatment. This may in turn lead to measurable negative spillovers on the broader workforce in the form of a higher turnover rate.

We investigate these spillover effects by identifying all other workers in the same firm and estimating the impacts of manager/subordinate relationships on whether these other workers remain employed by the firm. We find that these relationships between a manager and subordinate cause a 6 percentage point decline in the retention of other workers in the firm. We find no impact on the share of women at the firm, consistent with these relationships leading men and women to leave the firm at equal rates due to their bosses dating a subordinate and potentially giving preferential treatment to their romantic partners.

Based on our analysis, we offer four main conclusions when it comes to dating and breaking up with the boss. First, the significant positive impacts on subordinates' outcomes at the start of these relationships are either consistent with nepotism, or an organizational failure where unobserved talent is only recognized or information on how to advance is only attained by engaging in an intimate personal relationship with someone with power in the firm. Second, these relationships are very costly to subordinates when they dissolve, well above the normal costs of a breakup. Third, these types of relationships are costly to colleagues, as evidenced by the fact that they are much more likely to leave a firm when these relationships are present. Fourth, the individuals in these relationships are more likely to remain in the firm, which could be good or bad for the firm depending on their individual profitability. Fifth, these relationships last longer, which could be a result of either higher quality relationships forming, or the higher costs of relationship dissolution forcing subordinates to stay in relationships that they would exit if they weren't dating their manager. Together, these results offer clear evidence that these relationships have important and economically large impacts both on those directly in-

volved and on the wider firm, perhaps justifying some of the recent regulations on such relationships being introduced at firms.

This paper adds to three main strands of literature in economics. First, we contribute to our understanding of how relationships impact economic outcomes. While there is no prior literature on the economic impacts of romantic relationships between a manager and their subordinate, a broader literature shows that relationships and families have large impacts on labor market outcomes (and vice versa), especially for women for whom the arrival of children plays an outsized role (Angelov *et al.*, 2016; Kleven *et al.*, 2019; Andresen and Nix, 2022). More closely related to this paper, Folke and Rickne (2020) shows that workplace promotions increase the probability of divorce for women but not men. Bertrand *et al.* (2015) document that women appear to curtail their incomes so as not to exceed their husbands' incomes, and interpret this result through the lens of gender norms. Particularly relevant for this paper, Zinovyeva and Tverdostup (2021) replicates this finding but shows that this discontinuity is concentrated amongst co-working couples, suggesting that having a relationship with a coworker may have important implications for earnings dynamics.

Second, our results on relationships with a manager contribute to the personnel literature on the important role of managers and manager ethics. A large literature in economics indicates that managers play an important role in setting the direction and determining the success of the firm (Bertrand and Schoar, 2003; Bloom *et al.*, 2007, 2013; Giorcelli, 2019; Bandiera *et al.*, 2020; Gosnell *et al.*, 2020). These papers underscore the importance of who the manager is and how they behave for the profitability of the firm. Yet the possible implications of romantic relationships between managers and their subordinates for both the direct individuals involved and for the wider firm have not been studied in economics prior to this paper. This is surprising given that such relationships are relatively common and their appropriateness is a source of some controversy. We fill

this gap in the literature by providing the first evidence of the economic benefits, costs, and spillovers from managers engaging in romantic relationships at work.

Third, our results that those dating the manager get a pay bump but breaking up with the manager leads to unemployment contribute to a small literature examining nepotism (Bertrand *et al.*, 2008), from the impacts of family connections on labor market outcomes (Wang, 2013; Gagliarducci and Manacorda, 2020) to firm performance, with Bennedsen *et al.* (2007) showing that replacing a CEO with his child reduces firm profitability by 4 percentage. Moreover, we show that firms where these relationships take place experience a significant decline in retention precisely when the gains accrue to the subordinates. A prior literature demonstrates that managers play a key role in the retention, recruitment, and training of workers (Hoffman and Tadelis, 2021), with better managers able to recruit better workers (Fenizia, 2022). Our results suggest that by mixing their personal relationships with their work, managers are less able to retain their existing workers, consistent with recent evidence that nepotism leads to negative selection of employees in the public sector in Colombia (Riaño, 2021) and manager bias can negatively impact hiring (Hoffman *et al.*, 2018).

The remainder of the paper is organized as follows. Section 2 describes our data and how we identify workplace couples. Section 3 presents our main empirical results on the earnings impacts of starting a relationship with the boss, Section 4 explores implications for firm attachment and relationship longevity, and Section 5 examines the impacts of breaking up on the subordinate's outcomes. Section 6 explores how these relationships impact the broader workforce. Section 7 concludes.

2   Data

To explore the impact of workplace relationships on career trajectories we use the Finnish Linked Employer-Employee Data (FOLK) acquired from Statistics Finland. This data con-

sists of detailed administrative tax records allowing us to observe the demographic, education, earnings, and employment information for the entire resident population of Finland aged 15-70 for the years 1988-2016. Importantly, this data provides a unique identifier for each individual, as well as a unique identifier for their cohabiting partner. This allows us to track relationships over time. Additionally, the data contains unique identifiers for the firm and plant where individuals work allowing us to observe if cohabiting couples were coworkers prior to living together.

To identify couples we keep all women who started cohabiting with a partner of the opposite sex between 1995 and 2010. For each couple, we keep observations for the 5 years before and 9 years after the year they begin their cohabitation spell. We do not require that these couples remain together in all post years as breakup could be endogenous to workplace relationships.

Identifying Workplace Couples in the Data For the purposes of our main analysis we define workplace couples as those who are observed working for the same firm in the two years directly prior to the year they begin cohabitation. Mechanically, this restricts our workplace couples to those who were both employed in the two years before cohabitation. To obtain a comparable control group, we restrict the non-workplace couples in our sample to also both be employed the two years before cohabitation. After making these restrictions we are left with 253,193 couples of which 16,151 worked together prior to living together. For most of the paper, we further focus on workplace couples where one is a manager in one of the 2 years prior to cohabitation and the other is a subordinate in both years.

There are two challenges to using cohabitation to define our workplace and non-workplace couples. First, we will not be able to observe individuals who work together, begin dating, but break up before moving in together. This means that we will be selecting "successful" relationships, i.e. those that result in cohabitation. We discuss the implica-

tions of this restriction for our results in more detail below, but it is worth noting that we will also be selecting "successful" couples in our comparison group of non-workplace control couples.

The second challenge is that for most couples, there is likely a dating period prior to cohabitation. Thus, while we use cohabitation status in the administrative data to identify workplace couples, the cohabitation year is not the appropriate event year of interest when we estimate the impacts of starting a relationship with a manager. If workplace relationships either provide income benefits or costs, then these are very likely to start materializing during the dating period, meaning that the effect of dating a workplace colleague would already occur in the years prior to cohabitation.

To address this challenge, we use the combination of the cohabitation year and rich survey evidence on the amount of time spent dating prior to cohabitation to define our event year of interest to identify the impacts of starting a relationship with one's manager. Specifically, survey evidence from Rosenfeld and Falcon (2018) shows that over 70% of couples move in together within 2 years of dating. Motivated by this fact, we focus on year -2 (relative to cohabitation) as the event year of interest, examining outcomes after versus before this year when estimating the impacts of starting a workplace relationship on outcomes. There are two possible implications of taking this approach. First, if the benefits or costs of starting a workplace relationship only materialize after cohabitation, we should see no impacts in the two years prior to cohabitation. If, on the other hand, the dating stage yields benefits, this approach will allow us to capture any such benefits. Second, if workplace couples date for longer before cohabitation than most couples surveyed, and this impacts incomes relative to non-workplace couples, then this could show up in pre-trends in the analysis. However, we find no evidence of pre-trends for women who date their male managers, suggesting this is not an issue. We discuss this in more detail and provide associated robustness checks [in progress] when presenting the relevant

results.

When we turn to the impacts of breaking up with one's manager on economic out-
comes we perfectly observe the end of cohabitation for these couples, so there is no such
measurement issue in identifying the correct event year for breakup. The fact that our
results tell a consistent story from the impacts of getting together to the impacts of break-
ing up, as well as the impacts on other colleagues, reassures us that our approach works
well as it is difficult to come up with alternative stories to rationalize the combination of
our findings.

2.1 Descriptive Statistics

In Figure 1 we report the share of all cohabiting couples who work together from the years
1995 to 2010. Panel (a) shows that among all cohabiting couples (including those where
one or both of the partners do not work before cohabiting), 2%-3.5% are workplace cou-
ples, with this share increasing over time. Panel (b) shows that among all couples where
both members were employed the 2 years before cohabitation (a mechanical restriction
for the workplace couples), just over 12% were workplace couples in 1995, although this
number decreased to 7.5% by 2010. The larger share of workplace couples among all cou-
ples where both partners work is mechanical, given that both have to work in order to
form a workplace couple. Last, Panel (c) shows the share of workplace couples consisting
of a manager dating a subordinate over time. We find that between 8% and 17% of all
workplace relationships exhibit power differences over this time period.

