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Abstract: Using longitudinal data from the Current Population Survey, we examine how post-pandemic work-from-home arrangements relate to wage growth and promotions, with a focus on differences by sex and parental status. Our analysis shows that on average, remote and hybrid work are associated with increased wage growth for those in the top 75% of the wage distribution. Among mothers, hybrid work is associated with increased wage growth only among those in the top wage quartile. We find that the relationship between work-from-home arrangements and promotions depends on parental status, type of work-from-home arrangement, and a worker's position on the job ladder.

JEL classification: J3, J22

Keywords: wages; hybrid work; remote work; promotions; productivity

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Introduction

One of the most significant post-pandemic labor market changes has been the rapid adoption and normalization of work-from-home (WFH) arrangements. At the onset of the COVID-19 pandemic, employees whose jobs could be performed remotely were instructed to WFH on a full-time basis (“remote workers”). Most were well-paid, college-educated professionals, resulting in large earnings differences across work location arrangements (Pabilonia and Vernon 2025). While some workers—particularly mothers with young children—may be willing to accept lower wages in exchange for the ability to WFH (Barrero et al. 2023; He et al. 2021; Maestas et al. 2023; Mas and Pallais 2017; Nagler et al. 2024), they were not initially required to because many employers treated remote work as a temporary solution, and most employees within a given firm followed the same arrangement: either working full-time on-site or full-time at home.

There are several reasons to believe that wage growth after the pandemic may differ depending on work location arrangements, and that wage trends could vary by occupation, sex, and parental status (defined by presence of household children under age 18). Following the pandemic, some employees returned to the office full-time (“on-site workers”) as employers implemented strict return-to-office (RTO) mandates, while others transitioned to a hybrid work schedule, splitting their time between home-based and on-site work (“hybrid workers”). In the wake of an RTO mandate, some workers, especially senior employees, caregivers, and those with disabilities, sought new remote/hybrid jobs (Ding 2025; Van Dijcke et al. 2026), potentially taking a pay cut, while others complied with RTOs due to tighter labor markets (Liu 2026). Many existing and start-up firms embraced remote work (Aksoy, Barrero et al. 2026), letting go of their expensive office space (Pabilonia and Redmond 2024), leading to higher profits, which may or may not be passed along to workers in terms of higher wages.

Worker productivity can differ across work locations. Some employees are more productive at certain tasks when working from home (Bloom 2015). A meta-analysis by Mang and Anwar (2026) concluded that hybrid and remote work arrangements during the pandemic resulted in a modest increase in workers’ hourly productivity. However, the

impact differed based on sex and whether workers had children. This increased productivity may result from getting extra morning rest without the need to commute, having a quieter work environment, or benefiting from a better employer-employee match (Davis 2024; Pabilonia and Vernon 2025). However, mothers who WFH while supervising their children may experience reduced productivity due to frequent interruptions caused by childcare responsibilities (Adams et al. 2025; Ho et al. 2026; Pabilonia and Vernon 2023). Worker self-selection is also important. Before the pandemic, Emanuel and Harrington (2024) report that employees with lower productivity were more likely to choose WFH arrangements. Limited face-to-face collaboration can reduce knowledge sharing and hinder productivity (Emanuel et al. 2026). Recent findings indicate that visiting the office even just once a month helps improve workplace communication, productivity, and employee retention (Aksoy, Bloom, et al. 2026). However, following an RTO mandate, employees might disengage from their employers, which could lead to lower productivity growth at the firm level. Furthermore, top-performing employees may choose to leave their jobs, because they often have better opportunities elsewhere (Elliott 2024).

One way that employees earn higher wages is by getting promoted. However, supervisors may promote employees they see in person (“proximity bias”), often making judgments about productivity and commitment based on where an employee works (Matysiak et al. 2025). As a result, wage growth could be slower among remote workers who are never or rarely seen in person. Employees are more likely to receive promotions, bonuses, and pay raises as they gain on-the-job experience and skills. However, fully remote workers may accumulate less human capital if mentoring and training new employees is more challenging in a WFH environment (Emanuel and Harrington 2024; Emanuel et al. 2026; Gibbs et al. 2023). The number of hours worked can vary depending on the work location, even among full-time employees. Some individuals work extra hours, which may lead to higher compensation, as employers often reward their top performers. According to Pabilonia and Vernon (2026), hybrid workers in dual-earner couples tend to work the most hours, while remote workers tend to work the fewest number of hours

compared with on-site employees. This suggests that wage growth may be faster for hybrid workers and slower for remote workers.

During the inflationary phase at the end of the pandemic, U.S. employers noted that remote work helped keep wage growth in check (Barrero et al. 2022). Autor et al. (2024) observed an unexpected narrowing of wage differences during the pandemic and provided suggestive evidence that this could be because remote work was considered a valuable job perk. Bagga et al. (2025) found that wages in jobs suited for telework grew more slowly from 2019 to 2023 compared with previous economic recoveries. Using UK data, De Fraja et al. (2025) find that those who can normally WFH experienced slower wage growth between 2018 and 2023. However, Pabilonia and Vernon (2025) noted a positive association between an occupation's wage growth and its change in the percentage of remote workers from 2019 to 2021.

Although remote workers initially enjoyed substantial wage premia, wage growth may vary depending on the specific type of WFH arrangement. Similarly, the likelihood of receiving a promotion could differ across these arrangements. Parents of young children—especially mothers—face some of the greatest time constraints, which remote work can help alleviate by reducing daily commuting and grooming time (Pabilonia and Vernon 2022). As a result, wage growth and promotion opportunities may also vary based on sex and parental status. The factors discussed above that influence the relationship between wages and WFH arrangements make it uncertain how wages will change in a post-pandemic era with increased levels of remote and hybrid work.

The contribution of this paper is to document differences in conditional annual wage growth and promotion outcomes associated with post-pandemic work-location arrangements. Our main research questions are:

- Is wage growth associated with sustained remote or hybrid work arrangements? If so, is the association positive or negative?
- Does wage growth differ when employees move between different work location arrangements versus staying in an arrangement?

- Do remote workers experience different promotion probabilities, perhaps due to proximity bias?
- How do these relationships vary by WFH intensity, sex, and parental status?

We use the longitudinal component of the Current Population Survey (CPS) to examine these relationships for full-time employees in major occupation groups where at least 10% of employees engage in some WFH. Our study differentiates between on-site, hybrid, and remote workers during the post-pandemic period from January 2023 to June 2026, when WFH arrangements have stabilized. After finding that workers in hybrid and remote work arrangements have similarly higher hourly wages than those working on-site, we examine how wage growth is associated with different WFH arrangements. In linear models, we analyze relationships for employees who maintain remote or hybrid work arrangements, comparing them to those who consistently work on-site. In first-difference (FD) models, we compare relationships for employees who switch between work location arrangements versus continuing in their arrangement. We conclude by examining how initial WFH arrangements relate to the likelihood of receiving a promotion in the following year. For each analysis, we account for employees' initial positions on their career ladder that may mitigate concerns about selection based on productivity. However, we do not claim that our estimates represent causal effects; they show only associations. However, we control for a comprehensive set of observable characteristics, and our FD models control for time-invariant unobserved characteristics. In addition, for our main analyses, we estimate bounds on our coefficient estimates using a method popularized by Oster (2019). This method relates selection on observables to selection on unobservables to assess whether our results are robust to omitted variable bias.

On average, we do not observe any overall relationship between WFH arrangements and wage growth, when adjusting for a standard set of demographic controls. However, because wage levels and growth differ substantially along the career ladder and the proportion of remote workers varies across the wage distribution, our preferred specifications control for initial wage quartiles. We also estimate relationships separately by wage quartile. We find that sustained hybrid and remote work are positively associated

with wage growth throughout the top 75% of the wage distribution, except among mothers, for whom we find a positive association between hybrid work and wage growth among those in the top wage quartile only. This finding is consistent with WFH having positive productivity effects but some mothers being willing to pay for job flexibility or being less productive than their remote colleagues because they are working while supervising children.

Among all men, we find that year-to-year transitions from on-site arrangements to remote ones are positively associated with wage growth compared with staying in an on-site arrangement, whereas transitions from fully remote work arrangements to on-site ones, perhaps due to an RTO (potentially an exogenous shock), are negatively associated with wage growth. The magnitudes of the associations are similar in absolute terms, and the relationships hold even among those likely staying with the same employer. However, among women with no household children, we find only the year-to-year transitions from on-site arrangements to remote ones are positively associated with wage growth. Again, these findings are consistent with positive productivity effects from WFH.

The ties between remote work and career advancement vary by sex and parental status and where workers are along their career ladder. Among women with no household children, working remotely is negatively associated with the probability of getting promoted to a management role. Among mothers in sales and office/admin roles, working a hybrid schedule is associated with a lower probability of transitioning to a first-line supervisor role. These results are consistent with a proximity bias story. However, we also find a positive association between working fully remotely and the probability of getting promoted to management among mothers. In addition, among mothers who are already first-line supervisors in sales and office/admin roles, both hybrid and remote work are strongly associated with a higher probability of transitioning to management. These latter results are consistent with productivity effects dominating among potential mechanisms. Remote work arrangements could be especially helpful for some mothers who have the greatest constraints on their time.

Related post-pandemic literature on wage growth and promotions

In this section, we begin by reviewing a recent article by Castex and Dechter (2026) that examines the relationship between post-pandemic wage growth and WFH intensity in the United States and highlight how our analyses differ from theirs. Castex and Dechter (2026) use the CPS longitudinal component to examine relationships among all full-time employees aged 25–55. In contrast, our analysis focuses specifically on full-time employees aged 25–64 in major occupations in which at least 10% of workers are doing some WFH. Their method treats WFH hours (intensity) as a continuous variable, allowing intensity to change in a linear fashion. In contrast, our approach uses categorical variables to distinguish between fully remote and hybrid work arrangements—including transitions between arrangements—so we can evaluate whether different WFH arrangements are associated with wages in distinct ways.

A key distinction in our methods is that we consider workers’ starting wages—that is, we control for their position on the career ladder. They report average effects by sex, while our analysis not only examines sex differences but also explores differences by parental status, finding meaningful distinctions in outcomes based on whether employees have household children. They find that among men only, greater WFH intensity—measured as average WFH hours using months-in-sample (MIS) four through seven—is associated with slower annual wage growth while holding hours constant. They suggest that their results support the idea that WFH may hinder human capital accumulation.

We next describe the post-pandemic evidence on promotions and WFH arrangements. Bloom et al. (2024) find that employees randomly assigned to hybrid work at a Chinese technology company between 2021 and 2022 experienced no difference in promotion rates by arrangement over the following two years. Castex and Dechter (2026) also investigate how WFH intensity holding hours constant relates to promotions among employees who are initially classified as nonmanagers or nonsupervisors in MIS4. In their analysis, a promotion is defined as moving into either a management position or a first-line supervisor role by MIS5. Using a single outcome promotion variable could weaken observed associations, since advancing to a management position—rather than to a first-

line supervisor role—is far less common in some occupations, such as sales. They find that higher WFH intensity is linked to a lower likelihood of receiving a promotion, but only among men. Our approach is to distinguish between workers along their career ladders by examining three types of transitions: 1) transitions from non-management to management in occupations without first-line supervisor roles; 2) transitions from non-supervisor/non-manager to first-line supervisor in occupations that do offer first-line supervisor roles; and 3) transitions from first-line supervisor to management in occupations with first-line supervisor roles.

Data

We use monthly CPS data covering the period from October 2022 to June 2026 from IPUMS-CPS (Flood 2025). The CPS has a rotating framework, with households in the survey for 4 months, out for 8 months, and back in for 4 months. Earnings data are collected from respondents during MIS4 and MIS8 only. Individuals interviewed in MIS4 and MIS8 make up what is known as the outgoing-rotation-group (ORG) sample. To analyze over-the-year wage growth, we restrict the sample to full-time, civilian employees aged 25–64 who responded in both ORG months and were working in the nonfarm sector. We match person records from MIS4 to MIS8 using IPUMS’s unique longitudinal identifier, CPSIDV.¹ To address sample attrition, we adjust the earnings weights using the CPS-recommended raking method. This ensures that the weighted totals for key control variables in our sample align with established population benchmarks from the U.S. Census Bureau (U.S. Census Bureau 2026). We also restrict our sample to employees in major occupation groups in which at least 10% of employees engage in some WFH during this period. This allows us to make comparisons between workers who share similar characteristics. We further restrict the sample to workers with only one job because the WFH variables described below are calculated using hours worked across all jobs. Limiting the sample to single jobholders ensures that these variables accurately characterize WFH arrangements in the worker’s primary job.

¹ CPS data for October 2025 were not collected due to the government shutdown.

Our first main outcome variable is annual wage growth, measured as the change in log real hourly wages between MIS8 and MIS4. For respondents paid hourly, we use their reported hourly wage. For others, we use their weekly earnings and usual hours worked to calculate hourly wages. The CPS topcodes reported wages and earnings. Since April 2023, the value for this topcode has dynamically changed to reflect growth in the earnings distribution (calculated as the weighted monthly average for the top 3% of earners). We exclude observations with topcoded wages from our wage growth analyses, because it is not possible to accurately measure wage growth using these observations.² We winsorize wages below \$7.25 per hour, the federal minimum wage, to reduce the influence of outliers in our regressions.³ We adjust wages for inflation using the CPI-U-RS in 2023–2025 and the CPI-U in 2026 (U.S. Bureau of Labor Statistics 2026). Our real hourly wage reported in June 2026\$ ranges from \$7.25 to \$115.52 per hour. See Online Appendix Figure A.1 for a graph of the wage distribution.

Our second outcome variable is a binary indicator for whether a worker received a promotion between MIS4 and MIS8. Promotions can occur at different stages of the career ladder. Along with promotions, workers usually experience wage increases. Our data allow us to examine three distinct types of promotions. First, we focus on nonmanagers working in the major occupation groups that do not have a first-line supervisor option—we exclude sales and office/admin occupations—to assess their likelihood of being promoted to a management role by MIS8. Second, within sales and office/admin occupations, we look at employees who are neither managers nor first-line supervisors and evaluate their probability of advancing to a first-line supervisor position. Third, among those already working as first-line supervisors in sales and office/admin occupations, we examine their probability of being promoted to a management role.

² Prior to dropping singleton person records, we lose about 9% of the wage sample by removing records with topcoded earnings. Some researchers also drop observations with allocated earnings and hours, but doing so can introduce nonresponse bias. Nonetheless, comparing our wage growth distributions with and without observations with these allocated values, we find similar means, standard deviations, and medians.

³ Only 0.43% of our final sample had hourly wages below \$7.25. This could arise for numerous reasons such as data entry errors, reporting errors, a mismatch between weekly earnings reports and usual hours reports (90% of these reports were not paid by the hour), or respondents are disabled workers who may exempt from the federal minimum wage.