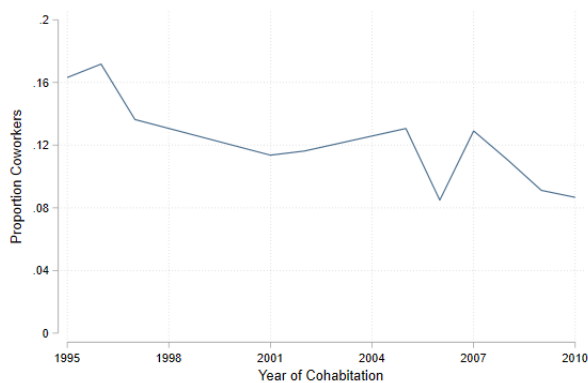**Figure 1:** Proportion of Couples Who Meet at Work, 1995-2010

(a) Full Population
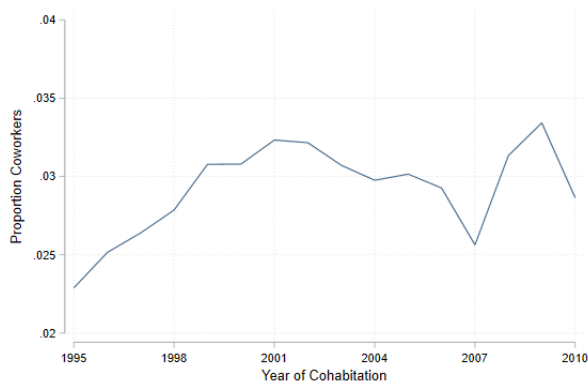
(b) Estimation Sample
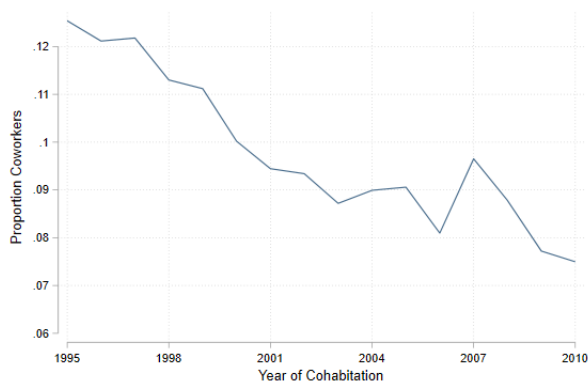
(c) Share of Workplace Couples with Manager/Non-Manager

Note: Figures report the proportion of couples in our sample that worked together the year before cohabiting. Panel (a) includes all couples in the population who begin a cohabitation spell in the given year. Panel (b) restricts to our estimation sample where both members of the couple were employed for at least 2 years before cohabitation. Panel (c) reports the share of all workplace couples in Panel (b) where one is a manager and one is not a manager. .

Individual Characteristics Table 1 Panel A reports descriptive statistics for our cohabiting couples. Columns (1) and (3) report statistics for the women and men in our workplace couples, respectively, where both are employed in the same firm the year before cohabitation. Columns (2) and (4) report summary statistics for women and men, respectively, amongst all cohabiting couples in Finland, without any restrictions on work status prior to cohabitation. We see that relative to all cohabiting couples in Finland, workplace couples are more attached to the labor force, have higher earnings, and are older. They are also more likely to have a tertiary degree, with those who are in non-workplace couples more likely to have a primary degree (the omitted category).

Panel B of Table 1 reports summary statistics after imposing the restrictions to enter the estimation sample. For work couples, we restrict to those where both parties were employed in the same workplace in the 2 years prior to cohabitation. For our comparison non-work couples we restrict to those where both partners were employed in the 2 years prior to cohabitation, but in different workplaces from each other. After making these restrictions we find that our workplace couples and non-workplace couples are more similar on multiple dimensions than when we made no restriction on employment status prior to cohabitation. Women and men across the two groups are more similar in terms of holding a tertiary degree, age at cohabitation, holding a managerial position, and their labor force attachment and income 5 years prior to cohabitation. This highlights that the restrictions we make for our estimation sample increase the likelihood that our sample of non-workplace couples serves as a good comparison group for our workplace couples.

Table 1: Individual Summary Statistics

	Female Partner		Male Partner	
	Work Couples (1)	Non-Work Couples (2)	Work Couples (3)	Non-Work Couples (4)
Panel A: Full Sample				
Secondary Degree	0.472	0.466	0.503	0.530
	(0.499)	(0.499)	(0.500)	(0.499)
Tertiary Degree	0.365	0.210	0.325	0.166
	(0.481)	(0.407)	(0.468)	(0.372)
Age	30.08	28.04	32.27	30.06
	(8.591)	(10.45)	(9.104)	(10.50)
Income -5	12240.4	7026.0	18752.2	10713.2
	(11045.8)	(9191.6)	(25923.2)	(15289.0)
Employed -5	0.579	0.339	0.673	0.400
	(0.494)	(0.474)	(0.469)	(0.490)
Manager	0.0240	0.0121	0.0420	0.0151
	(0.153)	(0.110)	(0.201)	(0.122)
# of Kids	0.439	0.434	0.228	0.218
	(0.839)	(0.891)	(0.665)	(0.693)
Observations	28823	961078	28823	961078
Panel B: Estimation Sample				
Secondary Degree	0.440	0.472	0.481	0.522
	(0.496)	(0.499)	(0.500)	(0.500)
Tertiary Degree	0.414	0.400	0.369	0.300
	(0.493)	(0.490)	(0.483)	(0.458)
Age	32.64	32.33	34.83	34.22
	(8.612)	(9.381)	(9.105)	(9.435)
Income -5	15493.2	13568.7	23188.0	19749.3
	(11301.9)	(10695.9)	(25723.1)	(16876.1)
Employed -5	0.708	0.665	0.795	0.735
	(0.455)	(0.472)	(0.403)	(0.472)
Manager	0.0294	0.0253	0.0517	0.0389
	(0.169)	(0.157)	(0.221)	(0.193)
# of Kids	0.485	0.393	0.229	0.166
	(0.840)	(0.781)	(0.649)	(0.565)
Observations	16151	237042	16151	237042

Firm Characteristics   Table 2 presents descriptive characteristics of firms. Column (1) reports characteristics of firms where workplace couples meet where one is a manager and the other is a subordinate. Column (2) reports characteristics for firms where all workplace couples met, including workplace couples where both are equals. Column (3) reports the characteristics of firms where members of all other couples in Finland met, restricted to firms with 50 or more employees. Column (4) reports summary statistics for all firms in Finland.

We observe some interesting patterns. Firms where a manager dates a subordinate tend to be larger in terms of the number of employees and have a greater share of male managers (15 as opposed to 3 in other firms with more than 50 employees). Additionally, average earnings are higher in these firms for both men and women.

That said, the raw male-female income gap is larger in firms where relationships with power gaps occur. On average males earn 45% more in power gap firms, whereas they only earn 35% more on average in all workplace relationship firms and in the sample of all firms in Finland with more than 50 employees. This difference in income gaps between men and women exists despite the fact that the ratio of female to male managers is broadly similar across workplace relationship sub-samples, with both workplaces restricted to those with power gap relationships and those with any workplace relationship having roughly 3 male managers for every female manager.

Table 2: Firm-level Summary Statistics

	Power Gap (1)	Work Relations. (2)	All >50 empl. (3)	All firms (4)
Employees	828.18	408.71	196.01	8.86
Female Employees	393.41	192.26	102.10	4.38
Male Employees	434.77	216.45	93.90	4.49
Male Managers	14.80	4.95	2.88	0.16
Female Managers	5.30	1.65	1.30	0.07
Earnings	33,895.96	27,383.64	27,834.06	14,339.21
Female Earnings	27,349.91	22,923.62	23,732.08	14,657.75
Male Earnings	40,094.91	31,118.32	32,015.88	17,086.35
Age	39.37	38.63	40.55	41.89
Tenure	11.40	11.76	9.42	9.25
Share University Degree	0.26	0.17	0.20	0.12
Share Seondary School Diploma	0.58	0.61	0.60	0.63
% Female Among Top 10% Earners	0.21	0.23	0.30	0.36
Turnover	-4.73	-0.77	3.39	-0.01
Female Turnover	-1.97	-0.18	1.69	-0.03
Male Turnover	-2.76	-0.59	1.69	0.02
Female Worker Share	0.44	0.44	0.48	0.41

3   Economic Impacts of Starting a Relationship with a Manager

Descriptive Results   We begin by reporting raw means for women subordinates who date their male managers in Panel (a) of Figure 2 and male subordinates who date their female managers in Panel (c). We also present raw means for a natural counterfactual group: relationships that exhibit power gaps but where the two do not work in the same firm during the dating period. Specifically, we compare the earnings of those who enter a workplace relationship with their manager in the same plant to the earnings of those who also enter a relationship with a manager in the same year, but where the manager works in a different firm. In both cases, we leverage the fact that we observe the occupational codes to define manager/non-manager relationships.

We first note the parallel pre-trends in panel (a). Before the dating period, which

according to survey evidence happens in the 2 years before cohabitation, so in years -1 and -2 in this figure, women who date managers in the same or different firms appear to have identical trends in earnings, with both experiencing steady earnings growth. In contrast, men who date their female managers appear to already be on an increasing earnings trajectory compared with men who date female managers in other firms in Panel (c).

Turning to the post period, we observe a noticeable slope change for women who date their managers in their plant relative to women who date managers in different firms, with women who date their managers obtaining larger incomes during the dating period (years -2 and -1 in the figure). Post-cohabitation, women in both types of relationships appear to experience a "cohabitation penalty" consistent with prior evidence (Adams-Prassl *et al.*, 2022; Kleven *et al.*, 2023), although the penalty appears slightly smaller for those who are cohabiting with their managers. For men who date their female managers, we see a slope change during the dating period and again after cohabitation. Given the lack of upswing for the counterfactual men who date managers in other firms, it seems unlikely that the slope change post-cohabitation is a general cohabitation bonus for men.

While these descriptive results are suggestive of a take-off in earnings in the "dating period" 2 years before cohabitation, they may fail to reflect the causal effect of dating and moving in with one's manager. There may be selection into dating a manager based on observable factors that also correspond to larger earnings growth. To address these concerns we employ two complementary identification strategies described below.

Estimated Impacts: Across-Relationship Design   First, we estimate a matched difference-in-differences design. This approach compares our workplace couples to non-workplace couples where a manager is also dating a subordinate and they begin cohabitation at the same time and are similar in observable characteristics and income in the fifth through the third years prior to cohabitation.

Formally, we pull the nearest neighbor matches on the year of cohabitation, age, education, earnings, and employment status in the fifth through the third years prior to cohabitation separately for the male and female partners. We then use the matched control and treatment observations to estimate the following regression model:

$$Y_{it} = \sum_{j=-5, j\neq-3}^{2} \delta_j(D_{i,j}) + \alpha_i + \eta_t + \omega_{m(i)} + \epsilon_{it}, \tag{1}$$

where Y_{it} represents the outcome of interest for the woman (or man) in couple i in year t. $D_{i,j}$ is an indicator variable for the treatment group (being in a relationship with a colleague) in year j. $\omega_{m(i)}$ give the match fixed effects. δ_j are the coefficients of interest, identifying the effects of being in a workplace relationship relative to the matched counterfactual of a non-workplace relationship. Given the inclusion of $\omega_{m(i)}$, δ_j is identified by variation between women who date a colleague and their matched controls in the time period of interest. We omit the indicator variable for 3 years prior to cohabitation ($j = -3$), which means that all estimates of δ_j are relative to three years before cohabitation. Additionally, we include event-time fixed effects, γ_t, and couple fixed effects α_i. Standard errors are clustered by couple and cohabitation year.

Panels (b) and (d) of Figure 2 report results for the female and male subordinates who date their managers. We first note the complete absence of pre-trends in panels (b) and (d) in these DiD estimates, suggesting that the matched event studies by construction consist of similar individuals, both of whom date a manager, but one dates a manager in their own firm while the other dates a manager at a different firm.
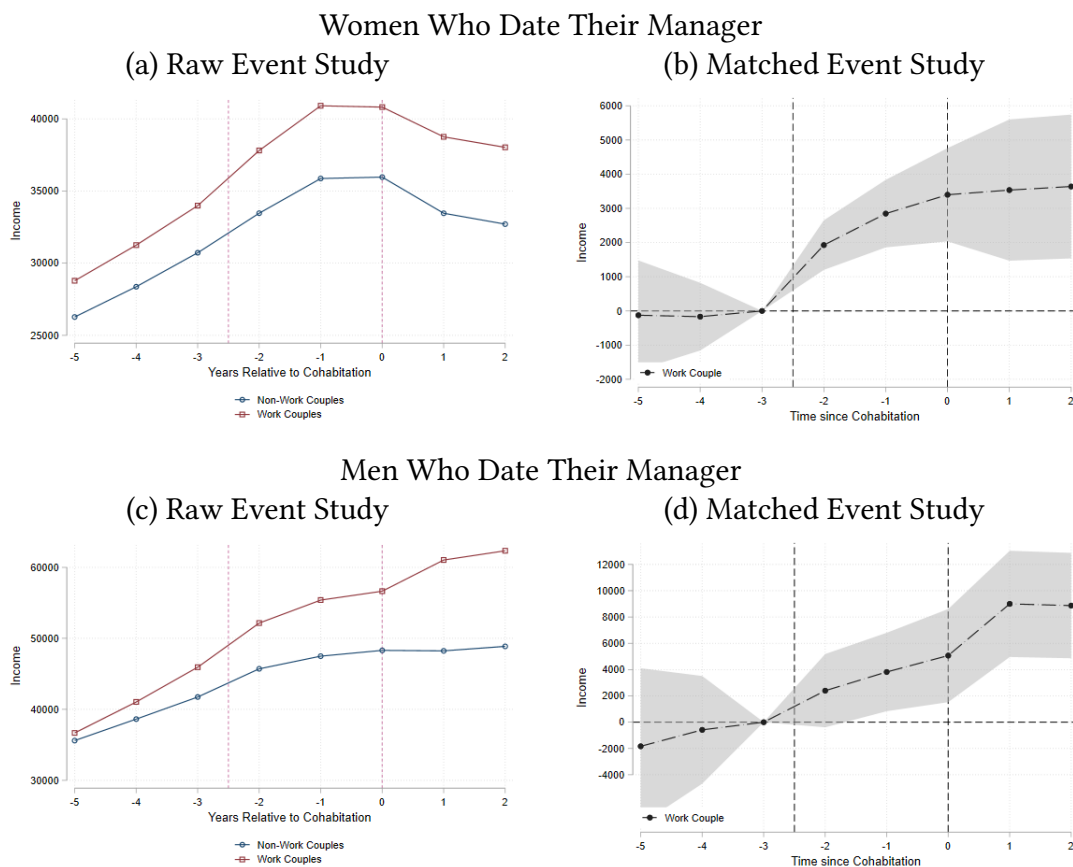
Once we enter the dating period in years -2 to 0, we find earnings increase €3000 more by year 2 for women who date their managers relative to women who date managers at different firms. This corresponds to a 9% increase relative to their earnings of around €34,000 just prior to the dating period. This impact grows to almost €4,000 by 2 years post-cohabitation. Thus, women who date managers obtain significant and economically

meaningful income gains from doing so, relative to women who also date managers, but where those managers are at different plants than the woman.

When we examine men who date their managers in the workplace, we find slightly smaller gains in their incomes during the dating period of roughly €2000 by the year directly before cohabitation. This event study also shows a second takeoff in earnings after cohabitation for men who date female managers in the workplace, with their incomes €9000 higher by 2 years post-cohabitation. Interestingly, this suggests that for men who date their managers not only is there an increase in earnings in the dating period, but they also receive a large cohabitation premium. We conclude that dating one's manager results in measurable and substantial gains in income *in general*, whether it is a woman or a man who is the subordinate.

There are three possible interpretations of these results. First, this earnings takeoff could be a classic example of nepotism, with managers giving promotions and raises to women (or men) with whom they are personally involved. Second, it could also be the case that managers date these women (or men) and realize that they are much more talented and productive than the manager previously realized, leading to a deserved promotion or pay raise. Third, it could be that by dating the manager these women (or men) are able to gain insider information on who to talk to, what project to take on, and more, facilitating their advancement in the workplace. While nepotism is generally viewed as a negative thing, it is also hard to view the second two explanations as positive. If the best way for women (and men) to have their talent recognized or obtain information on how to advance is to have a personal intimate relationship with a manager, this arguably reflects a broader organizational failure.

19

Figure 2: Earnings Impacts of Dating One's Manager

Women Who Date Their Manager

(a) Raw Event Study

(b) Matched Event Study

Men Who Date Their Manager

(c) Raw Event Study

(d) Matched Event Study

Notes: Panels (a) and (b) report raw means and estimated impacts on women of dating and later cohabiting with men who are their managers relative to women dating and later cohabiting with a man who is a manager at a different workplace, so not her manager. Panel (a) reports raw event studies. The estimates in Panel (b) use the matched control to identify effects 5 years before and after 2 years prior to cohabitation, estimating equation 1 (see main text for additional details), and with all estimates relative to three years before cohabitation which is omitted. Year 0 denotes the year cohabitation began. Year -2 is the event year of interest. Panel (c) and (d) report the raw means and estimated impacts of dating a manager for men who date their female managers. Earnings are the sum of all taxable labor earnings during the preceding calendar year. This includes both wage and salary income, but also self-employment income, and is deflated to 2013 euros. Standard errors are clustered at the couple level.

Estimated Impacts: Within-Individual Across-Relationship Design   One concern with these results is that individuals who begin relationships with workplace colleagues may always experience a significantly larger take-off in their earnings when dating and starting a new relationship, meaning that the above results are explained by an unob-

servable personality trait of these individuals and are not due to dating one's manager. To test this possibility, we leverage the fact that we can observe the other relationships individuals form in our data. We estimate a triple difference specification, comparing a between-colleague relationship for a given individual to his or her own other relationships without a colleague, relative to their matched controls.

Formally, we estimate the following event study specification:

$$Y_{it} = \sum_{j=-5, j \neq -1}^{5} \left(\delta_j \left(W_{i,j} \times A_{i,j} \right) + \omega_j W_{i,j} + \mu_j A_{i,j} + \alpha_i \right) + \eta_t + \epsilon_{it} \tag{2}$$

where $V_{i,j}$ is an indicator for whether an individual is a subordinate or a matched control to the subordinate in their workplace relationship and $A_{i,j}$ is an indicator for whether an individual is a subordinate in at least one of her relationships. Note that $(W_{i,j} \times A_{i,j})$ is equivalent to $D_{i,j}$ in Equation 1.

We report results from this exercise in Figure 3. [These results are in progress, and will depend on whether we observe enough other relationships to be powered for this exercise.]

Figure 3: Collapsed DiD Estimates from Triple Difference Design

(a) Women Dating their Manager   (b) Men Dating their Manager
           (IN PROGRESS)   (IN PROGRESS)

Notes: Panel (a) reports estimated impacts on women of dating and later cohabiting with their manager using the triple difference design described in the text. Panel (b) reports the same for men who date their bosses. Earnings are the sum of all taxable labor earnings during the preceding calendar year. This includes both wage and salary income, but also self-employment income, and is deflated to 2013 euros. Standard errors are clustered at the individual level.

Is This a Workplace Relationship Effect?   One possible concern with our preferred interpretation of these results as largely due to dating one's manager is that it might not be dating one's manager that explains the large increases in income we observe, but rather dating any colleague at work. If workplace relationships *in general* always yield large

income gains, then we may not have concerns about manager/non-manager relationships *in particular* generating unfair or inefficient earnings gains.

To assess this possibility and to ease comparisons, we estimate a collapsed DiD version of equation 1 for our main sample of couples with power differences (i.e. subordinates who date their managers), but also for couples in equal relationships. We define equal relationships as those where: 1) either both are managers or both are non-managers and 2) the income gap between the couple is below median amongst all couples in our estimations sample. We present the results from these exercises in Figure A1.

As a robustness check of our results, we also include in this figure estimates with an alternative definition of unequal relationships based on income gaps between the two partners instead of occupational roles. We introduce this additional measure of power discrepancies because in some cases, someone may play a managerial role without the official title. For example, a professor who dates a student would clearly constitute a relationship between a supervisor and a subordinate, i.e. a relationship exhibiting power gaps, but would not qualify under our previous definition. Using income gaps would likely capture such relationships in most cases, at the risk of including relationships where there is not an actual reporting relationship or power gap. Additionally, we do not observe occupational titles in all years of the data, so this approach allows us to bring in additional years and obtain more power. To identify those with "unequal incomes" we take the absolute value of the difference in the income of the female partner and the male partner. We then compare this value to all cohabiting couples in our estimations sample and define those with "unequal incomes" as those with above-median income gaps.