Our main independent variables are based on workers' average work location arrangements. Beginning in October 2022, the CPS introduced new questions for employed individuals working during the reference week asking them about how much they worked from home on all jobs. Respondents are first asked: "At any time LAST WEEK, did you telework or work at home for pay?" If they respond in the affirmative, they are asked: "Last week, you worked (# hours worked last week at all jobs) hours (total/at all jobs). How many of these hours did you telework or work at home for pay?" A worker, however, may not have worked their usual number of hours in the current month because of an unexpected illness, time off for vacation, or increased job demands. Work location arrangements also may vary from week to week, given personal demands and employer policies. For example, a job may be mostly remote, but employees might get together once a month in person. Thus, using the current month's work location arrangement might not reflect the worker's usual arrangement with their employer. To better reflect typical work location arrangements for the current job, we first calculate the percentage of WFH hours during the reference week for each MIS. We then calculate an average of the percentage of WFH hours for the current month (MIS4 or MIS8) and up to three previous months, excluding arrangements on prior jobs if the respondent reported changing employers.⁴ Based on these averages, we create a set of binary indicators for the work location arrangement of a worker. We classify workers as on-site if, on average, they spend less than 20% of their working hours at home. This 20% threshold is approximately equal to one day per week at home for a full-time worker. It helps us distinguish those who might occasionally bring work home outside of regular work hours from those whose work arrangement regularly includes at least some paid days at home. We classify workers as hybrid if they spend 20–99% of their working hours at home. Those who work 100% of their hours from home are classified as remote workers. These

⁴ For example, if a worker responds in all four months but reports that they changed employers in MIS3, then we use their MIS3 and MIS4 observations. Likewise, if they report being unemployed, didn't report being employed and at work, or didn't respond to the survey in MIS2, we use MIS3 and MIS4 observations if they reported the same employer in MIS4. We use the "same employer" variable to determine if they switched employers. However, because of the CPS Respondent Identification Policy that protects the confidentiality of respondents' information, not everyone is asked if they had the same employer, in which case we set the %WFH equal to missing. About 64% of work location arrangements are calculated using four observations, 19% with three, 9% with two, and 8% with one.

three work arrangements—on-site, hybrid, and remote—can be interpreted as representing no or low, moderate, and high levels of WFH intensity, respectively.⁵ Compared with hybrid work, remote work offers a greater range of potential employee-employer matches and provides employees with more consistent daily scheduling flexibility. Eliminating commutes can allow parents to coordinate parenting responsibilities more easily and potentially avoid paying for childcare for primary-school-age children (Gallen et al. 2026). However, remote work also reduces opportunities for in-person collaboration and networking. By treating these arrangements separately in our analysis, we can better identify how their unique features may influence wage growth and career advancement.

Because we do not have WFH information for all three months prior to MIS4 for respondents interviewed before January 2023, our wage and promotion samples include only those interviewed in both MIS4 and MIS8 between January 2023 and June 2026. Thus, wage growth is first measured from January 2023 to January 2024. To minimize the impact of outliers, we also winsorize the top and bottom 1% of the wage growth distribution. Our “wage growth sample” consists of 12,803 men and 16,017 women.⁶ The “promotion sample” is slightly different: we do not exclude workers with topcoded wage observations, as they may be more likely to receive a promotion. However, we limit this sample to nonmanagers in MIS4. The promotion sample includes 11,496 men and 13,629 women. See Online Appendix Table A.2 for further details on the construction of the different samples.

Descriptive Statistics

Based on our wage sample, we observe that, on average, 25% of men and women work a hybrid schedule, while 12% work fully remotely. However, WFH arrangements vary substantially across the 12 major occupation groups included in our study (Figure 1).

⁵ Online Appendix Figure A.2 presents the underlying distribution of % WFH hours. Among hybrid workers, there is a fairly even distribution of %WFH hours across deciles. Online Appendix Table A.1 compares the average monthly WFH intensity with the current month WFH intensity. While these measures differ as the current month captures more remote work, our main findings remain qualitatively unchanged when using the current month WFH intensity.

⁶ There are fewer men than women in the wage sample because men tend to earn higher wages on average, making their earnings more likely to be topcoded.

Following the pandemic, computer and mathematical occupations exhibit the highest percentage of employees working from home (71%)—about 42% of these employees follow a hybrid schedule, while 29% work fully remotely. In financial specialist and business operation occupations, 57% of employees participate in some form of WFH. In sales and office/admin occupations, 27 and 29% of employees WFH, most on hybrid schedules. Educational instruction and library occupations have the lowest percentage of employees working from home, just over 10%, most in a hybrid arrangement.

Figure 2 shows how work location arrangements persist or change year-over-year, by sex.⁷ Most employees (56%) worked on-site in both years. The next most common arrangement was consistently working a hybrid schedule—17% of men and 16% of women. The third most common arrangement was working fully remotely in both periods as reported by 7% of men and 8% of women. The remaining respondents changed their work location arrangements during the year, with the most frequent shift occurring between on-site and hybrid work—either moving from on-site to hybrid or vice versa—as reported by about 10% of the sample. Less than 2% transitioned between remote and on-site arrangements, and less than 10% moved between remote and hybrid arrangements. In results not shown, we find similar patterns by parental status.

Trends in real average hourly wages reveal notable level differences across work location arrangements (Figure 3). Hybrid and remote workers consistently earn substantially higher wages compared with their on-site counterparts. The wage gap between remote (hybrid) and on-site workers averages approximately \$8.91 (\$10.75) per hour over the study period.

Figure 4 illustrates the average over-the-year real wage growth for each work arrangement transition group, by sex and parental status. There are a few notably large differences among those transitioning between work location arrangements. For instance,

⁷ During the study period, the percentage of employees in hybrid work arrangements ranged from 21% to 30%, while the percentage working remotely ranged from 9% to 13%. The overall rate of WFH arrangements initially increased slightly from 31% in January 2023 to 36% in June 2023; thereafter, it ranged from 35% to 42% (Online Appendix Figure A.3).

fathers who move from working remotely to on-site experience a large drop in their real average hourly wages of 15%. In contrast, fathers who switch from on-site to fully remote see their wages increase by more than 14%. Turning to nonparents, we see some different patterns. Women without children who remain in hybrid positions experience faster wage growth than those who stay in on-site or remote positions. Like fathers, men without children experience remarkable wage growth of 16% when transitioning from on-site to remote positions. When these men transition from remote to on-site work, they experience a 7% decline in wages. These large swings in wages when moving from remote to on-site arrangements and vice versa could be due to switching jobs. We explore this possibility below in our multivariate analyses. We also examine whether these large wage changes for men could reflect changes in usual weekly hours among workers who were not paid by the hour. For example, their weekly earnings might remain the same over time, but their reported hours decline when working from home because they can complete the same job in less time. This would lead to wage growth when switching to remote work and would be consistent with remote work leading to an increase in worker productivity. Restricting the male sample to likely job stayers who are not paid hourly and who usually worked 40 hours in each MIS, we still observe large wage changes moving from remote to on-site (and vice versa) for men; albeit the cell sizes are small.

Figure 5 presents the average over-the-year promotion rates by workers' base-year work location arrangement, broken down by sex and parental status. Excluding workers in sales and office/admin occupations, we find that women working hybrid or remotely are promoted to management at notably higher rates than those working on-site (13–18% compared with 6–9%). Among men without children, remote workers have the lowest promotion rates (8%) compared with those working on-site or hybrid (9–11%). For fathers, however, promotion rates are similar across work location arrangements, 11–12%.

Examining a group of nonsupervisors/nonmanagers in MIS4 in sales and office/admin occupations, we find that fathers have similar promotion rates to first-line supervisor positions across work locations (4–6%). For mothers, the promotion rate to first-line supervisor is substantially lower among hybrid workers (3%) than among those working

on-site or fully remotely (5–7%). Among men and women without children, the highest promotion rates to first-line supervisor are observed for on-site workers (6%), compared with those working hybrid or fully remotely (2–4%).

Looking at first-line supervisors in MIS4 in sales and office/admin occupations, the promotion rate to management by MIS8 is much lower for those working on-site compared with those working hybrid or remotely. Among parents, on-site workers have promotion rates between 11% and 20%, while hybrid or remote workers have rates between 28% and 37%. Among nonparents, promotion rates for on-site workers are 17%, compared with 21–34% for those working hybrid or remotely. In summary, promotion rates vary depending on the occupation group, parental status, work location arrangement, and a worker’s position on the job ladder.

Econometric Models

We estimate several models. To start, we estimate linear models using ordinary least squares (OLS) to examine level differences in log hourly wages across work location arrangements adjusted for compositional differences:

$$\ln(wage_{i,t}) = \alpha_0 + \alpha_1 Hybrid_{i,t} + \alpha_2 Remote_{i,t} + \alpha'_3 X_{i,t} + \zeta_{i,t} \quad (1)$$

where the dependent variable, $\ln(wage_{i,t})$, is the log of hourly wage measured at month-year t for worker i . $Hybrid_{i,t}$ and $Remote_{i,t}$ are binary indicators equal to 1 if a worker has a hybrid or remote work arrangement, respectively, and 0 otherwise. The reference category is on-site. $X_{i,t}$ is a vector of controls, including a quartic in age, the number of children in four age groups (<1, 1–5, 6–11, 12–17), and indicators for educational attainment (some college, college, graduate degree), race (Black, Asian), Hispanic ethnicity, marital status, foreign born, government worker, year, month, state, metropolitan statistical area, 4-digit Census occupation, and 14 major industries. $\alpha_0 - \alpha_3$ are parameters to be estimated. $\zeta_{i,t}$ is an error term. This model is estimated using all MIS4 and MIS8 observations. We use raked earnings weights to account for attrition. Standard errors are clustered at the household level, because there are two observations for every worker and, in some households, multiple workers of the same sex. We estimate all models separately by sex,

and by both sex and parental status, where the latter is defined by whether the respondent resides with children under the age of 18.

We estimate annual wage growth models using OLS to examine how wage growth is related to remote and hybrid work arrangements for workers who remain in the same work location arrangement between MIS4 and MIS8:

$$\ln(\text{wage}_{i,t}/\text{wage}_{i,t-12}) = \beta_0 + \beta_1' \text{Work_arrangement}_{i,t} + \beta_2' Z_{i,t-12} + \varepsilon_{i,t} \quad (2)$$

where the dependent variable is the change in the log hourly wage between t and $t-12$.

$\text{Work_arrangement}_{i,t}$ is a vector of eight indicators for work location arrangements in $t-12$ and t , where the reference category is workers remaining on-site in both periods. We report results for equation 2 only for workers who stay in a hybrid arrangement or remote arrangement. $Z_{i,t-12}$ is a vector of controls measured in MIS4. $\beta_0 - \beta_2$ are parameters to be estimated. $\varepsilon_{i,t}$ is an error term. We use raked earnings weights to account for sample attrition and report robust standard errors. Online Appendix Table A.4 presents summary statistics for the variables used in this model.

In addition to the controls mentioned above, we include indicators for initial wage quartile to proxy for a worker's position on their career ladder, because workers at different career stages may have different promotion possibilities and wage-growth trajectories. There may be non-linear mean reversion or diminishing returns to human capital accumulation.⁸ High earners may have greater bargaining power to negotiate remote and hybrid schedules, or they may be positively selected based on productivity. Thus, excluding a control could bias the coefficients toward zero. We control for wage quartile rather than the initial wage level, because if wages are measured with error (assumed in the CPS),

⁸ Our method for determining wage quartiles involves three steps. First, when the sample size is at least 100, we calculate quartiles for each group defined by detailed occupation, region, and sex. If any group does not meet this threshold, we use the groups with at least 100 workers defined by major occupation, region, and sex. For any groups still lacking enough data, we calculate quartiles based on major occupation and sex. Most quartiles are assigned during the second step. Online Appendix Table A.3 shows how work location arrangements and adjusted average wage growth vary by quartile. Most notably real wages are rising rapidly in quartile 1, while they are falling in quartiles 3 and 4, especially for on-site workers.

including the initial wage can create a mechanical negative correlation between baseline wage and wage growth. This approach also helps avoid bias in other model coefficients.⁹

To analyze year-over-year wage growth differences for workers who change between on-site, hybrid, and remote work arrangements relative to those who stay in their same first-period work arrangement, while also controlling for all time-invariant worker and job characteristics and a limited set of time-varying characteristics, we estimate the following FD model of log wage growth:

$$\ln(\text{wage}_{i,t}/\text{wage}_{i,t-12}) = \theta_0 + \theta_1' \text{Transition}_{i,t} + \theta_2 \text{Hybrid}_{i,t-12} + \theta_3 \text{Remote}_{i,t-12} + \theta_4' W_{i,t} + \delta_t + \eta_{i,t} \quad (3)$$

where $\text{Transition}_{i,t}$ is a vector of six indicators for work location transitions from $t-12$ to t . $W_{i,t}$ is a vector of first-differenced time-varying controls for age squared, the number of children in four age groups (<1, 1–5, 6–11, 12–17), and indicators for educational attainment (some college, college, graduate degree), marital status, government worker, detailed occupation, and detailed industry.¹⁰ δ_t represents month-by-year FE, which we include because transitions might not occur uniformly across the calendar; for example, remote to hybrid transitions might be more likely to occur at the beginning of the calendar year or in September, when schools start. $\theta_0 - \theta_4$ are parameters to be estimated. $\eta_{i,t}$ is an error term. We cluster standard errors by individual. This specification allows us to examine whether the association differs depending on the direction of the transition. For example, do workers moving from on-site to remote and vice versa experience similar wage changes in absolute value?

While the worker FD models control for time-invariant worker and job characteristics, FD estimates may still be contaminated by selection bias from workers who change jobs. CPS contains information on job changes in MIS6–8 but not between MIS4 and MIS5, so we make a partially informed guess about who is a likely job changer and job stayer based on detailed occupation and industry changes. Additionally, households may experience unexpected events or shocks. Thus, although we can control

⁹ Our results, not shown, are qualitatively similar if we use the initial wage level instead of quartiles.

¹⁰ We include a control for any change in occupation or industry code using detailed codes.

for some selection, we still cannot claim causality with these work location transition models.

Finally, we use linear probability models (LPM) to estimate the probability that a worker receives a promotion:

$$Y_{i,t} = \gamma_0 + \gamma_1 \text{Hybrid}_{i,t-12} + \gamma_2 \text{Remote}_{i,t-12} + \gamma_2' Z_{i,t-12} + \mu_{i,t} \quad (4)$$

where $Y_{i,t}$ is a binary indicator equal to 1 if the worker received a promotion by MIS8 and 0 otherwise. The controls are as defined above. The models are estimated for a sample who was eligible to receive a promotion in MIS8.

To evaluate whether our main results for the wage growth and promotion models are sensitive to selection on unobservables, we use a method proposed by Oster (2019). Specifically, we estimate bounds on our parameters under the assumption of proportional selection (selection on unobservables is proportional to selection on observables), without making assumptions about the direction of selection. We set R_{max} to 1.3 times the R-squared from the full observable regression, as recommended by Oster. If the resulting parameter bounds include zero, then the sign of our estimates may not be robust to selection on unobservables.

Results

Wage levels

Table 1 presents the results from the estimation of equation 1. Hybrid and remote arrangements are associated with similar wage premia—10–12% higher wages than fully on-site workers. Men and women without household children have slightly stronger positive associations between hybrid work and wages compared with parents. Among women, those without children show somewhat stronger positive relationships between remote work and wage growth compared with mothers. Our findings from the CPS are comparable in size to those reported by Pabilonia and Vernon (2025), who found that individuals who primarily WFH in the American Community Survey earn higher wage premia. Our findings are also consistent with estimates from administrative data on French workers (Li et al., 2026), although that study attributes approximately half of the wage

premium to selection effects—workers who transitioned to WFH after the pandemic already had higher wages before the pandemic.

Wage growth

Tables 2 and 3 report coefficients on WFH arrangements in annual wage growth regressions. We begin by presenting the average association for men and women separately, then show the average association after controlling for initial wage quartile, and finally examine associations within each wage quartile. Controlling for initial wage quartile allows us to compare groups of similar workers and mitigate concerns about selection bias. The estimates show evidence of Simpson’s Paradox, where within-subgroup effects differ from average effects. When we analyze the data by wage quartile or include controls for wage quartiles, we observe some statistically significant positive relationships; however, in the pooled regression without quartile controls (column 1), the coefficients are not statistically different from zero. Among men, results controlling for wage quartile indicate that hybrid and remote work are positively associated with wage growth overall, with these associations driven by those in the top three wage quartiles (Table 2 Panel A). Among women, hybrid work is positively associated with wage growth both overall and in every wage quartile. Remote work also shows a positive association with wage growth among women; however, the association is weaker and primarily driven by women in the highest quartile (Table 3 Panel A).

Among fathers, hybrid and remote work are similarly positively linked to wage growth, with statistically significant positive associations between hybrid and wage growth in the top two wage quartiles and between remote and wage growth in the third wage quartile (Table 2 Panel B). Among men without children, hybrid and remote work are also positively associated with wage growth, with associations between hybrid and wage growth driven by those in the top 75% of the wage distribution and associations between remote and wage growth driven by those in the second and fourth quartiles (Table 2 Panel C). Among women without children, we observe positive relationships between hybrid/remote work and wage growth on average (Table 3 Panel C). The coefficients on hybrid are

particularly large across all wage quartiles, while the overall coefficient on remote is driven by the highest earners.

Among mothers, hybrid work is positively associated with wage growth; however, this relationship is entirely driven by mothers in the top wage quartile (Table 3 Panel B). We see no statistically significant positive associations between remote work and wage growth among mothers; however, the coefficient estimate in the top quartile is large. One possible explanation for these patterns is that these high-earning mothers may be better able to afford institutional childcare, making them less likely to supervise children while working from home than women in other wage quartiles. If WFH boosts productivity by enabling uninterrupted work time—and if childcare responsibilities substantially constrain the time available for work—then hybrid and remote arrangements may help these high-earning mothers be more productive and achieve greater wage growth. The evidence is stronger for hybrid work, however, because only the hybrid estimate is statistically significant. We also explored whether our results could be driven by differences in the age composition of children across wage quartiles but observed no significant differences in the age composition of children by quartile.

Our findings may be affected by workers who changed jobs. Unfortunately, we do not have information on employer changes between MIS4 and MIS5. Some researchers identify job changes by examining changes in industry or occupation. However, this approach may not accurately capture employer transitions for several reasons. First, the CPS uses cross-sectional hot-deck imputation to address item non-response. Second, trained CPS coders assign occupation and industry codes based on respondents' open-ended descriptions of their jobs. Complete occupation and industry information is collected in MIS1 and MIS5, and codes are updated during the intervening three months only if respondents report changing employers or job duties. Artificial changes may result from differences in how Census coders interpret respondents' descriptions. Third, one person per household provides information for all household members in the CPS. When the data are collected by proxy in one month and self-reported in a subsequent month, changes in reported industry and occupation may reflect differences in who provided the

information and how accurately they were able to report it. Fourth, even the same respondent may provide different job descriptions in MIS1 and MIS5.

Instead, we categorize respondents based on whether they reported changing employers between MIS5 and MIS8—that is, whether they are a recent hire in MIS8—and analyze associations for a subsample that was recently hired in MIS6–MIS8 (Table 4 Panel A) and a subsample that was not recently hired (Table 4 Panel B). We further analyze associations across three additional subsamples. First, we examine a group likely to have stayed with the same employer, because they did not change their detailed industry **and** occupation between MIS4 and MIS5 nor did they report a new employer in MIS6–MIS8 (Table 4 Panel C).¹¹ Second, we consider a subsample that did not change employer or job duties during MIS6–MIS8 (Table 4 Panel D). Third, we look at a subsample that likely experienced a change in employer (Table 4 Panel E). Overall, our main results are not solely driven by individuals who changed employers or job duties. Although the positive associations are stronger among those who likely have switched employers than among those who likely have the same employer, we cannot reject the hypothesis that the coefficients do not differ significantly (Online Appendix Table A.6).

Because younger people are still building their human capital and are more likely to have young children who require more intensive caregiving, we examine a subsample of workers under age 40 who may have more to gain from in-person training and mentorship. Among fathers of younger children, there is a statistically significant positive relationship between hybrid work and wage growth of similar magnitude to that estimated for the full sample but a weaker and not statistically significant relationship between remote work and wage growth (Online Appendix Table A.7). Among younger women without children, we find positive associations between hybrid/remote arrangements and wage growth of similar magnitude. Unlike our findings for the full sample, there are no statistically significant associations between WFH arrangements and wage growth among men without children or among mothers. Thus, among men, we find some evidence that supports the hypothesis

¹¹ We follow Autor et al. (2024) in requiring that workers change both detailed industry and detailed occupation.

that some in-person work may be important for those building human capital. The differences between men and women without children could reflect occupational sorting. The differences observed among women by parental status provide suggestive evidence that mothers of young children may prioritize job flexibility—choosing slower wage growth in favor of job flexibility over opportunities for human capital development.

Table 5 presents our worker FD estimates of the relationship between wage growth and transitions in work location arrangements. These results have the advantage over the prior results of controlling for time-invariant unobservable characteristics. Among men working on-site in the base year, transitioning to remote work is associated with wage growth that is 13% higher than that of men who remain on-site, regardless of parental status. Among women without children, a transition to remote work also is strongly associated with faster wage growth. Among men working remotely in the base year, we observe that transitioning to on-site work—such as during a RTO event—is linked to statistically significantly slower wage growth, with the absolute magnitude of the relationship similar to a transition from on-site to remote. We do not observe a statistically significant relationship for women without children; however, we also cannot rule out that the coefficients for this group may be equal in absolute value. We do not observe any differences in wage growth for those moving in or out of hybrid work compared with workers staying in their arrangements.

Rather than interpreting this result as remote work boosting productivity, it is possible that positive wage growth could occur with a transition from on-site to remote work if workers can secure new positions that offer higher pay and remote work options. Likewise, negative wage growth with a transition from remote to on-site might occur if a worker loses their remote job and must secure new employment at a lower wage. Thus, we examine subsamples who did not recently change employers or who were likely job stayers versus likely job movers (Online Appendix Tables A.8–A.10). Results are qualitatively similar, but the coefficients are larger in magnitude when using a sample who are not recent hires. Results are generally stronger when examining likely job stayers, though among fathers, a move from on-site to remote work is no longer statistically significant.

Overall, the results are mostly consistent with the story that fully remote work can enhance productivity, but again we find no statistically significant associations among mothers.

Promotions

Table 6 presents the associations between the likelihood of a promotion and WFH arrangements in the previous year for different occupation groups. Among women without children excluding those sales and office/admin roles, working remotely is associated with a 3-percentage-point (pp) lower likelihood of getting promoted to management (Table 6 Panel A). This result is consistent with the idea that proximity bias or slower skill development may impact promotion opportunities when working remotely. In sales and office/admin roles, women who are not supervisors at the start and work hybrid schedules are less likely to become first-line supervisors, with this tendency especially pronounced among mothers (3 pp lower, Table 6 Panel B). On the other hand, mothers who are initially not managers and work fully remotely show a positive association with being promoted to management. Furthermore, among mothers who already hold positions as first-line supervisors in sales and office/admin roles, both hybrid and remote work are associated with a 22–24 pp higher probability of advancing to management (Table 6 Panel C).¹² These supervisors likely represent a select group with greater abilities and more demanding schedules. The flexibility offered by WFH may help these mothers balance their responsibilities, allowing them to focus more on their careers or multitask effectively. Higher wages may also enable them to afford institutional childcare while working remotely, further supporting their career advancement. These results suggest that productivity benefits may play a key role in the observed promotion effects. Overall, the link between WFH and promotions depends on parental status, promotion type, and occupation group.

¹² Because the coefficients are quite large, we performed a robustness check by re-estimating the relationship after excluding respondents who switched between proxy and self-reporting. We did this because proxy respondents may not always accurately know the mother's supervisory or managerial status. The estimates (not shown here) are only slightly smaller.

Robustness Checks

We perform several additional robustness checks. First, we re-estimate our main results using workers' WFH status in the current month, instead of their average WFH arrangements. In our wage models (Online Table A.11), results are qualitatively similar but now the coefficient on remote is statistically significant for mothers; albeit it is weaker than the other associations. In our promotion models (Online Appendix Table A.12), the results are also qualitatively similar; however, among women without children, the coefficient on remote work in the promotion-to-manager model is smaller and not statistically significant.

We also test different thresholds for defining hybrid and remote status, using thresholds of 10% and 90% WFH hours, and then 1% to 99% WFH hours instead of 20% and 100%. For the most part, the results remain robust to these adjustments. However, with the 1–99% hybrid cutoff, we now find that among fathers working hybrid is associated with a greater likelihood of being promoted to manager from first-line supervisor.

Finally, we estimate Oster bounds for our parameters in equations 2 and 4. None of the bounds for our statistically significant results include zero, indicating that our findings are relatively insensitive to selection on unobservables under the assumptions underlying Oster's method (Online Appendix Tables A.13–A.14).

Conclusion

Since the COVID-19 pandemic, hybrid and remote work arrangements have become widespread. We show that these WFH options are positively associated with current wages in the period after the pandemic (January 2023–June 2026), but that wage dynamics differ by parental status. We observe many positive associations between WFH arrangements and wage growth overall. However, among mothers, we find a positive association between hybrid work and wage growth only among those with the highest earnings. Examining transitions in work location arrangements, we find positive associations with wage growth for transitions from on-site to remote work and symmetric negative associations for those returning to the office among men and women without children. These patterns are consistent with the story that WFH can boost productivity, though mothers may opt for more flexibility at the expense of wage growth, or their productivity may be affected by

childcare interruptions. Given our findings that remote and hybrid work are associated with stronger wage growth and that the prevalence of these arrangements is stable, we do not expect wage differences by work location to disappear anytime soon.

We show that the relationship between WFH and the likelihood of being promoted varies by parental status, occupation grouping, and the type of promotion—whether it’s advancement to a manager or first-line supervisor role. For higher-earning mothers in sales and office/admin roles (those already supervisors), WFH is associated with a greater likelihood of being promoted to manager. This may be because WFH helps mothers, whose time is traditionally the most constrained, become more productive by eliminating long commutes, and these mothers are also more likely to be able to afford childcare while working from home. Among mothers excluding those in sales and office/admin roles, we also find WFH is associated with a greater likelihood of being promoted to manager role. In contrast, for lower-paid mothers in non-supervisory roles within sales and office/admin support occupations, hybrid work is associated with a lower likelihood of being promoted to first-line supervisor. Mothers working hybrid schedules may prioritize flexibility or the ability to supervise their children while working from home, which could affect their productivity and career progression. Additionally, among women without children, remote work is associated with a lower probability of promotion to a manager role in jobs excluding sales and office/admin roles. This result aligns with the proximity bias hypothesis that being physically present in the workplace can influence promotion chances or that remote work is associated with lower human capital accumulation.

Our main results are robust to omitted variable bias using Oster’s method. Overall, our findings provide suggestive evidence that in certain situations WFH may be productivity enhancing.

Our study has several limitations. First, in our wage growth analyses, we use a truncated sample by removing topcoded values. While this approach is common in the literature, the recent addition of dynamic topcoding may cause bias in the top quartile. For example, mothers near the top of the wage distribution who work on-site may experience greater wage growth compared with those working remotely, but many of these on-site

workers are left out of the sample due to topcoding. Second, our data does not include comprehensive records of every type of promotion workers receive. Often, employees are promoted with a pay increase but without a formal change in job title, which is not captured in our dataset. Third, our measure of average work arrangements may not reflect typical work arrangements for everyone if arrangements are changing over the four months that we average, or for the 8% of the sample where only the current month observation is used because of missing responses in earlier months or a job change. Finally, our study focuses on earnings, while workers may negotiate other aspects of their compensation packages with their employers.