We find that the female partner in equal couples experiences a small increase in income of just over €1500 per year. This is about half the size of the over €3000 income boost for women who date their managers. We also show here that when we use income gaps as a proxy for power differences ("unequal incomes"), subordinates also obtain large gains

in their incomes relative to subordinates who also date a much higher-income partner who is employed at a different firm. We find that for women, both the unequal incomes and unequal positions relationships result in significantly larger positive income effects compared with women in equal workplace relationships (and also relative to women who form similar relationships but with non-colleagues, given these are DiD estimates). We find similar results for men. In the appendix, we report the same results without matching but including individual fixed effects and find a consistent story (see Appendix Figure 4).

Figure 4: Collapsed Matched DiD Estimates for Women and Men Who Date Equals Versus Unequals
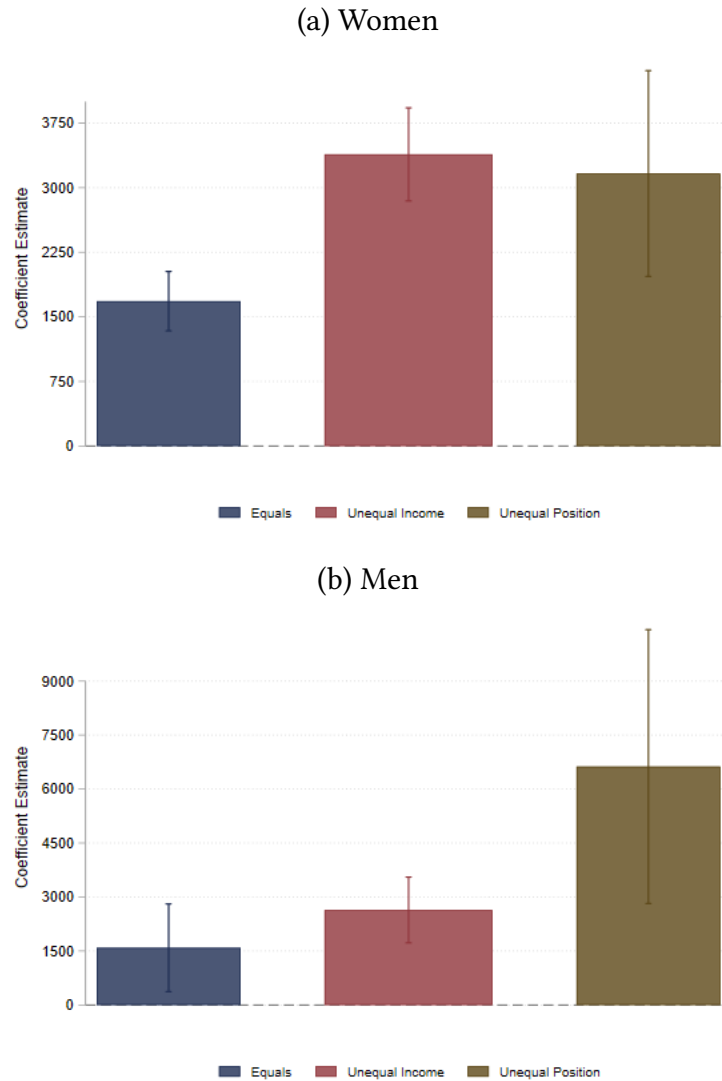
(a) Women

(b) Men

Notes: Panels (a) report estimated impacts on men of dating and later cohabiting with women who are colleagues relative to a woman dating and later cohabiting with a man who is not a colleague. Figure reports collapsed matched DiD for each couple type. Panel (b) reports the same for men. Earnings are the sum of all taxable labor earnings during the preceding calendar year. This includes both wage and salary income, but also self-employment income, and is deflated to 2013 euros. Standard errors are clustered at the individual level. 95% confidence intervals are shown in whiskers around the point estimates.

Permissive Environments and Workplace Harassment   Absent from the above re-

sults are the potential implications of allowing consensual workplace relationships be-

tween managers and subordinates on harassment. There can be a very fine line between asking a subordinate out and harassing a subordinate. As #MeToo demonstrated, the costs of turning down an economic superior can be very large, including retribution and increasingly aggressive advances. Moreover, the costs of non-consensual attacks and harassment in the workplace are enormous, as documented in Adams-Prassl, Huttunen, Nix and Zhang (2022) and Folke and Rickne (2022). While we cannot provide causal estimates exploring whether there is a link between allowing for relationships between manager and subordinate and workplace harassment, this possibility must be considered alongside the other results in this paper when thinking about what type of policies should be in place (if any) regarding romantic relationships at work.

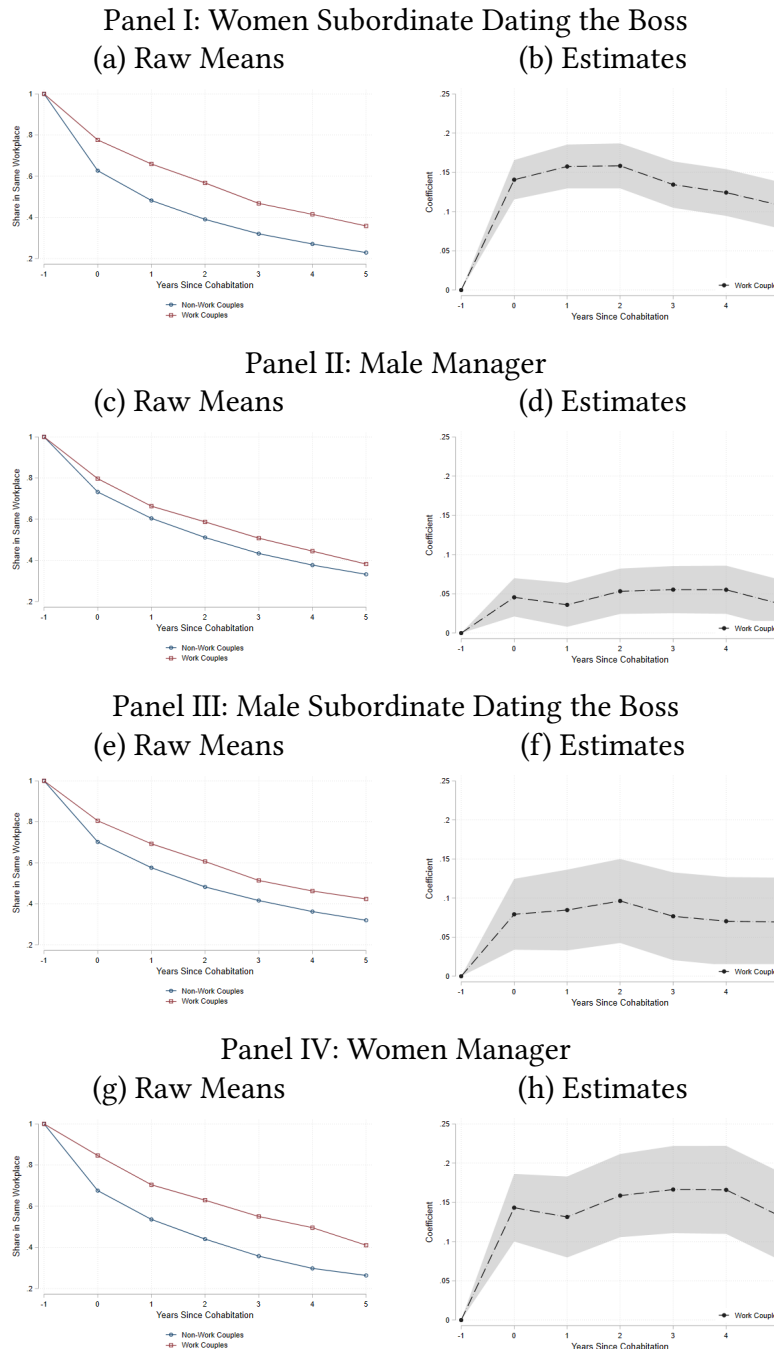## 4 Firm Attachment and Relationship Longevity

Workplace Relationships and Firm Attachment Next, we examine whether individuals who date their managers are more or less likely to remain in the same firm. By construction, we require both partners in workplace couples to be in the same firm in the two years prior to cohabitation, so for this exercise, we focus just on the year of cohabitation and five years post-cohabitation. We report raw means for female subordinates in workplace couples and non-workplace couples in Figure 5 in Panel (a), raw means for their male managers in Panel (c), raw means for male subordinates in Panel (e), and raw means for female managers dating male subordinates in Panel (g). We find that in all cases, both managers and subordinates in workplace relationships are more likely to remain in the firm.

We supplement these descriptive results with estimates of the first differences between workplace and non-workplace couples, including controls for education, age, and income five years prior to cohabitation. We report estimates from these regressions in Figure 5. Results for women in male manager/female non-manager couples are in Panel (b), men in

female manager/male non-manager couples are in Panel (f), for male managers in Panel (d) and female managers in Panel (h). These results again suggest that all individuals are much more likely to remain in the same firm.

However, there is striking heterogeneity in the effect sizes. While women subordinates are just over 15 percentage points more likely to be in the same firm 1 year post-cohabitation, their male managers are only 5 percentage points more likely to be in the same firm 1 year post-cohabitation. Results are the opposite for female managers who date their male subordinates: the female manager is 15 percentage points more likely to remain with the firm while her male subordinate is only around 10 percentage points more likely to remain in the firm. Note that the fact that both women subordinates and managers are more likely to remain in the firm is not simply an artifact of women being less likely to switch jobs overall, since these regressions compare women who date a colleague to women managers or subordinates who date and move in with a non-colleague.