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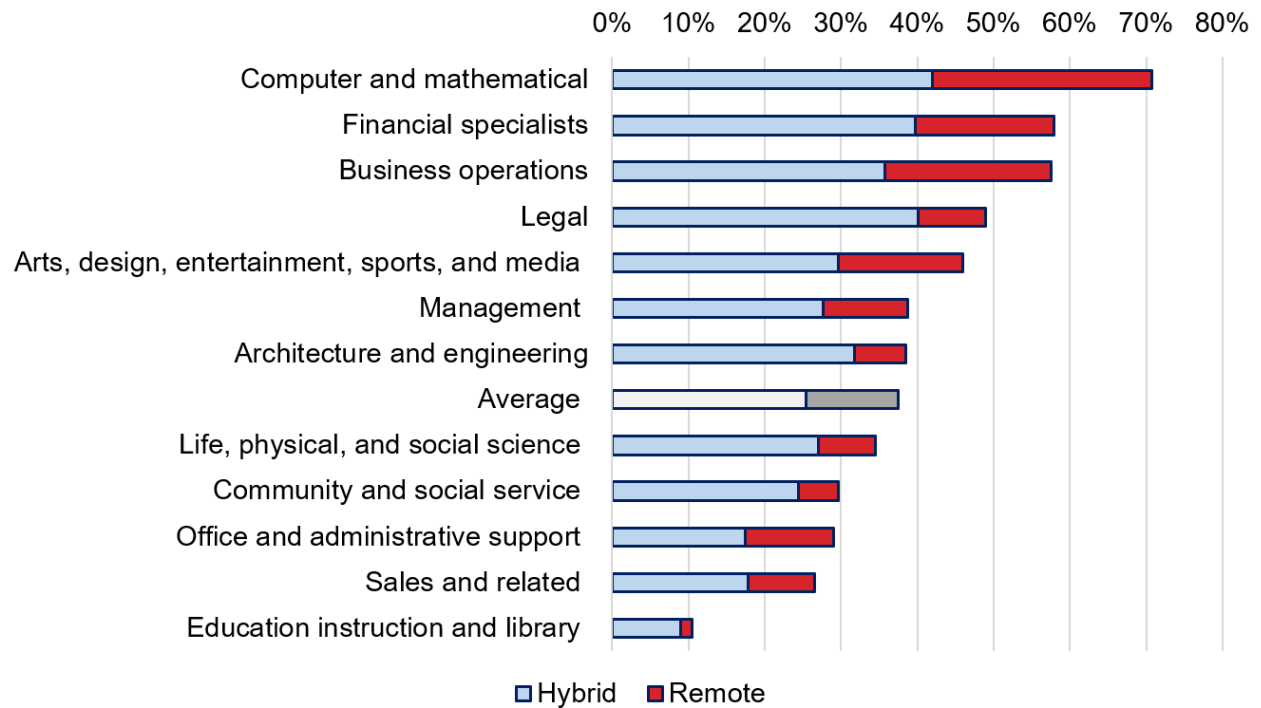
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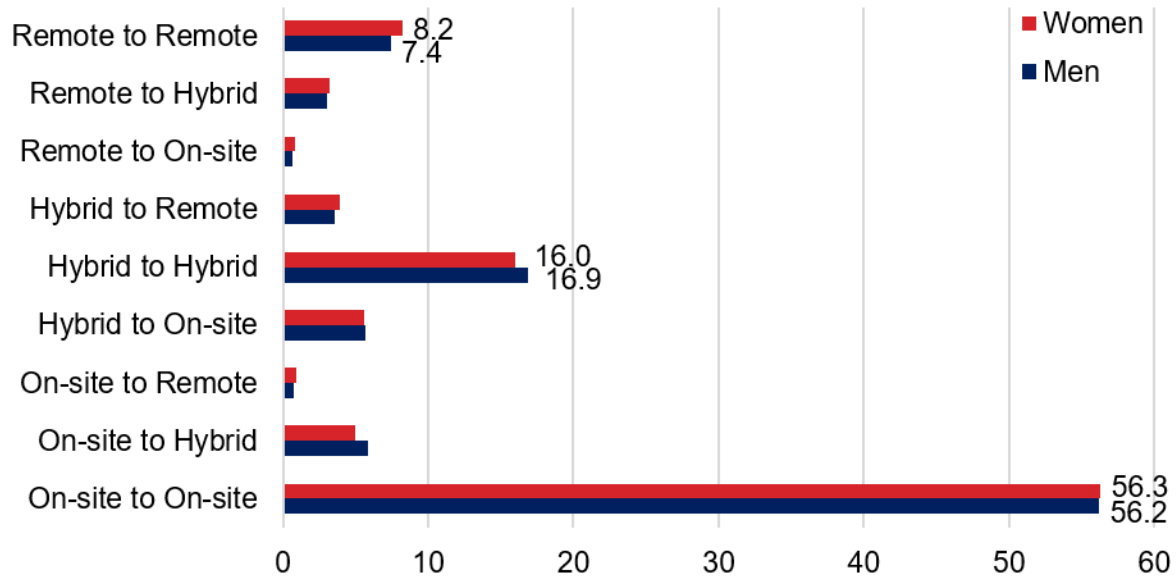
Figure 1. Percentage of hybrid and remote workers within major occupation groups



Note: N = 57,640. Estimates are based on the wage levels sample. CPS raked earnings weights are used.

Source: Jan 2023–Jun 2026 Current Population Survey Outgoing Rotation Groups (Flood et al. 2025), author's calculations.

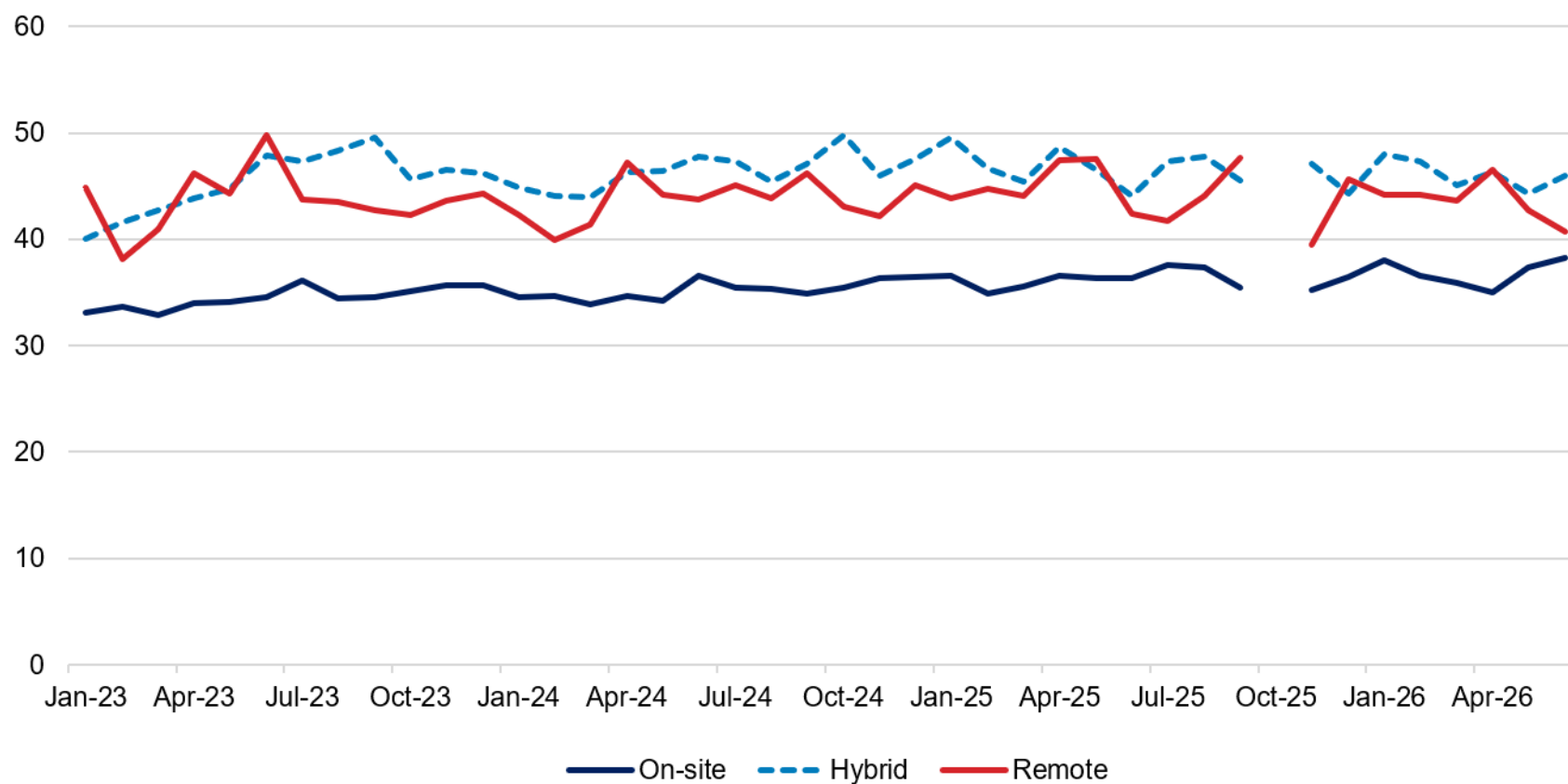
Figure 2. Year-over-year work location arrangements (% of sample)



Note: N = 12,803 men, 16,017 women. Estimates are based on the wage growth sample. CPS raked earnings weights are used.

Source: Jan 2023–Jun 2026 Current Population Survey Outgoing Rotation Groups (Flood et al. 2025), author's calculations.

Figure 3. Trends in real average hourly wages by work location arrangement (June 2026\$)

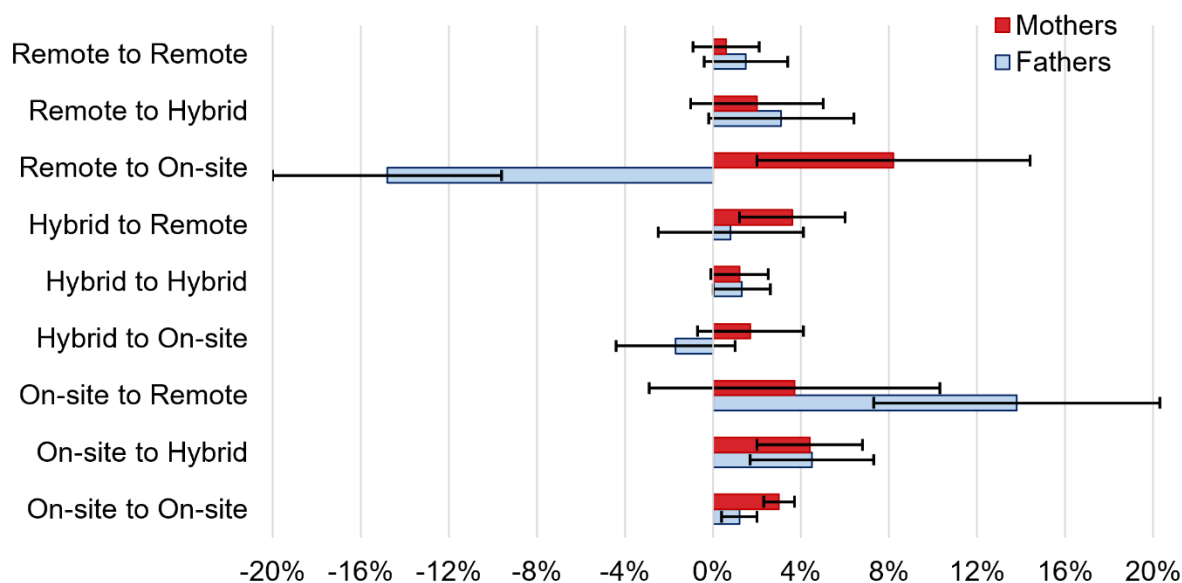


Note: N = 57,640. Estimates are based on the wage level sample. CPS raked earnings weights are used. CPS data for October 2025 were not collected due to the government shutdown.

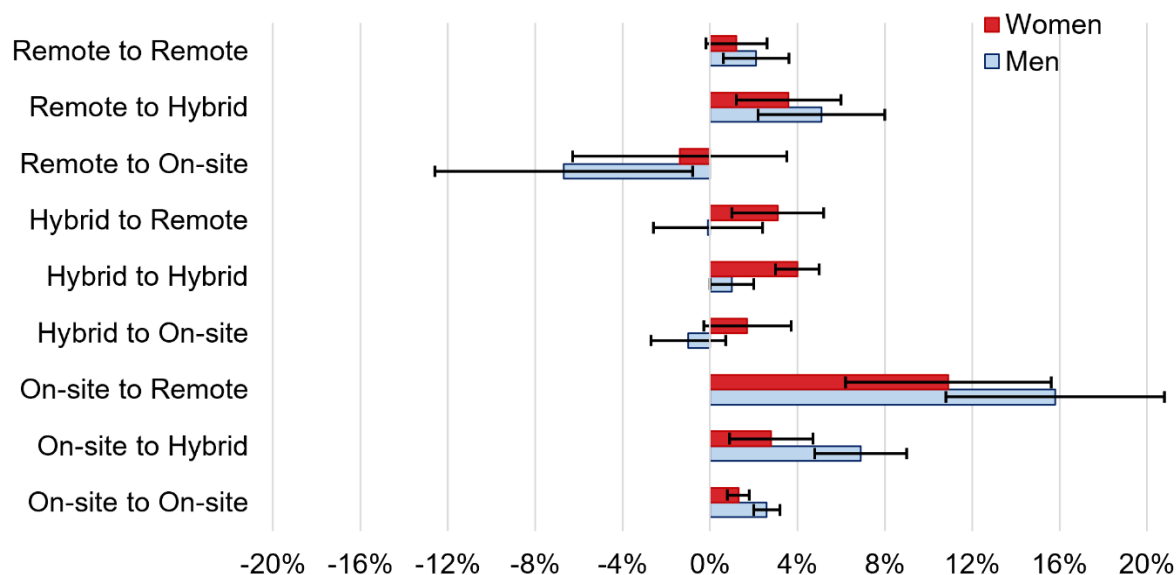
Source: Jan 2023–Jun 2026 Current Population Survey Outgoing Rotation Groups (Flood et al. 2025), author's calculations.

Figure 4. Average over-the-year real wage growth by work location arrangement transition

A. Parents



B. Nonparents

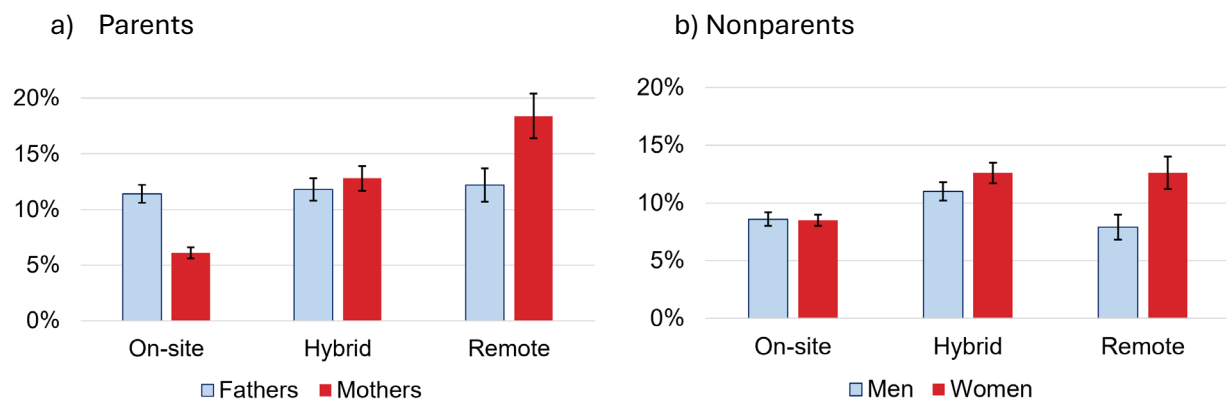


Note: N = 10,998 fathers, 12,301 mothers, 16,697 men without children, 20,811 women without children. Estimates are based on the wage growth sample. CPS raked earnings weights are used. Wages are adjusted for inflation using June 2026\$.

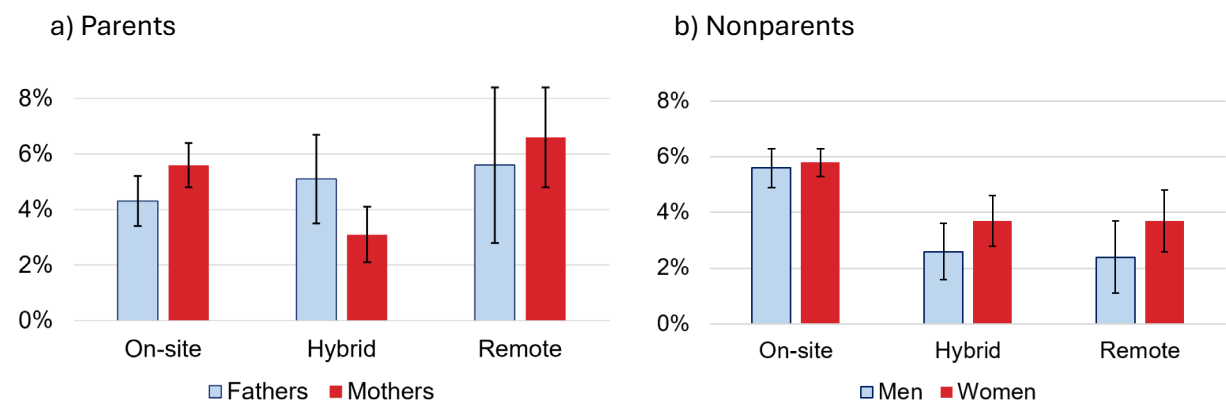
Source: Jan 2023–Jun 2026 Current Population Survey Outgoing Rotation Groups (Flood et al. 2025), author's calculations.

Figure 5. Average over-the-year promotion rates by base-year work location arrangement

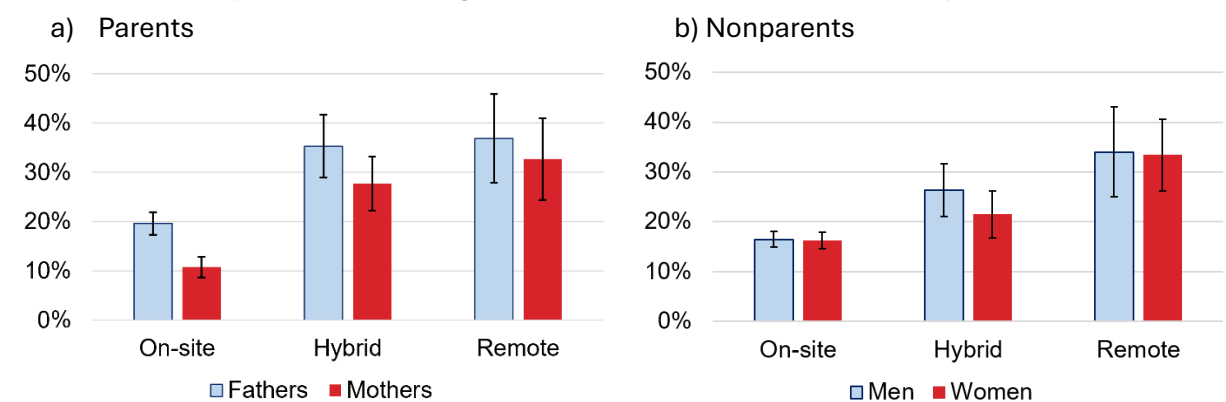
A. Non-management to management, excluding sales and office/admin occupations



B. To first-line supervisors in sales and office/admin occupations



C. First-line supervisors to management in sales and office/admin occupations



Notes: Panel A N = 3270 fathers, 3197 mothers, 4534 men with no children, 4798 women with no children. Panel B N = 804 fathers, 1402 mothers, 1645 men with no children, 2864 women with no children. Panel C N = 378 fathers, 318 mothers, 607 men with no children, 650 women with no children. Estimates are based on the promotions sample. CPS raked earnings weights are used.

Source: Jan 2023–Jun 2026 Current Population Survey Outgoing Rotation Groups (Flood et al. 2025), author's calculations.

Table 1. The relationship between wages and work location arrangements (OLS estimates)

Work location	Men	Women	Fathers	Mothers	Men without children	Women without children
Hybrid	0.103***	0.110***	0.091***	0.094***	0.108***	0.119***
SE(Hybrid)	(0.009)	(0.008)	(0.014)	(0.013)	(0.012)	(0.010)
Remote	0.095***	0.106***	0.095***	0.090***	0.091***	0.117***
SE(Remote)	(0.013)	(0.011)	(0.021)	(0.017)	(0.016)	(0.013)
N	25606	32034	9969	11854	15637	20180
R-squared	0.293	0.305	0.267	0.341	0.319	0.296

Note: The dependent variable is log real wage in June 2026 dollars. CPS raked earnings weights are used. Standard errors are clustered by household. Other controls include a quartic in age, the number of children under age 1, the number of children aged 1–5, the number of children aged 6–11, the number of children aged 12–17, and indicators for educational attainment (some college, college, graduate degree), race (Black, Asian), Hispanic ethnicity, marital status, foreign born, government worker, year, month, state, metropolitan statistical area, detailed occupations, and 14 major industries. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Source: Jan 2023–Jun 2026 Current Population Survey Outgoing Rotation Groups (Flood et al. 2025), author’s calculations.

Table 2. Wage growth regressions, men (OLS estimates)

Work location	All	Include wage quartiles		Quartile 1	Quartile 2	Quartile 3	Quartile 4
Panel A: All men	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hybrid-Hybrid	-0.012	0.057***	0.010	0.049**	0.058***	0.102***	
SE(Hybrid-Hybrid)	(0.013)	(0.011)	(0.029)	(0.020)	(0.020)	(0.028)	
Remote-Remote	-0.001	0.053***	-0.013	0.073***	0.044*	0.102***	
SE(Remote-Remote)	(0.016)	(0.015)	(0.037)	(0.024)	(0.026)	(0.037)	
N	12803	12803	3798	3725	3463	1817	
Adjusted R-squared	0.009	0.233	0.081	0.088	0.114	0.150	
Panel B: Fathers	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hybrid-Hybrid	-0.002	0.061***	0.003	0.052	0.055*	0.089**	
SE(Hybrid-Hybrid)	(0.020)	(0.018)	(0.052)	(0.034)	(0.032)	(0.042)	
Remote-Remote	0.006	0.067***	0.075	0.052	0.085**	0.038	
SE(Remote-Remote)	(0.027)	(0.023)	(0.068)	(0.043)	(0.042)	(0.063)	
N	4986	4986	1267	1438	1433	848	
Adjusted R-squared	0.010	0.235	0.135	0.101	0.073	0.125	
Panel C: Men without children	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hybrid-Hybrid	-0.022	0.051***	0.015	0.052**	0.043	0.053	
SE(Hybrid-Hybrid)	(0.017)	(0.015)	(0.038)	(0.026)	(0.028)	(0.043)	
Remote-Remote	-0.015	0.035*	-0.052	0.076**	0.024	0.153***	
SE(Remote-Remote)	(0.021)	(0.020)	(0.046)	(0.031)	(0.037)	(0.052)	
N	7817	7817	2531	2287	2030	969	
Adjusted R-squared	0.018	0.240	0.077	0.101	0.144	0.214	

Note: The dependent variable is the difference in log real wages between MIS8 and MIS4. Raked earnings weights are used. Robust standard errors are used. Other controls are from MIS4: quartic in age, the number of children under age 1, the number of children aged 1–5, the number of children aged 6–11, the number of children aged 12–17, and indicators for educational attainment (some college, college, graduate degree), race (Black, Asian), Hispanic ethnicity, marital status, foreign born, government worker, year, month, state, metropolitan statistical area, detailed occupations, and 14 major industries. Source: Jan 2023–Jun 2026 Current Population Survey Outgoing Rotation Groups (Flood et al. 2025), author's calculations.

Table 3. Wage growth regressions, women (OLS estimates)

Work location	All	Include wage quartiles	Quartile 1	Quartile 2	Quartile 3	Quartile 4
Panel A: All women	N/A	N/A	N/A	N/A	N/A	N/A
Hybrid-Hybrid	0.010	0.076***	0.070***	0.072***	0.044**	0.122***
SE(Hybrid-Hybrid)	(0.012)	(0.010)	(0.026)	(0.019)	(0.018)	(0.024)
Remote-Remote	-0.014	0.047***	0.020	0.037	0.031	0.096***
SE(Remote-Remote)	(0.014)	(0.012)	(0.027)	(0.023)	(0.020)	(0.031)
N	16017	16017	4505	4238	4150	3124
Adjusted R-squared	0.007	0.235	0.095	0.092	0.080	0.117
Panel B: Mothers	N/A	N/A	N/A	N/A	N/A	N/A
Hybrid-Hybrid	-0.012	0.051***	0.031	0.034	0.009	0.133***
SE(Hybrid-Hybrid)	(0.019)	(0.017)	(0.042)	(0.035)	(0.031)	(0.036)
Remote-Remote	-0.023	0.031	-0.013	0.022	0.042	0.073
SE(Remote-Remote)	(0.022)	(0.019)	(0.042)	(0.039)	(0.037)	(0.049)
N	5982	5982	1702	1523	1519	1238
Adjusted R-squared	0.005	0.224	0.133	0.124	0.065	0.157
Panel C: Women without children	N/A	N/A	N/A	N/A	N/A	N/A
Hybrid-Hybrid	0.027*	0.097***	0.092***	0.106***	0.067***	0.122***
SE(Hybrid-Hybrid)	(0.015)	(0.013)	(0.034)	(0.024)	(0.023)	(0.033)
Remote-Remote	-0.012	0.059***	0.041	0.049	0.025	0.112***
SE(Remote-Remote)	(0.019)	(0.016)	(0.036)	(0.030)	(0.027)	(0.042)
N	10035	10035	2803	2715	2631	1886
Adjusted R-squared	0.007	0.247	0.094	0.083	0.089	0.139

Note: The dependent variable is the difference in log real wages between MIS8 and MIS4. Raked earnings weights are used. Robust standard errors are used. See Table 2 for controls.

Source: Jan 2023–Jun 2026 Current Population Survey Outgoing Rotation Groups (Flood et al. 2025), author's calculations.

Table 4. Wage growth regressions by tenure with employer (OLS estimates)

Work location	Men	Women
Panel A: Recently hired in MIS6-8	N/A	N/A
Hybrid-Hybrid	0.044	0.066
SE(Hybrid-Hybrid)	(0.060)	(0.051)
Remote-Remote	0.059	0.057
SE(Remote-Remote)	(0.072)	(0.057)
N	970	1377
Adjusted R-squared	0.373	0.271
Panel B: Exclude recently hired in MIS6-8	N/A	N/A
Hybrid-Hybrid	0.052***	0.079***
SE(Hybrid-Hybrid)	(0.012)	(0.011)
Remote-Remote	0.053***	0.047***
SE(Remote-Remote)	(0.015)	(0.013)
N	11833	14640
Adjusted R-squared	0.226	0.235
Panel C: Likely same employer in MIS4 and MIS8	N/A	N/A
Hybrid-Hybrid	0.042***	0.068***
SE(Hybrid-Hybrid)	(0.013)	(0.012)
Remote-Remote	0.048***	0.044***
SE(Remote-Remote)	(0.017)	(0.014)
N	9368	11863
Adjusted R-squared	0.225	0.229
Panel D: Same employer/duties in MIS6-8	N/A	N/A
Hybrid-Hybrid	0.040***	0.068***
SE(Hybrid-Hybrid)	(0.014)	(0.012)
Remote-Remote	0.047***	0.052***
SE(Remote-Remote)	(0.018)	(0.015)
N	8900	11281
Adjusted R-squared	0.221	0.229
Panel E: Likely different employer in MIS4 and MIS8	N/A	N/A
Hybrid-Hybrid	0.080***	0.110***
SE(Hybrid-Hybrid)	(0.023)	(0.021)
Remote-Remote	0.048	0.062***
SE(Remote-Remote)	(0.030)	(0.024)
N	3435	4154
Adjusted R-squared	0.268	0.267

Note: The dependent variable is the difference in log real wages between MIS8 and MIS4. Raked earnings weights are used. Robust standard errors are used. Regressions control for wage quartiles. See Table 2 for other controls. Panel C sample excludes those recently hired in MIS6–8 and those with both a detailed occupation **and** detailed industry change between MIS4 and MIS5. Panel E sample includes those not in Panel C sample.

Source: Jan 2023–Jun 2026 Current Population Survey Outgoing Rotation Groups (Flood et al. 2025), author's calculations

Table 5. Wage growth by change in work location arrangement (FD estimates)

Work location	Men	Women	Fathers	Mothers	Men without children	Women without children
On-site to Hybrid	0.030	0.005	0.034	0.015	0.026	-0.000
SE (On-site to Hybrid)	(0.025)	(0.022)	(0.035)	(0.040)	(0.033)	(0.026)
On-site to Remote	0.120**	0.083	0.133	0.002	0.134**	0.116*
SE (On-site to Remote)	(0.052)	(0.053)	(0.090)	(0.081)	(0.064)	(0.067)
Hybrid to On-site	-0.016	-0.003	-0.036	-0.002	-0.003	-0.004
SE (Hybrid to On-site)	(0.025)	(0.025)	(0.044)	(0.034)	(0.029)	(0.035)
Hybrid to Remote	0.029	-0.002	0.027	0.017	0.026	-0.011
SE (Hybrid to Remote)	(0.040)	(0.031)	(0.051)	(0.058)	(0.057)	(0.031)
Remote to On-site	-0.133**	0.003	-0.169	0.084	-0.118*	-0.046
SE (Remote to On-site)	(0.059)	(0.043)	(0.111)	(0.065)	(0.068)	(0.056)
Remote to Hybrid	-0.000	0.023	-0.001	0.000	-0.005	0.037
SE (Remote to Hybrid)	(0.043)	(0.033)	(0.046)	(0.042)	(0.062)	(0.046)
Started Hybrid	-0.011	0.005	-0.008	-0.007	-0.012	0.012
SE (Started Hybrid)	(0.013)	(0.014)	(0.024)	(0.021)	(0.016)	(0.018)
Started Remote	0.006	-0.007	0.005	-0.021	0.005	0.002
SE (Started Remote)	(0.018)	(0.016)	(0.024)	(0.022)	(0.026)	(0.022)
N	12803	16017	4986	5982	7817	10035
Within R-squared	0.008	0.008	0.012	0.013	0.012	0.009
On-site to Remote = Remote to On-site (p-value)	0.872	0.204	0.803	0.407	0.867	0.423

Note: The dependent variable is the difference in log real wage between MIS 8 and MIS4. Other controls include indicators for year-month and first differences in age-squared, the number of children under age 1, aged 1–5, aged 6–11, aged 12–17, and indicators for educational attainment (some college, college, graduate degree), marital status, government worker, detailed occupation, and detailed industry. Raked earnings weights are used. Standard errors are clustered by individual.