Figure 5: Probability of Remaining in the Same Firm for Women in Workplace Relationships

Panel I: Women Subordinate Dating the Boss

(a) Raw Means | (b) Estimates

Panel II: Male Manager

(c) Raw Means | (d) Estimates

Panel III: Male Subordinate Dating the Boss

(e) Raw Means | (f) Estimates

Panel IV: Women Manager
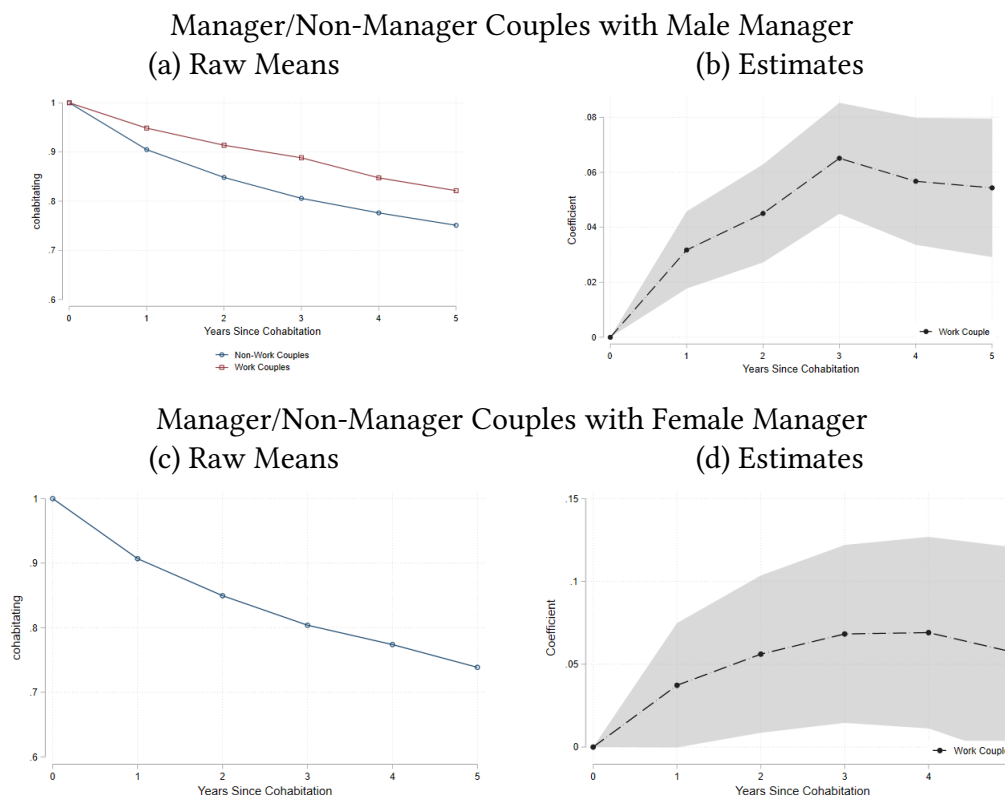
(g) Raw Means | (h) Estimates

Notes: Panels (a) and (b) report raw means and estimated probabilities that women who date a relative manager in the firm stay in the same firm, compared with women who date a manager not in the same firm. Panel (b) reports estimates comparing the likelihood of remaining in the firm for observationally similar women in work versus non-work couples. Panel II reports the same for male managers, Panel III reports the same for male subordinates who date female managers, and Panel IV reports the same for female managers. Year 0 denotes the year when cohabitation began. The outcome, staying in the same firm, is a dummy equal to 1 if the individual remains in the same firm as he or she was employed the year before cohabitation (in year -1). By construction, everyone is in the same firm in year -1 which is why at -1 Panel (a) is at 1, and Panel (b) is at 0 in Panel I, similarly for the others.

Longevity of Workplace Relationships   We also examine whether workplace relationships between managers and subordinates last longer than non-workplace relationships where one is a manager and the other is not. We focus on the five years post-cohabitation, since by construction the cohabitation spell only begins in year 0. We report raw means for workplace couples and non-workplace couples for manager/subordinate couples where the man is a manager in Figure 6 Panel (a), and for female manager/male subordinate couples in Panel (c). Looking at these raw means, we see that by 5 years post-cohabitation, both the male-female and female-male manager/subordinate workplace relationships have a 10 percentage point higher likelihood of remaining together. When we estimate first-difference results in Panels (b) and (d), we still find that workplace relationships appear to last significantly longer than similar non-workplace relationships, although the estimated effect size is slightly smaller at just over 5 percentage points.

There are two possible interpretations of these results. First, meeting a romantic partner at work may allow for greater information on match quality. Having more information and opportunities to get to know one's partner before cohabitation could lead to longer-lasting relationships. This could be a potential benefit of workplace relationships that would be lost by placing any restrictions on them. Alternatively, subordinate workers might anticipate that if the romantic relationship breaks up, it will become untenable to remain in the same firm with an ex-partner who also holds a position of power in the firm. This additional cost of break up may push individuals to stay in relationships longer than they optimally would. We explore if there are additional costs to breaking up with a manager in one's workplace in the next section.

Figure 6: Longevity of Workplace Relationships

Manager/Non-Manager Couples with Male Manager

(a) Raw Means   (b) Estimates

Manager/Non-Manager Couples with Female Manager

(c) Raw Means   (d) Estimates

Notes: Panels (a) and (b) report raw means and estimated probabilities that male manager/female subordinate couples remain together. Panel (a) reports raw means for such couples who are also workplace colleagues versus couples who are also in manager/subordinate relationships but are not workplace colleagues. Panel (b) reports estimated first differences including fixed effects for the duration of the relationship, income of both partners five years prior to cohabitation, age, and education. Panels (c) and (d) report the same but for men who date their female managers within versus outside of the firm. Year 0 denotes the year when cohabitation began. The outcome for all panels is a dummy equal to 1 if the couple is still cohabiting in year t.

5 The Impacts of Breaking Up with One's Manager

Not all of the relationships examined in the previous sections survive. In this section, we examine the impact of a breakup from a romantic relationship with a workplace manager. We define the breakup year as the first year we observe the couple no longer cohabiting with each other in the data.

We first report the simple raw means of income and employment around breakup in

Figure 7 Panel (a). Breakup occurs between years 0 and 1 (i.e. we observe the couple cohabiting in year 0, and no longer cohabiting in year 1). We focus on women who break up with their managers given the very small sample size of men who date a manager and then break up with them, although we show our results remain similar when we pool the two groups together and examine subordinate outcomes in the appendix.

We find that women who break up from a workplace relationship with a manager experience an immediate fall in income of just over 15% of their pre-breakup income. This decline in incomes puts them back on a similar earnings trajectory as women who date managers at different firms. Their incomes remain depressed relative to before the break up for at least 4 years afterward.

Turning to employment, we again see a decrease in employment post-breakup for the female subordinate. Descriptively, these women are 9 percentage points less likely to remain employed after the breakup. In contrast, we see a very different pattern for women who break up with a manager at a different plant. These women have a much less dramatic drop in employment of 5 percentage points after their break up. Again, we see little evidence of a recovery in employment for women who break up from a relationship with a manager in their firm four years after the event.

To more formally capture the causal impact of breaking up from a workplace rela-tionship with a manager on income and employment, we estimate a simple event study equation:
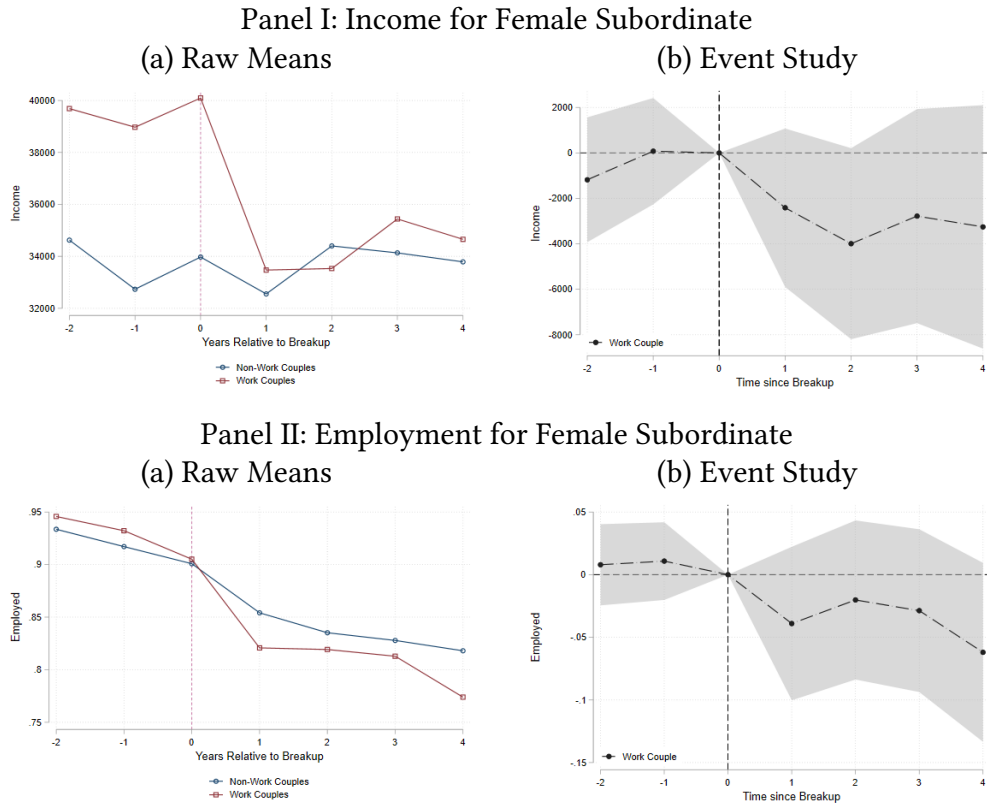
$$Y_{it} = \sum_{j=-2, j\neq 0}^{4} \delta_j (W_i \times \eta_j) + \alpha_i + \eta_t + \epsilon_{it}, \tag{3}$$

where Y_{it} is the outcome of interest for the subordinate partner in couple i at time t relative to break up. Event time is the year relative to breakup, defined as the last year we observed couples cohabiting in the data. Event time runs between -2 to 4, with year 0 dropped as the reference year. W_i is a dummy variable indicating if couple i is a workplace couple,

η_t are time fixed effects, and α_i are couple fixed effects. The coefficients of interest are the δ_js which identify the effect of breaking up from a workplace relationship ($W_i = 1$) in event year j. Standard errors are clustered by couple and cohabitation year. We again use the matched observations from the previous analysis as our counterfactual group, although results are similar if we take all manager/subordinate non-workplace couples as the counterfactual. For income we use the matched observation amongst women who date managers in other firms, using the same match from Section 3. For employment, the matched event study was not released by Statistics Finland at the time of writing so we use just a raw DiD estimate comparing women who date and break up with a manager in a different firm to women who break up with their own managers.