Source: Jan 2023–Jun 2026 Current Population Survey Outgoing Rotation Groups (Flood et al. 2025), author's calculations

Table 6. Promotion by base-period work location arrangement (LPM estimates)

Work location	Men	Women	Fathers	Mothers	Men without children	Women without children
Panel A: Promotion to manager, excl. sales/office	N/A	N/A	N/A	N/A	N/A	N/A
Hybrid	0.001	-0.011	-0.013	-0.003	0.008	-0.020
SE(Hybrid)	(0.010)	(0.011)	(0.015)	(0.017)	(0.012)	(0.014)
Remote	-0.012	0.001	-0.023	0.053**	-0.012	-0.033*
SE(Remote)	(0.013)	(0.016)	(0.021)	(0.027)	(0.016)	(0.020)
N	7804	7995	3270	3197	4534	4798
R-squared	0.092	0.109	0.123	0.177	0.129	0.112
Panel B: Promotion to supervisor in sales/office	N/A	N/A	N/A	N/A	N/A	N/A
Hybrid	-0.011	-0.017*	0.027	-0.033*	-0.031	-0.011
SE(Hybrid)	(0.016)	(0.010)	(0.023)	(0.017)	(0.021)	(0.013)
Remote	-0.010	0.002	0.049	-0.007	-0.022	-0.006
SE(Remote)	(0.020)	(0.014)	(0.048)	(0.023)	(0.021)	(0.014)
N	2449	4266	804	1402	1645	2864
R-squared	0.069	0.068	0.197	0.143	0.094	0.077
Panel C: Promotion from supervisor to manager in sales/office	N/A	N/A	N/A	N/A	N/A	N/A
Hybrid	0.033	0.034	0.064	0.231***	0.021	-0.040
SE(Hybrid)	(0.054)	(0.050)	(0.089)	(0.085)	(0.073)	(0.069)
Remote	0.116	0.118	0.108	0.215**	0.103	0.097
SE(Remote)	(0.078)	(0.074)	(0.131)	(0.100)	(0.089)	(0.101)
N	985	968	378	318	607	650
R-squared	0.152	0.140	0.371	0.398	0.236	0.184

Note: The dependent variable is a binary variable for a promotion in MIS 8. Raked earnings weights are used. Robust standard errors are reported. See Table 2 for controls.

Source: Jan 2023–Jun 2026 Current Population Survey Outgoing Rotation Groups (Flood et al. 2025), author's calculations.

Online Appendix

Remote Work, Wage Growth, and Promotions

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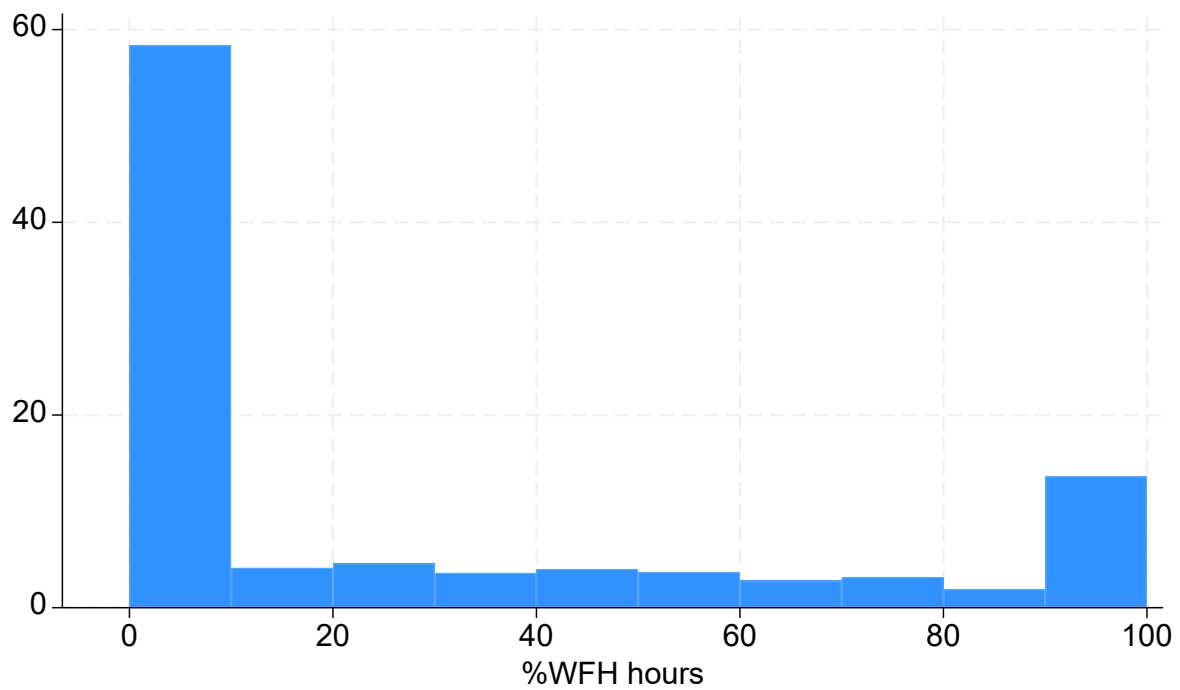
Figure A1. Kernel density estimate of real hourly wage



Note: N = 57,640. Wages are computed for workers reporting weekly earnings using usual hours worked. We drop observations with topcoded values and winsorize those below \$7.25. Wage range: \$7.25–\$115.52. Wages are adjusted for inflation using the CPI-U-RS through 2025 and then the CPI-U in 2026. Wages are measured in June 2026\$.

Source: Jan 2023–Jun 2026 Current Population Survey Outgoing Rotation Groups (Flood et al. 2025), author's calculations.

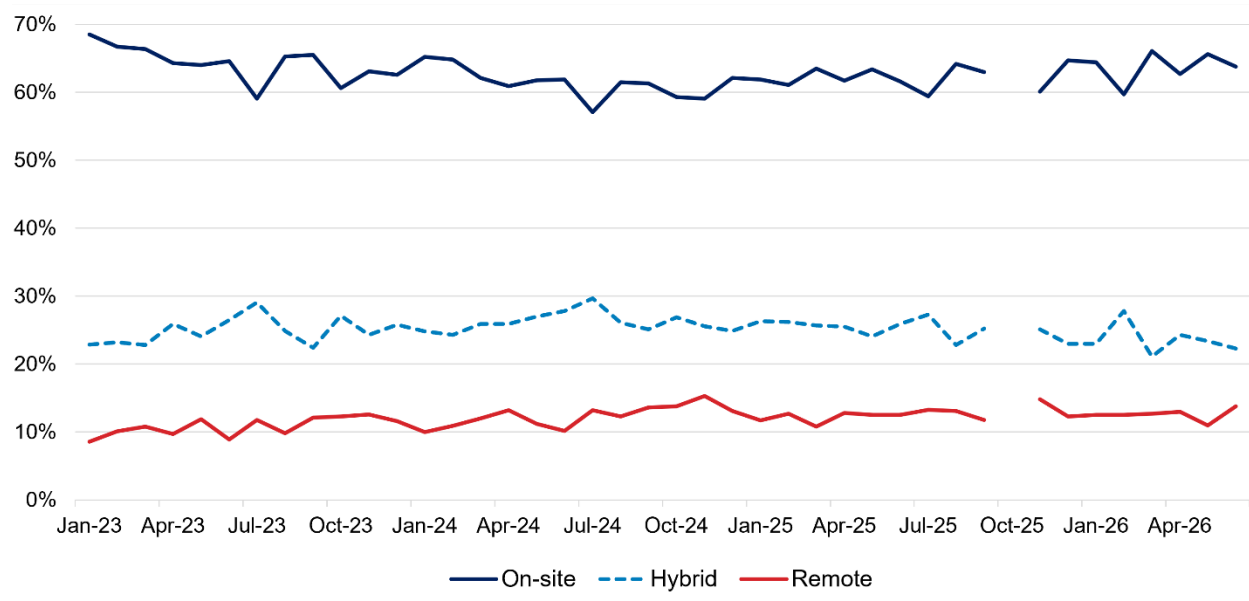
Figure A2. Distribution of percentage of work-from-home hours by decile (% of workers)



Note: N = 57,640. The figure is based on the wage growth sample in MIS4 and MIS8. CPS raked earnings weights are used.

Source: Jan 2023–Jun 2026 Current Population Survey Outgoing Rotation Groups (Flood et al. 2025), author's calculations.

Figure A3. Percentage of workers by work location arrangement



Note: N = 57,640. The figure is based on the wage growth sample, including MIS 4 and 8 observations. CPS raked earnings weights are used. CPS data for October 2025 were not collected due to the government shutdown.

Source: Jan 2023–Jun 2026 Current Population Survey Outgoing Rotation Groups (Flood et al. 2025), author's calculations.

Table A1. Distribution of workers by work location using average monthly WFH intensity versus current month WFH intensity

WFH intensity measure	On-site (Men)	Hybrid (Men)	Remote (Men)	On-site (Women)	Hybrid (Women)	Remote (Women)
Panel A: Wage growth sample	N/A	N/A	N/A	N/A	N/A	N/A
Average used in the paper	0.628	0.261	0.111	0.622	0.255	0.123
Current month	0.657	0.176	0.167	0.653	0.163	0.185
Panel B: Promotions sample	N/A	N/A	N/A	N/A	N/A	N/A
Average used in the paper	0.587	0.293	0.120	0.603	0.267	0.130
Current month	0.613	0.202	0.184	0.629	0.180	0.191

Source: Jan 2023–Jun 2026 Current Population Survey Outgoing Rotation Groups (Flood et al. 2025), author's calculations.

Table A2. Sample construction

Sample criteria	Wage growth (Men)	Wage growth (Women)	Promotion (Men)	Promotion (Women)
Civilians age 25–64, Oct 2023–Jun 2026 in the nonfarm sector	913,768	870,045	913,768	870,045
Keep MIS4 or MIS8	228,252	217,537	228,252	217,537
Keep if “employed and at work”	201,530	185,441	201,530	185,441
Keep Jan 2023–Jun 2026	187,145	172,277	187,145	172,277
Drop self-employed and unpaid family workers	165,159	157,732	165,159	157,732
Keep those in major occupations with $\geq 10\%$ engaging in WFH	87,414	103,626	87,414	103,626
Keep if usually full-time (hours ≥ 35)	83,110	90,734	83,110	90,734
Drop multiple jobholders	79,137	86,201	79,137	86,201
Drop topcoded wages/salary	68,449	81,350	N/A	N/A
Drop singleton person records	25,606	32,034	32,344	35,088
Sample for log wage regressions	25,606	32,034	N/A	N/A
Total workers (MIS 4 observations)	12,803	16,017	16,172	17,544
Total workers excluding management	9,430	12,647	11,496	13,629

Source: Oct 2023–Jun 2026 Current Population Survey Outgoing Rotation Groups (Flood et al. 2025), author’s calculations.

Table A3. Share of on-site/hybrid/remote workers within each initial wage quartile and the adjusted average wage growth by work arrangement within each quartile

Work location arrangement	Quartile 1	Quartile 2	Quartile 3	Quartile 4
Panel A: Men	N/A	N/A	N/A	N/A
Share of on-site workers (%)	36.1	29.1	23.5	11.3
Share hybrid workers (%)	20.0	29.0	32.3	18.7
Share remote workers (%)	24.9	30.4	28.6	16.1
Adjusted wage growth for on-site workers	0.282	0.024	-0.166	-0.383
Adjusted wage growth for hybrid workers	0.284	0.061	-0.100	-0.239
Adjusted wage growth for remote workers	0.254	0.079	-0.104	-0.213
Panel B: Women	N/A	N/A	N/A	N/A
Share of on-site workers (%)	32.9	27.3	23.9	15.9
Share hybrid workers (%)	18.6	25.2	28.8	27.4
Share remote workers (%)	20.8	25.3	30.4	23.5
Adjusted wage growth for on-site workers	0.267	0.045	-0.088	-0.339
Adjusted wage growth for hybrid workers	0.358	0.105	-0.045	-0.220
Adjusted wage growth for remote workers	0.291	0.077	-0.051	-0.245

Note: CPS raked earnings weights are used. Adjusted means are predictions from OLS regressions of the change in log wage on the interaction of work location and quartile as well as controls described in Table 2.

Source: Oct 2023–Jun 2026 Current Population Survey Outgoing Rotation Groups (Flood et al. 2025), author’s calculations

Table A4. Summary statistics (Wage growth sample)

Variable	On-site (Men)	Hybrid (Men)	Remote (Men)	On-site (Women)	Hybrid (Women)	Remote (Women)
N	8,159	3,273	1,371	10,338	3,868	1,811
Share of the sample (%)	62.8	26.1	11.1	62.2	25.5	12.3
Real wage in MIS4, Jun 2026 \$	38.8	50.4	48.4	31.8	42.1	40.0
Wage growth	0.026	0.004	0.018	0.022	0.026	0.017
Government job	0.188	0.126	0.081	0.326	0.188	0.092
Married	0.624	0.671	0.637	0.574	0.610	0.593
Foreign born	0.138	0.185	0.158	0.115	0.152	0.137
Number of children age 0	0.028	0.035	0.035	0.017	0.021	0.027
Number of children age 1–5	0.202	0.212	0.209	0.166	0.208	0.204
Number of children age 6–11	0.264	0.256	0.232	0.250	0.248	0.276
Number of children age 12–17	0.194	0.195	0.164	0.227	0.197	0.184
Age	42.2	41.6	40.8	43.0	42.3	41.9
Hispanic	0.149	0.113	0.109	0.165	0.121	0.108
Black	0.106	0.071	0.083	0.127	0.127	0.142
Asian	0.071	0.140	0.104	0.050	0.106	0.106
High school or less	0.201	0.066	0.070	0.210	0.086	0.122
Some college	0.247	0.116	0.175	0.245	0.174	0.233
College	0.352	0.510	0.524	0.316	0.438	0.444
Graduate degree	0.200	0.307	0.232	0.230	0.303	0.201
Metropolitan statistical area area	0.896	0.963	0.945	0.866	0.942	0.923
Management	0.273	0.235	0.187	0.182	0.265	0.215
Business operations	0.042	0.077	0.100	0.047	0.109	0.139
Financial specialists	0.030	0.077	0.060	0.035	0.083	0.083
Computer and mathematical	0.070	0.235	0.338	0.016	0.078	0.137
Architecture and engineering	0.096	0.110	0.057	0.014	0.028	0.012
Life, physical, and social science	0.028	0.027	0.014	0.020	0.025	0.014
Community and social service	0.023	0.016	0.008	0.051	0.044	0.018
Legal	0.012	0.022	0.008	0.019	0.037	0.020
Education instruction and library	0.084	0.023	0.007	0.225	0.053	0.022
Arts, design, entertainment, sports,	0.029	0.027	0.041	0.016	0.034	0.028
Sales and related occupations	0.166	0.087	0.084	0.103	0.068	0.071
Office and administrative support	0.148	0.063	0.095	0.271	0.176	0.241
Construction, forestry, fishing,	0.060	0.034	0.023	0.027	0.018	0.019
Manufacturing	0.143	0.149	0.083	0.058	0.095	0.063
Wholesale trade	0.044	0.025	0.024	0.017	0.026	0.019
Retail trade	0.155	0.041	0.046	0.115	0.046	0.040
Transportation and warehousing	0.061	0.016	0.014	0.030	0.014	0.017
Information	0.024	0.046	0.078	0.014	0.036	0.043
Finance and insurance, real estate and rental and leasing	0.066	0.180	0.190	0.086	0.181	0.243
Professional, scientific, and technical services	0.111	0.249	0.339	0.068	0.166	0.264
Management of companies and enterprises, administrative and support and waste management	0.025	0.028	0.040	0.024	0.035	0.052

Variable	On-site (Men)	Hybrid (Men)	Remote (Men)	On-site (Women)	Hybrid (Women)	Remote (Women)
Educational services and health care and social assistance	0.158	0.090	0.081	0.415	0.208	0.152
Arts, entertainment, and recreation, and accommodation and food	0.044	0.012	0.014	0.039	0.021	0.006
Other services (except Public Administration)	0.030	0.026	0.012	0.022	0.034	0.022
Public administration	0.065	0.080	0.047	0.079	0.100	0.055
Utilities	0.015	0.025	0.010	0.006	0.019	0.005

Notes: The sample includes wage and salary workers aged 25–64. CPS raked earnings weights are used.