Figure 7 Panel I (b) reports the estimates from equation 3 with income as the outcome, which captures the causal impact of breaking up from a workplace relationship with a superior relative to women in non-workplace relationships where their partner is a manager in a different firm. Figure 7 Panel II (b) reports the impacts of break up on employment. In the 3 periods before breakup (-3 to 0) we observe an absence of pre-trends, consistent with the fact that most of the gains accrue to these women in the dating period and our pre-period in these graphs is generally at least a few years post-cohabitation. After the break up we observe a clear drop in income for women who break up with their manager at the same firm, although we struggle with precision in the post period. However, by year 4 post-breakup women who break up with their managers in the same firm experience €5,000 lower earnings, a roughly 15% decline in earnings relative to their pre-breakup income of €33,000. The patterns for employment reported in Panel II (b) are similar. They show an absence of pre-trends and a clear drop in employment for women who break up with their managers [note that this figure is outdated, the most recent version was not released as of this writing].

Figure 7: Earnings and Employment Impacts of Breaking Up with One's Manager

Panel I: Income for Female Subordinate

(a) Raw Means   (b) Event Study

Panel II: Employment for Female Subordinate

(a) Raw Means   (b) Event Study

Notes: Panel I (a) (II (a)) reports raw means for earnings (employment) for the women subordinate in couples where one is a manager and one is not and both work in the same firm (red line) versus couples where one is a manager and one is not but work in different firms (blue lines). Both groups consist of couples who break up where breakup happens between years 0 and 1. The estimates in Panel (b) use the matched control to identify effects 2 years before and 4 years after the breakup, estimating equation 3 (see main text for additional details), and with all estimates relative to the year before breakup which is omitted. Year 0 denotes the year of the breakup. Earnings are the sum of all taxable labor earnings during the preceding calendar year. This includes both wage and salary income, but also self-employment income, and is deflated to 2013 euros. Employment is measured at the end of each year. Standard errors are clustered at the individual level.

Next, we estimate the impact of breakup on income and employment using a collapsed difference-in-differences specification. This approach allows us to improve precision in our estimates by pooling the post-breakup years together. We report results for income in column (1) of Table 3 and again see a negative point estimate that is still not statistically significant. Turning to unemployment in column (2), we find that women who break up

with their managers experience a 4.2 percentage point increase in unemployment post-breakup. This is a striking result, as these women previously had very strong attachment to the labor market.

To explore the interaction between unemployment and breakup on income we estimate a fully interacted difference-in-differences design that takes the form:

$$Y_{it} = \beta_1 D_{it} + \beta_2 SameFirm_{it} + \beta_3 SameFirm_{it} \times D_{it}$$

$$+\beta_3 Unemployed_{it} + \beta_4 Unmployed_{it} \times D_{it} + \alpha_i + \eta_t + \epsilon_{it}$$

(4)

where Y_{it} is the subordinate partner's income. D_{it} is an indicator equal to one if couple i is a workplace couple and the couple has broken up ($t > 0$). $Unemployed_{it}$ is an indicator equal to 1 if the individual is unemployed in period t, and $SameFirm_{it}$ is an indicator equal to 1 if the individual is in the same firm they were in at the time of break up in year t. α_i and η_t are couple and time fixed effects. In this regression, we are primarily interested in the coefficients on the interaction terms. β_3 gives us the difference-in-difference estimate of breaking up from a workplace couple with a manager and remaining in the same firm on a woman's earnings, and β_4 gives the impact of breaking up from this kind of relationship and becoming unemployed on a woman's earnings.

Estimates from our interacted model are reported in Column (3) of Table 3. These estimates reveal an interesting pattern. Unsurprisingly, remaining in the same firm increases earnings by €958, and unemployment decreases earnings by €18559. However, we find that those who enter unemployment after a breakup with their boss, experience an €8205 larger decline in their earnings, and this effect is statistically significant. These estimates indicate that it is especially problematic to break up with a manager in the workplace, both because it causes the subordinate to enter unemployment, and also because these unemployment spells are even more costly. In panel B, we show the same regression us-

ing a matched control group made up of non-workplace couples who are observationally similar to our workplace couples in the 5 to 3 years prior to cohabitation. These estimates are quite similar to the unmatched case.

Table 3: Impacts of Break Up on Income and Employment of Female Subordinates

Dependant Variable:	Income	Unemployed	Income
	(1)	(2)	(3)
Panel A: Raw DiD Estimates for Female Subordinates			
Treatment	-1384.7	0.0423*	1620.7
	(1373.3)	(0.0255)	(1257.1)
Same Firm			958.8***
			(298.4)
Same Firm X Treatment			-1851.2
			(1731.4)
Unemployed			-18559.9***
			(584.7)
Unemployed X Treatment			-8205.2**
			(3366.9)
Observations	33284	33284	33284
Panel B: Matched DiD Estimates for Female Subordinates			
Treatment	-2203.6	0.0628*	1259.0
	(1913.2)	(0.0350)	(1758.2)
Same Firm			1618.4*
			(886.6)
Same Firm X Treatment			-2380.7
			(1937.9)
Unemployed			-18914.4***
			(1834.5)
Unemployed X Treatment			-7530.8*
			(3926.8)
Observations	4455	4455	4455

Notes: Table reports the impact of a breaking up with one's manager on income (column 1) and employment (column 2) where we collapse to the post-period (4 years post-breakup) relative to the pre-period (2 years prior to breakup). Column 3 estimates equation 4. Panel A reports results using all other couples where the man is a manager and the woman is a subordinate but they are in different firms at the start of the relationships as the control group. Panel B selects a matched control from this larger group, yielding the smaller number of observations. Income is the sum of all taxable labor earnings during the preceding calendar year. This includes both wage and salary income, but also self-employment income, and is deflated to 2013 euros. Employment is measured at the end of the year. Standard errors are clustered at the individual level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Is This a Workplace Relationship Effect?   Breaking up with a colleague at work may always lead to large declines in income, whether or not one is dating the boss. To test this possibility, we compare estimates of the impacts of breakup for those dating their boss, relative to the impacts of breaking up with a colleague who is a workplace equal. We report the results in Figure 8. Panel (a) reports collapsed difference-in-differences estimates for income post-breakup and panel (b) reports results for employment. Interestingly, we find that the impact of breaking up with a workplace colleague who is an equal is also negative and significant in both the case of income and employment. However, we find that the impact of breaking up with a manager in the same firm on income is at least three times larger than the negative impact of breaking up with an equal at the same plant. The impact of breaking up on employment is 7 times larger for those who break up with their manager versus those who break up with a relative equal within the plant. These estimates are noisy due to the reduction in sample size required when we restrict our workplace relationships with a power differential sample to those that also experience a breakup. As a result, we cannot reject that the impacts of breaking up with an equal and breaking up with the boss are the same. However, these results are consistent with much larger costs of the dissolution of the relationship for a subordinate who breaks up with their manager.

Figure 8: Impact of Breaking up with the Manager Versus Breaking Up with an Equal on Income and Employment, Collapsed DiD Estimates

(a) Income   (b) Employment
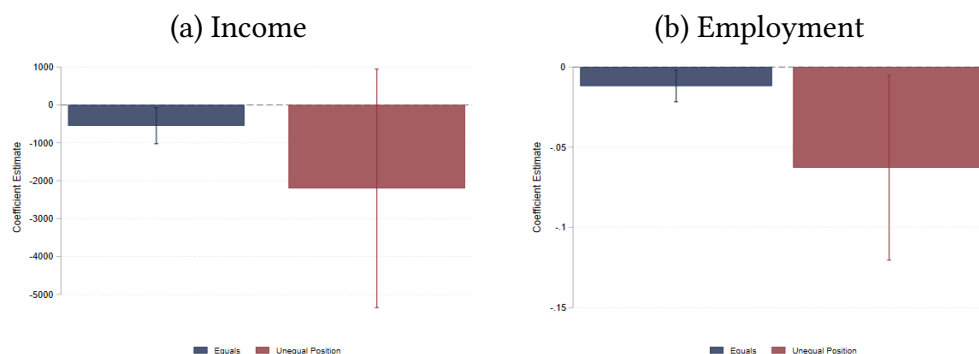
Notes: Figure (a) reports the estimated impacts of breaking up with one's manager on income versus breaking up with an equal. Figure (b) reports the same but with employment as the outcome. Earnings are the sum of all taxable labor earnings during the preceding calendar year. This includes both wage and salary income, but also self-employment income, and is deflated to 2013 euros. Standard errors are clustered at the individual level. 90% confidence intervals are shown in whiskers around the point estimates.

6   Spillovers on the Broader Workforce

Workplace relationships between managers and their subordinates may be harmful to the firm at large if they cause discomfort or disgruntlement amongst other workers. For example, other workers may think an individual who is dating his or her boss is receiving unfair promotions, income gains, or preferential assignments. Coincidentally, such feelings could be consistent with our prior findings. This disgruntlement could lead to measurable negative externalities for the broader firm.

To investigate this possibility, we estimate a matched difference-in-differences design, comparing outcomes in firms where such relationships take place to a matched control firm (Adams-Prassl, Huttunen, Nix and Zhang, 2022). This approach allows us to carefully compare the evolution of outcomes before and after the incident for treatment and control firms with similar characteristics. Formally, we find a firm's nearest neighbor match on the basis of firm size, turnover rate, industry, the average age of workers, average education of workers, share of new hires, gender composition, and retention before the

workplace couple dating period.[2]

With the matched and control firms, we then estimate the following regression:

$$Y_{ft} = \sum_{j=-5, j \neq -1}^{5} \delta_j D_{f,t-j} + \alpha_f + \eta_t + \epsilon_{ft}, \tag{5}$$

Y_{ft} represents the outcome of interest for firm f at time t. $D_{f,t-j}$ is an indicator variable for the treatment (workplace hierarchical relationship) for each year j. δ_j are the coefficients of interest, identifying the effects of a manager dating a subordinate on firm outcomes relative to the matched counterfactual. We omit the year prior to the event ($j = -1$), which means that all estimates of δ_j are relative to the year before the incident. Additionally, we include firm-year fixed effects, α_f and event time fixed effects, η_t. Standard errors are clustered at the firm level.