Source: Jan 2023–Jun 2026 Current Population Survey Outgoing Rotation Groups (Flood et al. 2025), author’s calculations

Table A5. Summary statistics (Promotions sample)

Variable	On-site (Men)	Hybrid (Men)	Remote (Men)	On-site (Women)	Hybrid (Women)	Remote (Women)
N	9,642	4,670	1,860	10,923	4,562	2,059
Share of sample (%)	58.6	29.5	11.8	59.9	27.4	12.6
Real wage in MIS4, Jun 2026 \$	51.0	74.4	67.1	35.6	54.3	48.0
Wage growth	0.033	0.007	0.038	0.021	0.015	0.034
Promotion to manager, exclude	0.097	0.114	0.097	0.075	0.128	0.148
Promotion to first-line supervisor in	0.053	0.037	0.034	0.057	0.035	0.050
Promotion from first-line supervisor to	0.177	0.305	0.353	0.146	0.237	0.331
Government job	0.177	0.110	0.070	0.324	0.173	0.089
Married	0.652	0.707	0.672	0.580	0.625	0.607
Foreign born	0.144	0.207	0.180	0.117	0.166	0.147
Number of children age 0	0.028	0.036	0.031	0.017	0.021	0.026
Number of children age 1–5	0.206	0.224	0.221	0.164	0.210	0.209
Number of children age 6–11	0.278	0.289	0.264	0.249	0.253	0.274
Number of children age 12–17	0.211	0.219	0.191	0.229	0.204	0.189
Age	42.7	42.5	41.8	43.2	42.4	42.1
Hispanic	0.138	0.100	0.096	0.161	0.113	0.103
Black	0.100	0.065	0.072	0.126	0.119	0.131
Asian	0.079	0.159	0.128	0.054	0.122	0.117
High school or less	0.179	0.051	0.058	0.201	0.075	0.113
Some college	0.223	0.095	0.149	0.236	0.155	0.215
College	0.368	0.499	0.533	0.323	0.442	0.446
Graduate degree	0.230	0.355	0.260	0.240	0.328	0.227
Metropolitan statistical area	0.901	0.968	0.954	0.869	0.947	0.929
Management	0.293	0.271	0.233	0.189	0.280	0.236
Business operations	0.042	0.068	0.092	0.047	0.109	0.132
Financial specialists	0.034	0.077	0.053	0.036	0.086	0.084
Computer and mathematical	0.075	0.231	0.338	0.016	0.080	0.139
Architecture and engineering	0.094	0.100	0.052	0.015	0.027	0.011
Life, physical, and social science	0.028	0.025	0.012	0.020	0.025	0.016
Community and social service	0.021	0.011	0.007	0.051	0.041	0.017
Legal	0.017	0.031	0.011	0.022	0.043	0.021
Education instruction and library	0.077	0.020	0.006	0.223	0.049	0.021
Arts, design, entertainment, sports, and media	0.028	0.025	0.035	0.016	0.035	0.028
Sales and related occupations	0.161	0.089	0.085	0.102	0.071	0.076
Office and administrative support	0.130	0.051	0.076	0.261	0.154	0.218
Construction, forestry, fishing, hunting, mining	0.063	0.031	0.021	0.027	0.017	0.018
Manufacturing	0.144	0.146	0.082	0.059	0.097	0.066
Wholesale trade	0.043	0.024	0.022	0.017	0.026	0.018
Retail trade	0.146	0.047	0.042	0.111	0.048	0.042
Transportation and warehousing	0.055	0.015	0.016	0.029	0.014	0.015
Information	0.025	0.055	0.085	0.014	0.041	0.043
Finance and insurance, real estate and rental and leasing	0.081	0.186	0.180	0.087	0.182	0.234

Variable	On-site (Men)	Hybrid (Men)	Remote (Men)	On-site (Women)	Hybrid (Women)	Remote (Women)
Professional, scientific, and technical	0.122	0.268	0.362	0.072	0.183	0.287
Management of companies and enterprises, administrative and support	0.024	0.025	0.037	0.023	0.035	0.049
Educational services and health care and social assistance	0.150	0.078	0.077	0.414	0.190	0.143
Arts, entertainment, and recreation, and accommodation and food	0.042	0.011	0.014	0.039	0.021	0.006
Other services (except Public Administration)	0.028	0.020	0.012	0.022	0.034	0.021
Public administration	0.064	0.069	0.045	0.080	0.093	0.053
Utilities	0.015	0.024	0.007	0.005	0.019	0.005

Notes: The sample includes wage and salary workers aged 25–64. CPS raked earnings weights are used.

Source: Jan 2023–Jun 2026 Current Population Survey Outgoing Rotation Groups (Flood et al. 2025), author’s calculations.

Table A6. Near-fully interacted wage growth model by job stayer status (OLS estimates)

Variable	Men	Women
Hybrid-Hybrid	0.083***	0.101***
SE(Hybrid-Hybrid)	(0.021)	(0.020)
Remote-Remote	0.055**	0.059**
SE(Remote-Remote)	(0.028)	(0.023)
Job stayer	0.081	0.000
SE(Job stayer)	(0.167)	(0.142)
Hybrid-Hybrid × Job stayer	-0.036	-0.032
SE(Hybrid-Hybrid × Job stayer)	(0.024)	(0.023)
Remote-Remote × Job stayer	-0.002	-0.014
SE(Remote-Remote × Job stayer)	(0.032)	(0.027)
N	12803	16017
Adjusted R-squared	0.235	0.238

Note: The dependent variable is the difference in log real wages between MIS8 and MIS4. Raked earnings weights are used. Regressions control for wage quartiles. See Table 2 for other controls. Job stayer exclude those separated in MIS6–8 and those with both a detailed occupation AND detailed industry change between MIS4 and MIS5.

Source: Jan 2023–Jun 2026 Current Population Survey Outgoing Rotation Groups (Flood et al. 2025), author’s calculations

Table A7. Wage growth regressions for workers under age 40 (OLS estimates)

Work location	Men	Women
Panel A: Full sample	N/A	N/A
Hybrid-Hybrid	0.045**	0.051***
SE(Hybrid-Hybrid)	(0.018)	(0.016)
Remote-Remote	0.041*	0.029
SE(Remote-Remote)	(0.022)	(0.020)
N	5180	5797
Adjusted R-squared	0.244	0.216
Panel B: Parents	N/A	N/A
Hybrid-Hybrid	0.064*	0.008
SE(Hybrid-Hybrid)	(0.032)	(0.027)
Remote-Remote	0.049	0.006
SE(Remote-Remote)	(0.041)	(0.029)
N	1889	2678
Adjusted R-squared	0.226	0.204
Panel C: Nonparents	N/A	N/A
Hybrid-Hybrid	0.037	0.093***
SE(Hybrid-Hybrid)	(0.023)	(0.022)
Remote-Remote	0.030	0.057**
SE(Remote-Remote)	(0.028)	(0.029)
N	3291	3119
Adjusted R-squared	0.253	0.228

Note: The dependent variable is the difference in log real wages between MIS8 and MIS4. Raked earnings weights are used. Robust standard errors are reported. Regressions control for wage quartiles. See Table 2 for other controls.

Source: Jan 2023–Jun 2026 Current Population Survey Outgoing Rotation Groups (Flood et al. 2025), author's calculations.

Table A8. Wage growth by change in work location arrangements, excluding recent hires (FD estimates)

Work location	Men	Women	Fathers	Mothers	Men without children	Women without children
On-site to Hybrid	0.032	0.010	0.025	0.041	0.033	-0.009
SE (On-site to Hybrid)	(0.026)	(0.022)	(0.036)	(0.036)	(0.035)	(0.028)
Onsite to Remote	0.180***	0.084	0.183*	-0.042	0.207***	0.138*
SE (Onsite to Remote)	(0.059)	(0.063)	(0.100)	(0.088)	(0.073)	(0.081)
Hybrid to On-site	-0.017	0.003	-0.045	-0.002	0.001	0.007
SE (Hybrid to On-site)	(0.026)	(0.026)	(0.047)	(0.035)	(0.030)	(0.037)
Hybrid to Remote	-0.008	0.001	0.022	0.025	-0.029	-0.011
SE (Hybrid to Remote)	(0.028)	(0.024)	(0.055)	(0.034)	(0.031)	(0.033)
Remote to On-site	-0.205***	-0.002	-0.199*	0.089	-0.207***	-0.059
SE (Remote to On-site)	(0.067)	(0.045)	(0.120)	(0.062)	(0.075)	(0.062)
Remote to Hybrid	-0.016	0.018	0.002	0.012	-0.033	0.021
SE (Remote to Hybrid)	(0.045)	(0.034)	(0.047)	(0.045)	(0.066)	(0.049)
Started Hybrid	-0.013	0.007	-0.014	-0.009	-0.012	0.015
SE (Started Hybrid)	(0.014)	(0.014)	(0.024)	(0.022)	(0.016)	(0.019)
Started Remote	0.002	-0.009	-0.007	-0.033	0.005	0.006
SE (Started Remote)	(0.018)	(0.016)	(0.024)	(0.023)	(0.026)	(0.023)
N	11833	14640	4623	5491	7210	9149
Within R-squared	0.008	0.008	0.013	0.015	0.013	0.009
On-site to Remote = Remote to On-site (p-value)	0.776	0.291	0.918	0.664	0.999	0.437

Note: The dependent variable is the difference in log real wage between MIS 8 and MIS4. See Table 5 for other controls. Raked earnings weights are used.

Source: Jan 2023–Jun 2026 Current Population Survey Outgoing Rotation Groups (Flood et al. 2025), author's calculations

Table A9. Wage growth by change in work location arrangements, likely job stayers (FD estimates)

Work location	Men	Women	Fathers	Mothers	Men without children	Women without children
On-site to Hybrid	0.076***	0.009	0.033	0.038	0.100***	-0.007
SE (On-site to Hybrid)	(0.025)	(0.026)	(0.041)	(0.043)	(0.030)	(0.032)
Onsite to Remote	0.163***	0.068	0.070	-0.108	0.246***	0.117
SE (Onsite to Remote)	(0.056)	(0.079)	(0.066)	(0.149)	(0.082)	(0.091)
Hybrid to On-site	-0.008	0.031	-0.063	0.023	0.028	0.038
SE (Hybrid to On-site)	(0.032)	(0.031)	(0.056)	(0.037)	(0.037)	(0.044)
Hybrid to Remote	-0.019	-0.005	-0.025	0.024	-0.021	-0.022
SE (Hybrid to Remote)	(0.032)	(0.028)	(0.064)	(0.039)	(0.035)	(0.039)
Remote to On-site	-0.284***	-0.020	-0.363***	0.077	-0.232***	-0.085
SE (Remote to On-site)	(0.081)	(0.049)	(0.137)	(0.074)	(0.083)	(0.064)
Remote to Hybrid	-0.019	-0.008	0.022	0.003	-0.052	-0.010
SE (Remote to Hybrid)	(0.056)	(0.032)	(0.056)	(0.051)	(0.083)	(0.040)
Started Hybrid	-0.015	-0.007	-0.017	-0.024	-0.011	0.004
SE (Started Hybrid)	(0.015)	(0.016)	(0.026)	(0.022)	(0.018)	(0.022)
Started Remote	0.007	-0.006	-0.016	-0.029	0.022	0.008
SE (Started Remote)	(0.022)	(0.019)	(0.027)	(0.026)	(0.031)	(0.026)
N	9368	11863	3695	4445	5673	7418
Within R-squared	0.010	0.009	0.018	0.019	0.016	0.011
On-site to Remote = Remote to On-site (p-value)	0.221	0.606	0.054	0.854	0.900	0.775

Note: The dependent variable is the difference in log real wage between MIS 8 and MIS4. See Table 5 for other controls. Raked earnings weights are used.

Source: Jan 2023–Jun 2026 Current Population Survey Outgoing Rotation Groups (Flood et al. 2025), author's calculations

Table A10. Wage growth by change in work location arrangements, likely job changers (FD estimates)

Work location	Men	Women	Fathers	Mothers	Men without children	Women without children
On-site to Hybrid	-0.055	0.006	0.032	-0.008	-0.111	0.018
SE (On-site to Hybrid)	(0.054)	(0.042)	(0.068)	(0.086)	(0.077)	(0.045)
Onsite to Remote	0.073	0.098	0.223	0.024	0.005	0.106
SE (Onsite to Remote)	(0.088)	(0.073)	(0.155)	(0.095)	(0.089)	(0.101)
Hybrid to On-site	-0.028	-0.074*	0.017	-0.088	-0.051	-0.078
SE (Hybrid to On-site)	(0.040)	(0.042)	(0.076)	(0.072)	(0.046)	(0.052)
Hybrid to Remote	0.149	-0.004	0.140	-0.029	0.144	0.010
SE (Hybrid to Remote)	(0.112)	(0.071)	(0.087)	(0.150)	(0.175)	(0.050)
Remote to On-site	-0.042	0.056	0.005	0.072	-0.052	0.036
SE (Remote to On-site)	(0.081)	(0.076)	(0.118)	(0.118)	(0.096)	(0.097)
Remote to Hybrid	0.043	0.093	-0.061	0.014	0.080	0.136
SE (Remote to Hybrid)	(0.061)	(0.077)	(0.079)	(0.079)	(0.081)	(0.113)
Started Hybrid	-0.000	0.034	0.027	0.052	-0.013	0.024
SE (Started Hybrid)	(0.028)	(0.027)	(0.056)	(0.052)	(0.030)	(0.031)
Started Remote	0.004	-0.014	0.076	0.001	-0.041	-0.023
SE (Started Remote)	(0.034)	(0.028)	(0.049)	(0.042)	(0.044)	(0.041)
N	3435	4154	1291	1537	2144	2617
Within R-squared	0.028	0.017	0.043	0.046	0.052	0.023
On-site to Remote = Remote to On-site (p-value)	0.793	0.146	0.243	0.530	0.720	0.312

Note: The dependent variable is the difference in log real wage between MIS 8 and MIS4. See Table 5 for other controls. Raked earnings weights are used.