We always compare treated and never-treated firms to address concerns of bias in event-study estimates (Goodman-Bacon, 2018; Sun and Abraham, 2020), meaning that we estimate a stacked DiD exercise as in Cengiz *et al.* (2019). To interpret our firm estimates causally, we must assume that the outcomes of the firms where these relationships took place would have evolved similarly to the matched counterfactual control firm in the absence of such a relationship.

We report the impacts of these relationships forming on retention in Figure 9. Retention is a variable that is equal to the share of employees from three years before the manager and subordinate begin cohabitation who are still employed in all the other event years. When calculating the retention variable, we remove the manager and subordinate who are in a relationship. As we documented above, both of them are more likely to be retained, however for this exercise we are interested only in impacts on other employees.

We find that there is a significant decline in retention of other workers, with firms where a manager dates a subordinate retaining 6 percentage points fewer workers relative

---

[2]Results are qualitatively similar if we do not match on retention before the incident.

to the counterfactual firms by the year before cohabitation. Interestingly, the bulk of the decline in retention occurs in the same period when we observed the largest increases in income of the subordinate in Figure 2.

Figure 9: Impacts of Managers Dating Subordinates on Retention of Other Employees
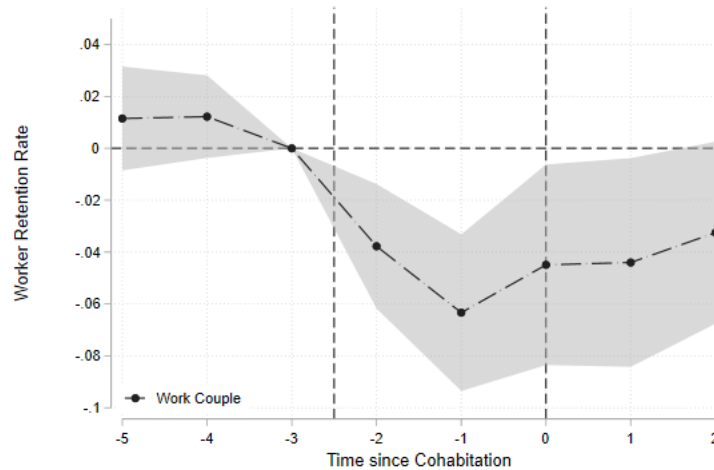
Notes: Figure reports impacts on retention of other colleagues from managers dating their subordinates. Estimates compare retention in the firm with the manager dating a subordinate to a firm that is observational equivalent in terms of observables, but where no manager dates a subordinate during the time period. Retention is defined as the share of all employees in period -3 who remain in the plant in each of the other years. Standard errors are clustered at the firm level.

7 Conclusion

This paper provides the first large-scale evidence of the impacts and implications of workplace relationships between a manager and their subordinate on both the individuals involved in the relationship and the broader workforce. We find that "dating the boss" leads to a 9% income bump, which persists over time. These large effects are present both for women who date their managers and for men who date their managers, although the former is much more common. In contrast, dating a colleague who is not in a position of power within the firm yields much smaller income gains suggesting this is not simply a "workplace relationship effect".

We further explore the impacts of breaking up with one's manager. We find that breaking up with the boss is quite costly for subordinates who are 4.2 percentage points more likely to exit employment. We show that this fall into unemployment is costly in terms of future income. We again find that these results are much more muted in workplace relationships between relative equals in the firm.

The gains in income we find after dating a superior in the same firm are potentially consistent with nepotism, with managers promoting or giving pay bumps to their romantic partners who have not earned them. Alternatively, we cannot rule out that the subordinate partners had high unobserved ability or insider knowledge that is only recognized or achieved through an intimate relationship with one's manager. We view both possible explanations as organizational failures.

Our results show that relationships between managers and subordinates within a workplace can be quite costly for the subordinate in the case of a breakup. This could potentially be due to the superior using their relative power in the firm to retaliate against the subordinate ex-partner, which is a major concern of those who support bans on such relationships. The negative effects could also be due to tensions and discomfort from remaining in a firm with one's manager who is also one's ex, leading the subordinate to choose to exit the workplace.

In the last part of the paper, we explore the potential wider spillovers of these relationships on other workers in the firm. We show that when managers enter relationships with their subordinates, this leads to 4 percentage point decline in retention of the other workers in the firm. This result is consistent with these relationships causing widespread discontent in these firms.

We conclude that workplace relationships that feature power gaps have important career consequences for those directly involved and the broader workforce, and as such, are an important organizational issue, perhaps warranting some of the restrictions that

have been imposed across a range of companies such as General Motors, McDonald's, General Motors, Walmart, and the World Bank. Our analysis suggests that these within-firm restrictions could have important costs and benefits. On the cost side, they may prevent healthy and long-lasting relationships from forming and may cause the firm to lose workers who wish to pursue such relationships. On the benefits side, these policies could help prevent the sort of nepotism our results suggest occur from happening, stop the large costs that follow the break up of these relationships, and prevent the negative spillovers on colleagues. We leave a more formal evaluation of such policies banning workplace relationships to future research.

References

ADAMS-PRASSL, A., HUTTUNEN, K., NIX, E. and ZHANG, N. (2022). Violence against women at work.

—, —, — and — (2023). The Dynamics of Abusive Relationships.

ANDRESEN, M. E. and NIX, E. (2022). What Causes the Child Penalty? Evidence from Adopting and Same-Sex Couples. *Journal of Labor Economics*, **40** (4), 971–1004.

ANGELOV, N., JOHANSSON, P. and LINDAHL, E. (2016). Parenthood and the Gender Gap in Pay. *Journal of Labor Economics*, **34** (3), 545–579.

BANDIERA, O., PRAT, A., HANSEN, S. and SADUN, R. (2020). CEO Behavior and Firm Performance. *Journal of Political Economy*, **128** (4), 1325–1369.

BENNEDSEN, M., NIELSEN, K. M., PÉREZ-GONZÁLEZ, F. and WOLFENZON, D. (2007). Inside the Family Firm: The Role of Families in Succession Decisions and Performance. *The Quarterly Journal of Economics*, **122** (2), 647–691.

BERTRAND, M., JOHNSON, S., SAMPHANTHARAK, K. and SCHOAR, A. (2008). Mixing Family With Business: A Study of Thai Business Groups and the Families Behind Them. *Journal of financial Economics*, **88** (3), 466–498.

—, KAMENICA, E. and PAN, J. (2015). Gender Identity and Relative Income Within Households. *The Quarterly Journal of Economics*, **130** (2), 571–614.

— and SCHOAR, A. (2003). Managing with Style: The Effect of Managers on Firm Policies. *The Quarterly Journal of Economics*, **118** (4), 1169–1208.

BLOOM, N., DORGAN, S., DOWDY, J. and VAN REENEN, J. (2007). Management Practice and Productivity. *The Quarterly Journal of Economics*, **122** (4), 1351–1408.

—, EIFERT, B., MAHAJAN, A., MCKENZIE, D. and ROBERTS, J. (2013). Does Management Matter? Evidence from India. *The Quarterly Journal of Economics*, **128** (1), 1–51.

CENGIZ, D., DUBE, A., LINDNER, A. and ZIPPERER, B. (2019). The Effect of Minimum Wages on Low-Wage Jobs. *The Quarterly Journal of Economics*, **134** (3), 1405–1454.

CHAFFIN, J. and ABBOUD, L. (2019). Office Romance in the MeToo Era. *The Financial Times*.

FENIZIA, A. (2022). Managers and Productivity in the Public Sector. *Econometrica*, **90** (3), 1063–1084.

FOLKE, O. and RICKNE, J. (2020). All the Single Ladies: Job Promotions and the Durability of Marriage. *American Economic Journal: Applied Economics*, **12** (1), 260–287.

— and — (2022). Sexual Harassment and Gender Inequality in the Labor Market. *The Quarterly Journal of Economics*, **137** (4), 2163–2212.

GAGLIARDUCCI, S. and MANACORDA, M. (2020). Politics in the Family: Nepotism and the Hiring Decisions of Italian Firms. *American Economic Journal: Applied Economics*, **12** (2), 67–95.

GIORCELLI, M. (2019). The Long-Term Effects of Management and Technology Transfers. *American Economic Review*, **109** (1), 121–152.

GOODMAN-BACON, A. (2018). *Difference-in-Differences with Variation in Treatment Timing*. Working Paper 25018, National Bureau of Economic Research.

GOSNELL, G. K., LIST, J. A. and METCALFE, R. D. (2020). The Impact of Management Practices on Employee Productivity: A Field Experiment with Airline Captains. *Journal of Political Economy*, **128** (4), 1195–1233.

HOFFMAN, M., KAHN, L. B. and LI, D. (2018). Discretion in Hiring. *The Quarterly Journal of Economics*, **133** (2), 765–800.

— and TADELIS, S. (2021). People Management Skills, Employee Attrition, and Manager Rewards: An Empirical Analysis. *Journal of Political Economy*, **129** (1), 243–285.

HYATT, H. R. (2015). Co-working Couples and the Similar Jobs of Dual-Earner Households. *US Census Bureau Center for Economic Studies Paper No. CES-WP-15-23*.

KLEVEN, H., LANDAIS, C. and LEITE-MARIANTE, G. (2023). *The Child Penalty Atlas*. Tech. rep., National Bureau of Economic Research.

—, — and SØGAARD, J. E. (2019). Children and Gender Inequality: Evidence from Denmark. *American Economic Journal: Applied Economics*, **11** (4), 181–209.

NOGUCHI, Y. (2020). Can I Date that Co-Worker? What to Consider Before an Office Romance. *National Public Radio*.

RIAÑO, J. F. (2021). Bureaucratic Nepotism. *Available at SSRN 3995589*.

ROSENFELD, M. J., THOMAS, R. J. and HAUSEN, S. (2019). Disintermediating Your Friends: How Online Dating in the United States Displaces Other Ways of Meeting. *Proceedings of the National Academy of Sciences*, **116** (36), 17753–17758.