Source: Jan 2023–Jun 2026 Current Population Survey Outgoing Rotation Groups (Flood et al. 2025), author's calculations

Table A11. Wage growth regressions using alternative work location arrangement definitions (OLS estimates)

Work location	Current month (Men)	Current month (Women)	10–90 hybrid cutoff (Men)	10–90 hybrid cutoff (Women)	1–99 hybrid cutoff (Men)	1–99 hybrid cutoff (Women)
Panel A: Full sample	N/A	N/A	N/A	N/A	N/A	N/A
Hybrid-Hybrid	0.047***	0.079***	0.071***	0.074***	0.066***	0.079***
SE(Hybrid-Hybrid)	(0.013)	(0.012)	(0.011)	(0.010)	(0.011)	(0.009)
Remote-Remote	0.055***	0.052***	0.057***	0.051***	0.062***	0.058***
SE(Remote-Remote)	(0.013)	(0.011)	(0.015)	(0.012)	(0.015)	(0.013)
N	12803	16017	12803	16017	12803	16017
Adjusted R-squared	0.234	0.235	0.235	0.236	0.233	0.234
Panel B: Parents	N/A	N/A	N/A	N/A	N/A	N/A
Hybrid-Hybrid	0.052**	0.042**	0.074***	0.041**	0.067***	0.050***
SE(Hybrid-Hybrid)	(0.021)	(0.019)	(0.017)	(0.016)	(0.017)	(0.015)
Remote-Remote	0.049**	0.039**	0.070***	0.039**	0.077***	0.041**
SE(Remote-Remote)	(0.021)	(0.017)	(0.024)	(0.019)	(0.024)	(0.020)
N	4986	5982	4986	5982	4986	5982
Adjusted R-squared	0.236	0.224	0.237	0.225	0.237	0.225
Panel C: Nonparents	N/A	N/A	N/A	N/A	N/A	N/A
Hybrid-Hybrid	0.042**	0.105***	0.066***	0.097***	0.063***	0.098***
SE(Hybrid-Hybrid)	(0.017)	(0.015)	(0.015)	(0.013)	(0.014)	(0.012)
Remote-Remote	0.050***	0.061***	0.040**	0.060***	0.044**	0.069***
SE(Remote-Remote)	(0.017)	(0.014)	(0.019)	(0.015)	(0.020)	(0.016)
N	7817	10035	7817	10035	7817	10035
Adjusted R-squared	0.241	0.247	0.242	0.248	0.240	0.246

Note: Dependent variable is the difference in log real wages in MIS8 and MIS4. Current month models use WFH intensity defined by current month %WFH hours. The 10–90 (1–99) hybrid cutoff models define hybrid worker as those with average %WFH shares between 10 and 90 (1 and 99) % of actual weekly work hours. Raked earnings weights are used. Regressions include dummies for wage quartiles. See Table 2 for other controls. Robust standard errors are reported.

Source: Jan 2023–Jun 2026 Current Population Survey Outgoing Rotation Groups (Flood et al. 2025), author's calculations

Table A12. Promotion regressions using alternative work location arrangement definitions (LPM estimates)

Work location	Current month (Men)	Current month (Women)	10–90 hybrid cutoff (Men)	10–90 hybrid cutoff (Women)	1–99 hybrid cutoff (Men)	1–99 hybrid cutoff (Women)
Panel A: Promotion to manager excl. sales/office	N/A	N/A	N/A	N/A	N/A	N/A
Hybrid-Hybrid	-0.011	0.001	-0.006	-0.009	-0.001	-0.010
SE(Hybrid-Hybrid)	(0.010)	(0.012)	(0.009)	(0.011)	(0.009)	(0.010)
Remote-Remote	-0.017	0.000	-0.004	-0.003	-0.014	0.000
SE(Remote-Remote)	(0.011)	(0.013)	(0.013)	(0.015)	(0.013)	(0.016)
N	7804	7995	7804	7995	7804	7995
R-squared	0.092	0.109	0.092	0.109	0.092	0.109
Panel B: Parents, Promotion to manager excl. sales/office	N/A	N/A	N/A	N/A	N/A	N/A
Hybrid-Hybrid	-0.018	0.009	-0.016	0.001	-0.004	-0.003
SE(Hybrid-Hybrid)	(0.017)	(0.020)	(0.016)	(0.017)	(0.015)	(0.016)
Remote-Remote	-0.029	0.039*	-0.018	0.044*	-0.018	0.053*
SE(Remote-Remote)	(0.018)	(0.022)	(0.021)	(0.026)	(0.022)	(0.027)
N	3270	3197	3270	3197	3270	3197
R-squared	0.123	0.176	0.123	0.177	0.123	0.178
Panel C: Nonparents, Promotion to manager excl. sales/office	N/A	N/A	N/A	N/A	N/A	N/A
Hybrid-Hybrid	-0.009	-0.004	0.000	-0.019	-0.001	-0.017
SE(Hybrid-Hybrid)	(0.013)	(0.015)	(0.012)	(0.014)	(0.011)	(0.013)
Remote-Remote	-0.014	-0.021	-0.002	-0.032*	-0.018	-0.033*
SE(Remote-Remote)	(0.014)	(0.016)	(0.016)	(0.019)	(0.016)	(0.020)
N	4534	4798	4534	4798	4534	4798
R-squared	0.128	0.111	0.129	0.112	0.130	0.112
Panel D: Promotion to supervisor in sales/office excl. promoted to manager	N/A	N/A	N/A	N/A	N/A	N/A
Hybrid-Hybrid	-0.018	-0.033***	-0.015	-0.018*	-0.021	-0.012
SE(Hybrid-Hybrid)	(0.015)	(0.011)	(0.015)	(0.010)	(0.014)	(0.010)
Remote-Remote	-0.006	-0.004	0.003	-0.000	-0.014	0.003
SE(Remote-Remote)	(0.017)	(0.012)	(0.022)	(0.014)	(0.020)	(0.015)
N	2449	4266	2449	4266	2449	4266
R-squared	0.069	0.069	0.070	0.069	0.071	0.068

Work location	Current month (Men)	Current month (Women)	10–90 hybrid cutoff (Men)	10–90 hybrid cutoff (Women)	1–99 hybrid cutoff (Men)	1–99 hybrid cutoff (Women)
Panel E: Parents, Promotion to supervisor in sales/office excl. promoted to manager						
	N/A	N/A	N/A	N/A	N/A	N/A
Hybrid-Hybrid	0.011	-0.030	0.026	-0.042**	0.014	-0.033*
SE(Hybrid-Hybrid)	(0.028)	(0.022)	(0.021)	(0.018)	(0.020)	(0.018)
Remote-Remote	0.048	-0.007	0.087*	-0.007	0.047	-0.008
SE(Remote-Remote)	(0.034)	(0.020)	(0.048)	(0.023)	(0.049)	(0.024)
N	804	1402	804	1402	804	1402
R-squared	0.198	0.141	0.204	0.144	0.197	0.143
Panel F: Nonparents, Promotion to supervisor in sales/office excl. promoted to manager						
	N/A	N/A	N/A	N/A	N/A	N/A
Hybrid-Hybrid	-0.018	-0.036***	-0.025	-0.011	-0.027	-0.004
SE(Hybrid-Hybrid)	(0.020)	(0.013)	(0.021)	(0.013)	(0.020)	(0.012)
Remote-Remote	-0.028	-0.012	-0.022	-0.012	-0.021	-0.004
SE(Remote-Remote)	(0.018)	(0.012)	(0.021)	(0.014)	(0.022)	(0.015)
N	1645	2864	1645	2864	1645	2864
R-squared	0.093	0.079	0.094	0.078	0.094	0.078
Panel G: Promotion from supervisor to manager in sales/office						
	N/A	N/A	N/A	N/A	N/A	N/A
Hybrid-Hybrid	0.023	0.075	0.073	0.011	0.111**	-0.001
SE(Hybrid-Hybrid)	(0.062)	(0.057)	(0.051)	(0.046)	(0.049)	(0.041)
Remote-Remote	0.049	0.082	0.153*	0.128*	0.161**	0.107
SE(Remote-Remote)	(0.066)	(0.062)	(0.078)	(0.072)	(0.080)	(0.075)
N	985	968	985	968	985	968
R-squared	0.150	0.140	0.150	0.144	0.155	0.142
Panel H: Promotion from supervisor to manager in sales/office						
	N/A	N/A	N/A	N/A	N/A	N/A
Hybrid-Hybrid	0.120	0.357***	0.102	0.223***	0.169**	0.173**
SE(Hybrid-Hybrid)	(0.101)	(0.094)	(0.079)	(0.081)	(0.073)	(0.073)
Remote-Remote	0.048	0.249***	0.118	0.263**	0.190	0.215**
SE(Remote-Remote)	(0.112)	(0.089)	(0.128)	(0.103)	(0.131)	(0.104)
N	378	318	378	318	378	318
R-squared	0.372	0.431	0.381	0.408	0.393	0.397

Work location	Current month (Men)	Current month (Women)	10–90 hybrid cutoff (Men)	10–90 hybrid cutoff (Women)	1–99 hybrid cutoff (Men)	1–99 hybrid cutoff (Women)
Panel I. Promotion from supervisor to manager in sales/office	N/A	N/A	N/A	N/A	N/A	N/A
Hybrid-Hybrid	-0.018	-0.048	0.081	-0.076	0.064	-0.060
SE(Hybrid-Hybrid)	(0.085)	(0.081)	(0.075)	(0.061)	(0.064)	(0.057)
Remote-Remote	0.016	0.017	0.158*	0.104	0.128	0.085
SE(Remote-Remote)	(0.079)	(0.085)	(0.092)	(0.100)	(0.092)	(0.101)
N	607	650	607	650	607	650
R-squared	0.233	0.180	0.231	0.191	0.228	0.188

Note: Dependent variable is a binary variable for a promotion between MIS4 and MIS 8. Current month models use WFH intensity defined by current month %WFH hours. The 10–90 (1–99) hybrid cutoff models define hybrid worker as those with average %WFH shares between 10 and 90 (1 and 99) % of actual weekly work hours. Raked earnings weights are used. Regressions include dummies for wage quartiles. See Table 2 for other controls. Robust standard errors are reported.

Source: Jan 2023–Jun 2026 Current Population Survey Outgoing Rotation Groups (Flood et al. 2025), author’s calculations.

Table A13. Coefficients and Oster bounds for Column 2 estimates in Tables 2–3

Dep. Var. Wage growth	Coef. (SE) for men	Oster bounds for men	Coef. (SE) for women	Oster bounds for women
Panel A: Full sample	N/A	N/A	N/A	N/A
Hybrid-Hybrid	0.057***(0.011)	[0.032, 0.088]	0.076***(0.010)	[0.051, 0.107]
Remote-Remote	0.053***(0.015)	[0.034, 0.076]	0.047***(0.012)	[0.025, 0.072]
Panel B: Parents	N/A	N/A	N/A	N/A
Hybrid-Hybrid	0.061***(0.018)	[0.038, 0.090]	0.051***(0.017)	[0.025, 0.085]
Remote-Remote	0.067***(0.023)	[0.038, 0.095]	0.031 (0.019)	[0.011, 0.054]
Panel C: Nonparents	N/A	N/A	N/A	N/A
Hybrid-Hybrid	0.051***(0.015)	[0.026, 0.083]	0.097***(0.013)	[0.070, 0.131]
Remote-Remote	0.035* (0.020)	[0.021, 0.050]	0.059***(0.016)	[0.035, 0.087]

Note: Oster bounds are Oster betas with $\delta=-1$ and $\delta=1$, correspondingly. R_{max} is $1.3 \times R^2$ from the full observable regression. *p < 0.1, **p < 0.05, ***p < 0.01.

Source: Jan 2023–Jun 2026 Current Population Survey Outgoing Rotation Groups (Flood et al. 2025), author's calculations

Table A14. Coefficients and Oster bounds for estimates in Table 6

Sample, Dep. Var:	Coef. (SE) for men	Oster bounds for men	Coef. (SE) for women	Oster bounds for women
Panel A: All, Promotion to manager excl. sales/office	N/A	N/A	N/A	N/A
Hybrid	0.001 (0.010)	[-0.007, 0.007]	-0.011 (0.011)	[-0.035, 0.009]
Remote	-0.012 (0.013)	[-0.015, -0.011]	0.001 (0.016)	[-0.026, 0.023]
Panel B: Parents, Promotion to manager excl. sales/office	N/A	N/A	N/A	N/A
Hybrid	-0.013 (0.016)	[-0.021, -0.007]	-0.004 (0.018)	[-0.034, 0.017]
Remote	-0.023 (0.021)	[-0.038, -0.012]	0.053**(0.027)	[0.024, 0.074]
Panel C: Nonparents, Promotion to manager excl. sales/office	N/A	N/A	N/A	N/A
Hybrid	0.008 (0.012)	[-0.001, 0.015]	-0.020 (0.014)	[-0.047, 0.002]
Remote	-0.012 (0.016)	[-0.014, -0.010]	-0.033*(0.02)	[-0.060, -0.009]
Panel D: All, Promotion to supervisor in sales/office	N/A	N/A	N/A	N/A
Hybrid	-0.011 (0.016)	[-0.012, -0.008]	-0.017*(0.01)	[-0.018, -0.015]
Remote	-0.010 (0.020)	[-0.012, -0.005]	0.002 (0.014)	[0.000, 0.004]
Panel E: Parents, Promotion to supervisor in sales/office	N/A	N/A	N/A	N/A
Hybrid	0.027 (0.023)	[0.020, 0.042]	-0.033*(0.017)	[-0.036, -0.031]
Remote	0.049 (0.048)	[0.035, 0.071]	-0.007(0.023)	[-0.017, 0.002]
Panel F: Nonparents, Promotion to supervisor in sales/office	N/A	N/A	N/A	N/A
Hybrid	-0.031 (0.021)	[-0.033, -0.029]	-0.011 (0.013)	[-0.013, -0.008]
Remote	-0.022 (0.021)	[-0.023, -0.016]	-0.006 (0.014)	[-0.010, -0.002]
Panel G: All, Promotion from supervisor to manager in sales/office	N/A	N/A	N/A	N/A
Hybrid	0.033 (0.053)	[-0.006, 0.066]	0.034(0.050)	[0.012, 0.052]
Remote	0.116 (0.078)	[0.100, 0.134]	0.118 (0.074)	[0.095, 0.140]
Panel H: Parents, Promotion from supervisor to manager in sales/office	N/A	N/A	N/A	N/A
Hybrid	0.064 (0.089)	[0.010, 0.097]	0.231*** (0.085)	[0.190, 0.325]
Remote	0.108 (0.131)	[0.088, 0.126]	0.215** (0.010)	[0.202, 0.258]
Panel I: Nonparents, Promotion from supervisor to manager in sales/office	N/A	N/A	N/A	N/A
Hybrid	0.021 (0.073)	[-0.011, 0.049]	-0.040 (0.069)	[-0.077, -0.013]
Remote	0.103 (0.090)	[0.079, 0.126]	0.097 (0.101)	[0.062, 0.122]

Note: Oster bounds are Oster betas with $\delta=-1$ and $\delta=1$, correspondingly. R_{max} is $1.3 \times R^2$ from the full observable regression. *p < 0.1, **p < 0.05, ***p < 0.01.

Source: Jan 2023–Jun 2026 Current Population Survey Outgoing Rotation Groups (Flood et al. 2025), author's calculations