ROSENFELD, R. J. T., MICHAEL J. and FALCON, M. (2018). How Couples Meet and Stay Together, Waves 1, 2, and 3: Public version 3.04, plus wave 4 supplement version 1.02 and wave 5 supplement version 1.0 and wave 6 supplement ver 1.0.

SHRM (2023). New SHRM Survey: Workplace Romance 2023. *Press Release*.

SUN, L. and ABRAHAM, S. (2020). Estimating Dynamic Treatment Effects in Event Studies with Heterogeneous Treatment Effects. *Journal of Econometrics*.

WANG, S.-Y. (2013). Marriage Networks, Nepotism, and Labor Market Outcomes in China. *American Economic Journal: Applied Economics*, **5** (3), 91–112.

ZINOVYEVA, N. and TVERDOSTUP, M. (2021). Gender Identity, Coworking Spouses, and Relative Income Within Households. *American Economic Journal: Applied Economics*, **13** (4), 258–84.

Online Appendix

Table A1: Impacts of Break Up on Income and Employment of Pooled Female and Male Subordinates

| Dependant Variable:	Income (1)	Unemployed (2)	Income (3)
Treatment	-1925.8	0.0669**	-69.78
	(1437.0)	(0.0268)	(1389.4)
Same Firm			2937.5***
			(317.8)
Same Firm X Treatment			2255.8
			(1767.3)
Unemployed			-11468.5***
			(416.8)
Unemployed X Treatment			-4851.0*
			(2527.2)
Observations	46123	46123	46123

Notes: Table reports the impact of a breaking up with one's manager on income (column 1) and employment (column 2) where we collapse to the post-period (4 years post-breakup) relative to the pre-period (2 years prior to breakup). Column 3 estimates equation 4. Results pool both male and female subordinates who break up with the manager together, compared to a control group consisting of women and men who date and break up with a manager in another firm. Income is the sum of all taxable labor earnings during the preceding calendar year. This includes both wage and salary income, but also self-employment income, and is deflated to 2013 euros. Employment is measured at the end of the year. Standard errors are clustered at the individual level. $^{*} p < 0.10$, $^{**} p < 0.05$, $^{***} p < 0.01$

Figure A1: Impact of Dating Manager Versus Equals on Income, Collapsed DiD Estimates
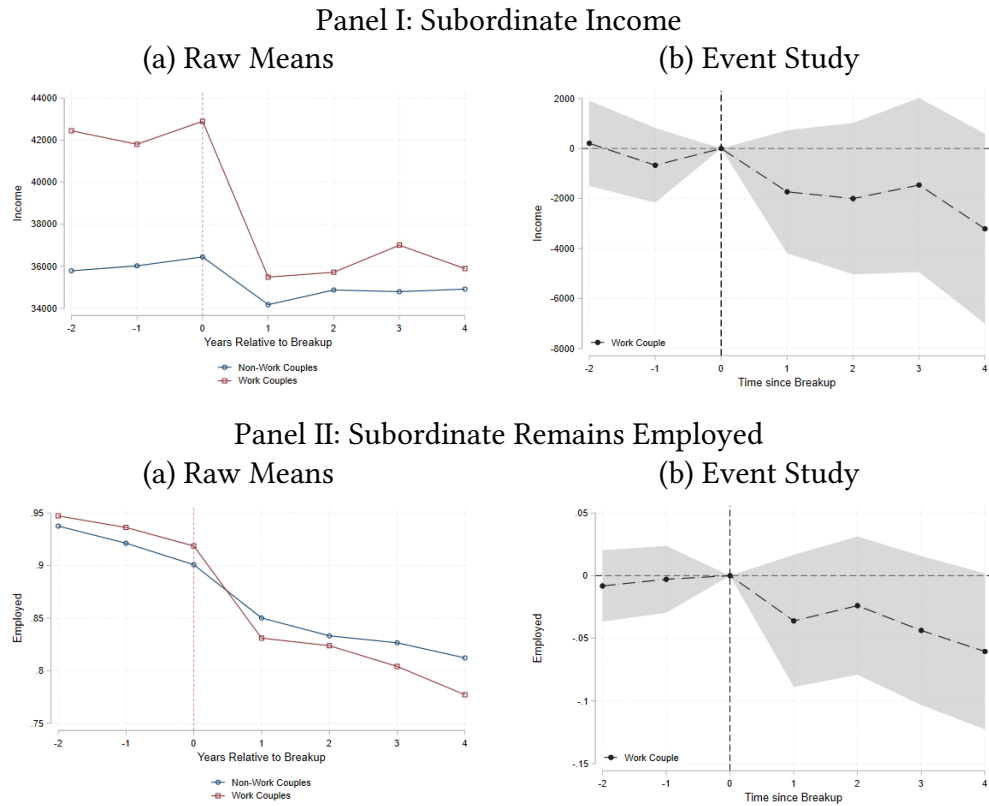
(a) Women Who Date Equals Versus Superiors
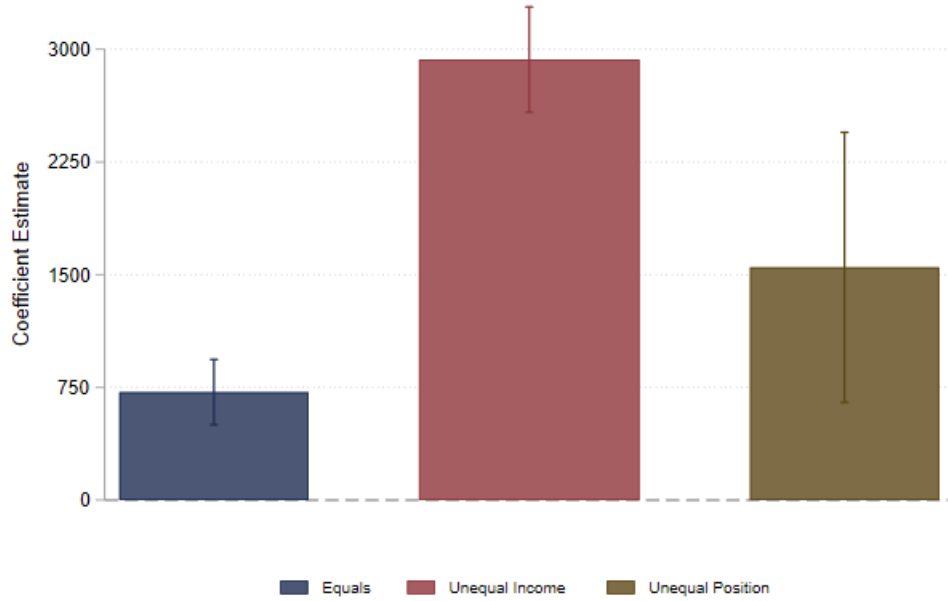
(b) Men Who Date Equals Versus Superiors
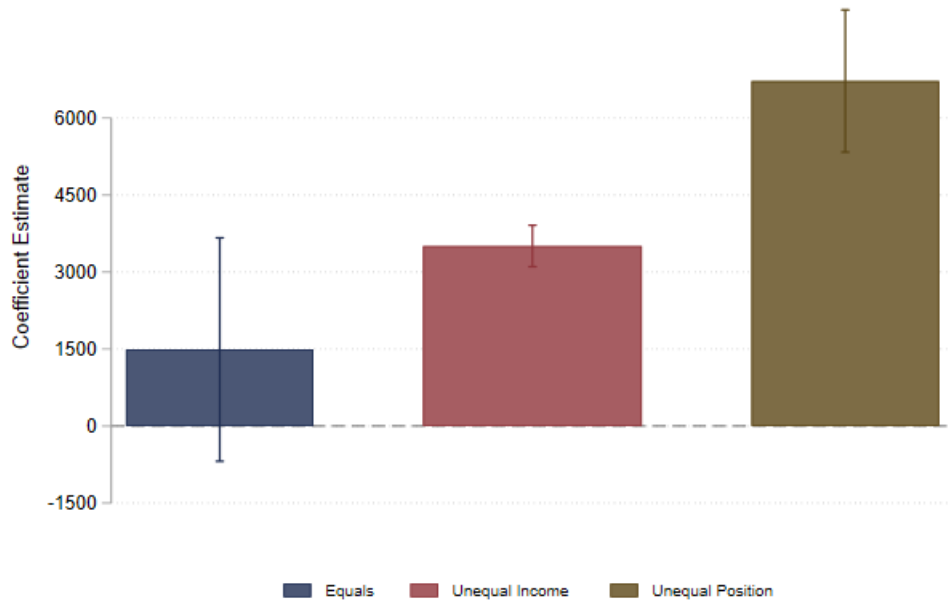
Notes: Panels (a) report estimated impacts on men of dating and later cohabiting with women who are colleagues relative to a woman dating and later cohabiting with a man who is not a colleague. Figure reports collapsed raw DiD. Panel (b) reports the same for men. Earnings are the sum of all taxable labor earnings during the preceding calendar year. This includes both wage and salary income, but also self-employment income, and is deflated to 2013 euros. Standard errors are clustered at the individual level.

Figure A2: Pooled Earnings and Employment Impacts of Breaking Up with One's Manager

Panel I: Subordinate Income

(a) Raw Means   (b) Event Study

Panel II: Subordinate Remains Employed

(a) Raw Means   (b) Event Study

Notes: Panels (a) and (b) report impacts on women of breaking up with men who are their managers relative to a woman who breaks up with a man who is also a manager but not her manager. Panel (a) reports raw means for couples where one is a manager and one is not and both work in the same firm (red line) versus couples where one is a manager and one is not but the work in different firms (blue lines). Both groups consist of couples who breakup. The estimates in Panel (b) use the matched control to identify effects 2 years before and 4 years after the breakup, estimating equation 3 (see main text for additional details), and with all estimates relative to the year before breakup which is omitted. Year 0 denotes the year of the breakup. Earnings are the sum of all taxable labor earnings during the preceding calendar year. This includes both wage and salary income, but also self-employment income, and is deflated to 2013 euros. Standard errors are clustered at the individual level.